# World Sleep 2017

World Sleep 2017 organized by

WORLD SLEEP SOCIETY
ADVANCING SLEEP HEALTH WORLDWIDE

**OCTOBER 7-11, 2017 • PRAGUE, CZECH REPUBLIC**

A JOINT CONGRESS OF WORLD ASSOCIATION OF SLEEP MEDICINE AND WORLD SLEEP FEDERATION

worldsleepcongress.com

# Final Program

# 14th WORLD SLEEP

**World Sleep Society Founded by**

WORLD SLEEP FOUNDATION
WORLD FEDERATION OF SLEEP RESEARCH & SLEEP MEDICINE SOCIETIES

WASM

# WORLD SLEEP SOCIETY

ADVANCING SLEEP HEALTH WORLDWIDE

Founded by WORLD ASSOCIATION OF SLEEP MEDICINE and WORLD SLEEP FEDERATION

## Join us for the 15th World Sleep Congress

World Sleep 2019

SEPTEMBER 20-25, 2019 • VANCOUVER, CANADA

A JOINT CONGRESS OF WORLD ASSOCIATION OF SLEEP MEDICINE AND WORLD SLEEP FEDERATION

**worldsleepcongress.com**

World Sleep 2017

OCTOBER 7-11, 2017 • PRAGUE, CZECH REPUBLIC

A JOINT CONGRESS OF WORLD ASSOCIATION OF SLEEP MEDICINE AND WORLD SLEEP FEDERATION

Dear Colleagues and Friends,

Welcome to World Sleep 2017 the first congress of the new World Sleep Society, which represents combining together the World Association of Sleep Medicine (WASM) and World Sleep Federation (WSF). This year's program is extremely robust, featuring over 278 hours of scientific content that includes 16 keynotes, 102 symposia, 18 courses, 138 oral abstract presentations, and 1,168 accepted abstracts.

The congress is hosted by the historic-city Prague, located in the heart of Europe, and brings the best in sleep medicine to Prague by providing an international discussion forum of sleep professionals from the entire world. It focuses particularly on the interdisciplinary character of our field. Sleep scientists, clinicians, educators, technologists, and trainees from around the world will meet to advance knowledge on sleep science, chronobiology, sleep in public health, sleep health and the diagnosis and treatment of sleep-wake disorders. We seek to maximize learning both from formal presentations by the leading experts in their fields and from informal discussion groups emphasizing opportunities for your participation.

Your involvement in this congress is greatly valued. You may learn and share knowledge and skills that will advance sleep health throughout the world. We are very pleased you have joined us for the science, learning, collegiality, networking and social events at this historic first congress of the World Sleep Society, the 14th congress of the combined WASM and WSF.

Sincerely,

World Sleep 2017 Program Committee

Richard Allen, PhD
Colin Espie, PhD, DSc
Clete Kushida, MD, PhD
Soňa Nevšímalová, MD, DrS
Allan O'Bryan
Thomas Penzel, PhD
Claudia Trenkwalder, MD
Anthony Williams

5TH CONGRESS OF THE INTERNATIONAL PEDIATRIC SLEEP ASSOCIATION

IPSA2018.COM

April 27-29, 2018

# IPSA 2018
## PARIS · FRANCE

International Pediatric Sleep Association pedsleep.org

## VENUE

IPSA 2018 will take place in The Palais des Congrès de Paris.

**Address:**
Palais des Congrès de Paris
2 place de la Porte Maillot,
75017 Paris

## ABSTRACTS

Abstract submission starts November 1, 2017 with a **deadline of March 31, 2018**. Accepted abstracts will be published on IPSA's website as part of the congress proceedings.

## SYMPOSIA

Symposium submission **deadline is January 31, 2018**. Symposium can be submitted and early acceptance will be sent.

## KEYNOTE SPEAKERS

**Carole L. Marcus, MBBCh**
New developments in childhood OSAS
Director of the Sleep Center at Children's Hospital of Philadelphia, Perelman School of Medicine, University of Pennsylvania (US)

**Monique K. LeBourgeois, PhD**
Sleep Regulation in early childhood: Insights into the development of behavioral sleep problems
Department of Integrative Physiology, University of Colorado, Boulder (US)

**Marion Leboyer, MD, PhD**
Microbiote and psychiatric disorders in children
Hôpital Albert Chenevier,
University of Paris Est (UPEC) (France)

**Mark S. Blumberg, PhD**
REM sleep twitches and sensorimotor development
Director of The Delta Center,
University of Iowa, Iowa City (US)

International Pediatric Sleep Association

FOR MORE INFORMATION VISIT, IPSA2018.COM

WORLD SLEEP SOCIETY

ADVANCING SLEEP HEALTH WORLDWIDE

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# Mission Statement

The fundamental mission of the World Sleep Society is to advance sleep health worldwide. World Sleep Society will fulfill this mission by promoting and encouraging education, research and patient care throughout the World, particularly in those parts of the world where the practice of sleep medicine is less developed. World Sleep Society will act as a bridge between different sleep societies and cultures, supporting and encouraging worldwide exchange of clinical information and scientific studies related to sleep medicine. World Sleep Society will seek to encourage development and exchange of information for world-wide and regional standards of practice for sleep medicine.

# Goal and Purpose

The goal and purpose of the World Sleep Society is to advance knowledge about sleep, circadian rhythms, sleep health, and sleep disorders worldwide, especially in those parts of the world where this knowledge has not advanced sufficiently. This endeavor will promote clinical and scientific information for scientists, health care personnel, and the general public. The World Sleep Society will foster international exchanges among scientists, physicians, psychologists, nurses, physician assistants, technologists, and other medical and research personnel interested in the sleep field. In this manner it is expected that sleep science and medicine can advance for all populations to improve the quality of life of individuals throughout the world. The World Sleep Society will promote world-wide sleep health by advancing public education, supporting public policies related to sleep health, and supporting sleep research.

World Sleep Society currently represents over 823 individual members, 26 societies. It is located in over 64 countries and will continue to operate programs of both the World Sleep Federation (WSF) and World Association of Sleep Medicine (WASM). Programs consist of education, awareness, and member services.

## Program Committee

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Membership Chair, WSF
(United Kingdom)

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President, WSF/WSS
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Executive Director, WASM/WSS
(United States)

Claudia Trenkwalder, MD
Past-President, WASM
(Germany)

Anthony Williams
Executive Director, WSF
(Australia)

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Psychiatry and Behavioral Sciences, Stanford Center for Sleep Sciences and Medicine
(United States)

**Prof. Dr. Irene Tobler-Borbély**
Biologist, Sleep Research and Chronobiology
Department of Pharmacology and Toxicology,
University of Zurich
(Switzerland)

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Co-chair: Ondrej Ludka (Czech Republic)
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Maxime Elbaz (France)
Lizzie Hill (United Kingdom)
Colette Navin (United Kingdom)

# General Information

World Sleep Society
3270 19th Street NW • Suite 109
Rochester, MN 55901
Ph: (507) 316-0084
Fax: 001-612-465-5357
www.worldsleepsociety.org

**Meeting Location**
Prague Congress Centre
5. kvetna 65
140 21 Prague 4
Czech Republic
630 80 24

**Opening Ceremony Location**
Municipal House
nám. Republiky 5
111 21 Praha 1-Staré Město
Czech Republic

**Gala Dinner Location**
Slovansky dum (Slavic House)
Na Příkopě 22, 110 00 Praha 1-Nové Město, Czechia

**Closing Ceremony Location**
Prague Congress Centre
5. kvetna 65
140 21 Prague 4
Czech Republic
630 80 24

**Registration Desk Hours**

| | |
|---|---|
| Friday | 5:00 P.M. to 8:00 P.M. |
| Saturday | 7:00 A.M. to 5:00 P.M. |
| Sunday | 7:00 A.M. to 5:00 P.M. |
| Monday | 7:00 A.M. to 7:00 P.M. |
| Tuesday | 7:00 A.M. to 7:00 P.M. |
| Wednesday | 7:00 A.M. to 7:00 P.M. |

**Exhibit Hall Hours**

| | |
|---|---|
| Monday | 10:00 A.M. to 4:00 P.M. |
| Tuesday | 10:00 A.M. to 4:00 P.M. |
| Wednesday | 10:00 A.M. to 4:00 P.M. |

## Opening Ceremony

Sunday, October 8, 2017: The Opening Ceremony of World Sleep 2017 will take place in the beautiful Municipal House located in the heart of Prague. This Art Nouveau treasure dominates the site of the former Royal Court. The ceremony will feature award presentations and classic Czech music played by a 65-piece orchestra. We expect over 1,000 delegates to attend this historic opening ceremony of the first joint congress of World Association of Sleep Medicine (WASM) and World Sleep Federation (WSF).

**Agenda**
6:00pm to 6:30pm
Opening Welcome, awards, and concert introduction
6:30pm to 7:30pm
Concert of the Prague Radio Symphony Orchestra, with conductor T. Brauner
7:30pm to 9:00pm
Reception

*All attendees must have official congress badge to attend.*

## Gala Dinner

Monday, October 9, 2017: The Gala Dinner will feature entertainment, dinner, and beverages. **A ticket will need to be purchased to attend*

The gala will be held at Slovansky dum (Slavic House) in Prague. Join attendees to celebrate and network over dinner and drinks. This is an exclusive event limited to 320 tickets. Purchase a single ticket or a table of eight. Entertainment will be provided by a local jazz band followed by a black light theatre production.

**Agenda**
7:30pm – 8:00pm
Welcome & Reception
8:00pm – 9:45pm
Dinner & Black light theatre production
9:45pm – 10:30pm
Dessert, coffee & networking

## Networking Opportunities

Plan to partake in networking events while attending congress to meet some of the names behind the research. Cost to attend events is included in the registration fee unless otherwise stated. Please make sure to wear your badge to non-ticketed events.

**World Sleep Day Networking Event**
Monday, October 9, 2017, 1 P.M., Room 221: Join several of our World Sleep Day 2017 delegates and past Distinguished Activity Award winners at the World Sleep Day Networking Event in Prague! You did not need to host an event to join us.

**Coffee Breaks**
Monday, October 9-Wednesday, October 11: Take a break from the exhibits and stop in for a cup of coffee. Available during exhibition hours at 10:00am and 2:00pm.

**Poster Sessions**
Monday, October 9-Wednesday, October 11: View young investigator and different abstracts each day during poster sessions.

## Closing Ceremony

Wednesday, October 11: The Closing Ceremony will be at the main event venue, Prague Congress Centre. All participants and exhibitors are invited to join. Before leaving, enjoy discussing the latest science and research you discovered at World Sleep 2017.

## CME

*Continuing Medical Education (CME) Credit for Physicians Accreditation Statement:*

This Live activity, World Sleep 2017, with a beginning date of 10/07/2017, has been reviewed and is acceptable for up to 42.25 Prescribed credit(s) by the American Academy of Family Physicians. Physicians should claim only the credit commensurate with the extent of their participation in the activity. CME is awarded for pre-congress courses, keynote lectures, symposia sessions and technologist workshops. A CME fee of US$25 is payable online with registration or in-person at the registration desk to obtain CME documentation.

**CME Record of Attendance**
A Record of Attendance is provided to all attendees at on-site registration. The Record of Attendance allows attendees to calculate their own credits of participation in the educational activity. The total number of credits participants can earn per day is noted on the Record of Attendance. Below each day is a line to record the actual number of credits during which you participated in the educational activity. It is recommended that you record your actual credits daily as you proceed through the CME activity. Upon conclusion of the CME activity, please total the number of credits you have recorded on the top half of the form, sign it, and return it to the registration desk.

The bottom half of the form represents your Record of Attendance, which you must retain for your records. Please make sure the number of credits claimed in both sections coincide. No

other documentation is provided to you after this CME activity. The Record of Attendance has replaced the certificate. The Record of Attendance can be used for requesting credits in accordance with state licensing boards, specialty societies, or other professional associations.

**CME Activity Evaluation**
The overall CME activity evaluation will be emailed following the activity to the email address that was provided when you registered. The CME activity evaluation is brief and will only take a few minutes to complete. Faculty evaluation forms will be provided electronically via email to registrants. Completed faculty evaluation forms should be completed online at the conclusion of the CME activity and within one week of the congress. Your feedback is very important to us and will be used for planning future programs, as well as identifying faculty strengths and opportunity for growth.

**CME Registration Required**
*Please complete the following steps to receive CME credit:*

1. Purchase the $25 CME fee at registration desk.
2. Obtain the CME Record of Attendance at registration desk.
3. Turn in CME Record of Attendance once completed to registration desk or email to info@worldsleepsociety.org by November 1, 2017.
4. Complete the faculty, session, and congress evaluations. Evaluations will be collected electronically and sent via email each day.

## Certificate of Attendance

All attendees of World Sleep 2017 will receive an official Certificate of Attendance. **Certificates will be available at the Registration Desk Monday, October 9 through Wednesday, October 11.**

## Elsevier Awards

The international panel of sleep specialists convened to score abstracts for the selection of the **Elsevier Awards for 2017** to recognize two young basic and clinical sleep specialists. The panel, integrated by Antonio Culebras, MD (United States), Liborio Parrino, MD (Italy), Elena Majano, MD (El Salvador), and Melissa Lipford, MD (United States), has made the following selection:

**Christian Guilleminault Award**
**Gianluca Sesso**
*Electrophysiological and microstructural features of sleep in children at high risk for depression: a preliminary study.*

**Elio Lugaresi Award**
**Tatyana Mollayeva**
*Sleep stage distribution in persons with mild traumatic brain injury: A polysomnographic study according to American Academy of Sleep Medicine Standards.*

## Young Investigator Awards 2017

*The following award winners will present during S38 Young Investigator: Sleep research in neurodegeneration:*
**Monday, October 9 from 5:30 to 7:00 P.M.**

**Carmen Gutierrez Muñoz (Spain)**
DIFFERENT MARKERS IN IDIOPATHIC RAPID EYE MOVEMENT (REM) SLEEP BEHAVIOUR DISORDER (RBD), POSSIBLE PREDICTORS OF CONVERSION TO DIFFERENT TYPES OF ALPHA-SINUCLEINOPATHIES

**Danay Clarissa Espinoza Castro (Chile)**
ENVELOPE ANALYSIS OF ELECTROMYOGRAM IN REM SLEEP BEHAVIOR DISORDER PATIENT

**Gohei Yamada (Japan)**
STRIATAL DYSFUNCTION AND DIMINISHED FUNCTIONAL CONNECTIVITY IN IDIOPATHIC REM SLEEP BEHAVIOR DISORDER WITH SUBTLE MOTOR ALTERATION

**Kangping Xiong (China)**
INCREASED SERUM CYSTATIN C IN PARKINSON'S DISEASE WITH OBJECTIVE SLEEP DISTURBANCE

**Michela Figorilli (Italy)**
DIAGNOSING REM SLEEP BEHAVIOR DISORDER IN PARKINSON DISEASE WITHOUT A GOLD STANDARD: A LATENT CLASSES MODELS STUDY

**Yaping Liu (Hong Kong)**
FAMILIAL AGGREGATION OF REM SLEEP BEHAVIOR DISORDER AND NEURODEGENERATIVE BIOMARKERS: A CASE-CONTROL FAMILY STUDY

## Young Investigator Awards 2017

*The following award winners will present during S77 Young Investigator: Sleep research in respiratory sleep medicine:*
**Tuesday, October 10 from 5:30 to 7:00 P.M.**

**Anupama Gupta (India)**
WHY IS OBSTRUCTIVE SLEEP APNEA IN PEOPLE WITH RESISTANT HYPERTENSION MISSED SO OFTEN – A CLINICAL AND POLYSOMNOGRAPHIC CASE-CONTROLLED STUDY

**Iana Andreieva (Ukraine)**
CARDIAC BIOMARKERS IN PATIENTS WITH OBSTRUCTIVE SLEEP APNEA SYNDROME AND HEART FAILURE WITH PRESERVED EJECTION FRACTION

**Jennifer M Cori (Australia)**
HYPOCAPNIA HAS MINIMAL INFLUENCE ON GENIOGLOSSUS MUSCLE AFTER-DISCHARGE ELICITED BY AROUSAL FROM SLEEP IN HEALTHY INDIVIDUALS

**Rodrigo Tomazini Martins (Australia)**
EFFECTS OF MORPHINE ON THE PHENOTYPIC CAUSES OF OBSTRUCTIVE SLEEP APNEA

**Yu Sun Bin (Australia)**
DOES MATERNAL SLEEP APNEA AFFECT CHILDHOOD HEALTH AND EDUCATIONAL OUTCOMES? A LONGITUDINAL STUDY USING POPULATION RECORD LINKAGE

**Anabel Castro-Grattoni (Spain)**
IMPACT OF INTERMITTENT HYPOXIA ON CARDIOVASCULAR REMODELING IN A MURINE MODEL OF SLEEP APNEA: EFFECT OF AGE

## Young Investigator Awards 2017

*The following award winners will present during S99 Young Investigator: Oral presentation:*
**Wednesday, October 11 from 5:30 to 7:00 P.M.**

**Anja Holm (Denmark)**
THE EVOLUTIONARY CONSERVED microRNA miR-137 REGULATES GENE EXPRESSION AND DIURNAL RHYTHM OF THE WAKE-PROMOTING HYPOCRETIN NEUROPEPTIDES

**Giovanni Piantoni (Netherlands)**
ULTRA-SLOW (0.0002 Hz) FLUCTUATIONS IN HUMAN INTRACRANIAL RECORDINGS CORRELATE WITH SLEEP

**Janet M.Y. Cheung (Canada)**
TRAJECTORIES OF USE OF OVER-THE-COUNTER AND NATURAL PRODUCTS FOR SLEEP: A FIVE YEAR FOLLOW-UP

**Lampros Perogamvros (Switzerland)**
EXPERIENCING FEAR IN DREAMS RELATES TO BRAIN RESPONSES TO AVERSIVE STIMULI DURING WAKEFULNESS

**Lucie Barateau (France)**
EXPLORATION OF CARDIAC AUTONOMIC FUNCTION BY MYOCARDIAL 123-I-MIBG SCINTIGRAPHY IN NARCOLEPSY TYPE 1

**Michael Prerau (United States)**
SEEKING A NEW STANDARD: A NOVEL CHARACTERIZATION OF SLEEP SPINDLES THROUGH TIME-FREQUENCY PEAK ANALYSIS

## World Sleep Day Distinguished Activity Awards

Dr. Elena Majano de Carías (El Salvador)
Dr. Nevin Zaki / Dr. Nesreen Elmorsy & Mansoura University Safety Society (Egypt)
Montida Veeravigrom, M.D. / Sleep Society of Thailand (Thailand)
Dr. David Lira (Peru)
Dr. Laura Palagini / Italian Association of Sleep Medicine (Italy)
María Montserrat Sánchez Ortuño / School of Nursing University of Murcia (Spain)

**2017 Honorable Mention**
Portuguese Sleep Association (Portugal)
Khosro Sadeghniiat Haghighi / Baharloo Hospital (Iran)
Lenise Jihe Kim / Brazilian Sleep Society (Brazil)
Dr. Miguel Meira e Cruz (Portugal)
Patricia van Wijk / SleepNet-BreatheNet Sleep Clinic (South Africa)
Dr. Surya Prakash (India)
Dr. Ravi Gupta / ISSR (India)
Rayleigh Ping-Ying Chiang / International Sleep Science and Technology Association & AM Life International (Malaysia)
Kenya Felicíssimo / Brazilian Association of Sleep (Brazil)

**2016 World Sleep Day Distinguished Activity Awardees**
Portuguese Association of Chronobiology and Sleep Medicine and the Portuguese Society of Hypertension (Portugal)
Brazilian Sleep Society (Brazil)
Liborio Parrino (Italy)
Matilde Valecia Flores (Mexico)
Am Life International / Lew Mun Yee (Malaysia)

**2015 World Sleep Day Distinguished Activity Awardees**
Australasian Sleep Association and Sleep Health Foundation / Sarah Biggs (Australia & New Zealand)
Elena Majano (El Salvador)
Kiril Terziyski (Bulgaria)
Peruvian Institute of Neurosciences – David Lira (Peru)
Russian Society of Somnologists Youth Committee of Russian Society of Somnologists (Russia)

nox medical

# SLEEP FOR ALL

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# World Sleep 2017 App

## Swipe Schedules, Science & Speakers

*Download the App that has it all.*

# *Easy as 1...2...3...*

## 1. Download

Visit the iTunes store or Google Play store to download the **World Sleep 2017 App**. View and search speaker names, sessions, rooms and topics in one easy App.

## 2. Connect

Don't forget to post your favorite science and selfies on Facebook and Twitter with the hashtag **#WorldSleep2017!**

## 3. Play

Pick up a **#WorldSleep2017 BINGO** card to share, post and win! Bingo winners will be entered to win a 1st Prize of $400 USD. Prizes for 2nd and 3rd place will be Complimentary Registration to World Sleep 2019 in Vancouver, Canada. Details on **worldsleepcongress.com/bingo.**

# Keynote Speakers

**Jerry Siegel, PhD**
**UCLA Center for Sleep Research (United States)**
**Monday, October 9**
**8:00am – 9:00am I Congress Hall**

**K01: The evolution of human sleep based on present-day hunter-gatherers**
How did humans sleep before the modern era? Because the tools to measure sleep under natural conditions were developed long after the invention of the electric devices suspected of delaying and reducing sleep, we investigated sleep in three preindustrial societies. We find that all three show similar sleep organization, suggesting that they express core human sleep patterns, most likely characteristic of pre-modern era Homo sapiens. Sleep periods, the times from onset to offset, averaged 6.9-8.5 hr, with sleep durations of 5.7-7.1 hr, amounts near the low end of those industrial societies [4-7]. There was a difference of nearly 1 hr between summer and winter sleep. None of these groups began sleep near sunset, onset occurring, on average, 3.3 hr after sunset. The sleep period consistently occurred during the nighttime period of falling environmental temperature, was not interrupted by extended periods of waking, and terminated near the nadir of daily ambient temperature. The daily cycle of temperature change, largely eliminated from modern sleep environments, may be a potent natural regulator of sleep. Napping occurred on <7% of days in winter and <22% of days in summer. Mimicking aspects of the natural environment might be effective in treating certain modern sleep disorders.

**Soňa Nevšímalová, MD, DSc**
**Charles University (Czech Republic)**
**Monday, October 9**
**10:30am – 11:15am I Congress Hall**

**K02: Central hypersomnias through the eyes of time**
Central hypersomnias have a long tradition in our country thanks to Bedrich Roth. The first cases of idiopathic hypersomnia were described more than 60 years ago, and Prof. Roth collected in the 70s and 80s the largest clinical cohort of 1,000 patients with excessive daytime sleepiness. Later research confirmed many of his ideas. According to present views, narcolepsy type 1 is an autoimmune disease due to a focal neurodegenerative process, while narcolepsy type 2 is a less clear clinical entity. Changes in biomarkers (particularly hypocretin and histamine) together with increasing attention to children´s cases helped to improve our knowledge of narcolepsy etiology. In spite of the disappearance of secondary narcolepsy from the latest International Classification (ICSD-3), rare cases due to brain damage by metabolic disorder (particularly Niemann-Pick type C disease) and/or tumors still exist. Idiopathic hypersomnia with long nighttime sleep, disappearing from the ICDS-3 as well, seems to be another separate disease with a strong genetic predisposition worth molecular analysis. Idiopathic hypersomnia without long sleep is a little vague clinical entity reminiscent of narcolepsy type 2. Of much etiological interest is also Kleine-Levin syndrome including different phenotypes with a variety of biomarkers and therapeutic results. Hence, central hypersomnias seem to be a hot topic for a new design of ICSD-4 classification.

**Yuichi Inoue, MD, PhD**
**Tokyo Medical University (Japan)**
**Monday, October 9**
**11:15am – 12:00pm I Congress Hall**

**K03: Racial difference in sleep disorders**
It is widely accepted that various factors including social life schedule, genetic background and bed room environment may affect nocturnal sleep. Given this, we should consider a possibility that frequency and symptomatic characteristics of sleep problems/disorders may differ depending on racial or regional difference. In this presentation, with aims of promoting sleep health and sleep medicine we would like to focus on difference in sleep habits as well as the prevalence and clinical characteristics (symptoms and treatment responses) of insomnia, narcolepsy, sleep related breathing disorders, movement disorders and parasomnias among populations in countries around the world.

## Keynote Speakers

**Clement Cheng-Hui Lin, MD**
**Chang Gung Craniofacial Center, Surgery and orthodontics (Taiwan)**
**Monday, October 9**
**3:30pm – 4:15pm I Congress Hall**

**K04: Dental sleep medicine**
Underdevelopment of craniofacial region can be accompanied by small skeletal framework, disproportion between structures, and narrowed pharyngeal airway. Segmental Maxillomandibular Rotational Advancement (SMMRA) is designed specifically for Far-East Asian OSA patients with underdeveloped maxillomandibular skeleton, featured by narrow maxilla with crowded upper dental arch, high mandibular plane angle, mandibular retrognathism, retruded chin and a generally narrowed pharyngeal airway. SMMRA advances maxilla by two segments, counterclockwisely rotates the maxillomandibular complex to improve the mandibular plane angle, advance the mandible to the optimal extent, and forward the anterior inferior mandible including chin and genioglossus tubercle. The surgery may normalize the airway, facial skeleton, occlusion, and facial aesthetics at the same time.

**Oliviero Bruni, MD**
**Sapienza University of Rome, Pediatrics (Italy)**
**Monday, October 9**
**4:15pm – 5:00pm I Congress Hall**

**K05: History of pediatric sleep and the contribution of sleep microstructure**
The aim of this presentation is to depict the discovery of sleep physiology and pathology in infants and the emergence of the discipline of Pediatric Sleep Medicine as a relatively autonomous entity. The gradual awareness regarding sleep disorders in infants and children began in the 19th century; children sleep had been neglected until the end of the last century with the main textbook of Pediatrics reporting none or only few paragraphs devoted to pediatric sleep, although the first observation that lead to the discovery of REM sleep was made on neonates and infants, as well as the first study on the negative behavioral consequences of sleep apnea was run in children. Researchers from different countries made important contributions for the development of the pediatric sleep medicine and actually different health providers (pediatric pulmonologists, otolaryngologists, neurologists, orthodontists and psychologists) recognize the fundamental role of sleep for the child health and development. In the last few decades, the analysis of sleep microstructure and of cyclic alternating pattern (CAP) allowed a better understanding of the neurophysiological mechanisms of sleep disturbance, especially in children. CAP can be considered as a window on pediatric sleep, allowing a new vision on how the sleeping brain is influenced by a specific pathology or how sleep protecting mechanisms try to counteract internal or external disturbing events.

# Commemorative Posters

Posters commemorating World Sleep 2017 are available for purchase to congress attendees. **Pick up your poster at the Registration Desk!**

# Keynote Speakers

**Chiara Cirelli, MD, PhD**
**University of Wisconsin-Madison (United States)**
**Tuesday, October 10**
**8:00am – 9:00am I Congress Hall**

**K06: Sleep and synaptic homeostasis**
Sleep is universal, tightly regulated, and many cognitive functions are impaired if we do not sleep. But why? Why do our brains need to disconnect from the environment for hours every day? The synaptic homeostasis hypothesis (SHY) states that sleep is the price we pay for brain plasticity and predicts that synaptic connections throughout the brain undergo net potentiation during wakefulness, while we learn new facts and regularities about the environment. Synaptic renormalization during sleep restores the homeostasis of energy and cellular supplies, with beneficial effects at the cellular and systems level, including memory acquisition, consolidation, integration, and smart forgetting. I will discuss the rationale underlying this hypothesis and summarize previous electrophysiological, molecular and genetic studies in flies, rodents and humans that confirmed SHY's main predictions. Synaptic size correlates with synaptic strength and most excitatory synapses in the cortex occur on spines. Thus, a strong prediction of SHY is that cortical spines should grow after wake and shrink after sleep, independent of circadian time. I will present new ultrastructural results obtained in mice using serial block face scanning electron microscopy that confirm this prediction, supporting the hypothesis that a core function of sleep is to renormalize overall synaptic strength increased by wake.

**Mehdi Tafti, PhD**
**University of Lausanne, Basic Science (Switzerland)**
**Tuesday, October 10**
**10:30am – 11:15am I Congress Hall**

**K07: Sleep: From single neuron to behavior**
Sleep is conserved throughout the evolution independent of the organization of the nervous system. This suggests that mechanisms regulating this complex behavior must also be conserved at the very basic molecular and cellular levels. We have shown that cortical cultures show robust similarities in terms of electrophysiology, transcription, and metabolism to the intact cortex of living animals. That sleep can occur in in vitro models is now reported by several groups. Such a simple model is very powerful for discovering the molecular and cellular bases of sleep. We recently showed that if cortical cultures are stimulated with waking neuromodulators, they show surprising homeostatic adaptations, very similar to the effects of sleep deprivation in animals. We also used this model to dissect the signaling pathways leading to the accumulation of plasticity-related transcripts during wakefulness. A major and highly evolutionary conserved pathway (Erk) was identified and we showed that Erk phosphorylation during wakefulness regulates sleep-related genes, sleep duration and consolidation in mice. Whether sleep is a self-sustained, cell autonomous, or a neural network property is under investigation.

**Juliane Winkelmann, MD, PhD**
**Neurogenetics, Technische University Munich (Germany)**
**Chair, Institute of Neurogenomics, Helmholtz Zentrum München**
**Tuesday, October 10**
**11:15am – 12:00pm I Congress Hall**

**K08: Restless legs syndrome: Towards a new concept of the disease**
Restless legs syndrome: towards a new concept of the disease. Genome-wide association studies led to the identification of first genetic risk variants for RLS and ongoing meta-analysis of large consortia yealed to many new risk loci. Variants detected by this approach are common genetic variants, which individually confer only a minor increase in risk of the disease. Large scale sequencing studies complemented the picture and showed that RLS is a complex genetic disorders where common and rare genetic variants contribute to the phenotype. This knowledge changed our idea about our pathophysiological concept. Furthermore, we are gaining new ideas towards the mode of action of drugs and potential new drugs.

# Keynote Speakers

**Michael R. Irwin, MD**
**UCLA Semel Institute for Neuroscience, and David Geffen School of Medicine at UCLA (United States)**
**Tuesday, October 10**
**3:30pm – 4:15pm I Congress Hall**

**K09: Chronic insomnia and the immune response**
Insomnia is considered a public health epidemic, which contributes to increased risk of inflammatory disorders and all-cause mortality. Dr. Irwin will provide an integrated understanding of the reciprocal relationships between sleep and inflammation; present innovative findings on impact of sleep on the regulation of genomic, cellular, and systemic markers of inflammation, as well as molecular processes of cellular aging; and demonstrate the robust efficacy of insomnia treatment to reverse inflammatory activation in humans.

**Allison Harvey, PhD**
**University of California – Berkeley (United States)**
**Tuesday, October 10**
**4:15pm – 5:00pm I Congress Hall**

**K10: Treating sleep and circadian problems: A transdiagnostic approach**
Past treatments for sleep and circadian disturbances have been disorder-focused—they have treated a specific sleep problem (e.g., insomnia) in a specific diagnostic group (e.g., depression). However, real life sleep and circadian problems are often not so neatly categorized: Features of insomnia commonly overlap with features of hypersomnia, delayed sleep phase and irregular sleep-wake schedules. To address this complexity, the process of developing and testing the Transdiagnostic Intervention for Sleep and Circadian Dysfunction (TranS-C) will be described. TranS-C is transdiagnostic in two ways; it treats a range of the most common sleep and circadian problems across mental disorders.

**Fang Han, MD**
**Peking University (China)**
**Wednesday, October 11**
**8:00am – 9:00am I Congress Hall**

**K11: H1N1, seasonality and childhood narcolepsy**
Narcolepsy is recognized different across ethnic groups in many aspects including prevalence, predisposing factors and clinical presentations. In a series of 2500 narcolepsy cataplexy patients received over 20 years in a sleep lab in China, narcolepsy symptoms onset is highly correlated with seasonal and annual patterns of upper airway infections. More specially, a large rise in childhood onset cases associated with the pH1N1 outbreak, but independent of vaccination, was noted in China, and the increased incidence returned to previous levels in 2011 till to the end of 2016. This allows further cross-ethnic comparisons, and facilitate our understanding of the neurologic autoimmune mechanisms of narcolepsy.

**Isabelle Arnulf, MD, PhD**
**Pitié-Salpêtrière University Hospital (France)**
**Wednesday, October 11**
**9:45am – 10:30am I Congress Hall**

**K12: Parasomnias: A window into dream**
Parasomnias in REM sleep (RBD) are newly identified behaviors strongly associated with neurodegeneration. Researches are now focused on following other early signs of neurodegeneration and developing neuroprotective therapy. In contrast, NREM parasomnias (sleepwalking, sleep terrors) have been identified for a century, but somehow neglected and considered as benign or childish behaviors. We would like to raise attention on the fact that these two adult parasomnias correspond to enacted dreams. In addition to be treatable medical disorders, they open a brief but exceptional window into the dreaming cognitive and motor activity. The ethology of all behaviors during sleep is an open field for investigation, including sleep-associated speeches, facial expressions, and movements. These dreaming mental images are made visible for external investigators. This is a plea for giving as much importance to video and audio at night as to functional brain imaging, in order to access to the complex brain functioning during sleep.

# Keynote Speakers

**Michael Chee, MBBS**
**Duke-NUS Medical School (Singapore)**
**Wednesday, October 11**
**10:30am – 11:15am I Congress Hall**

**K13: Sleep restriction in adolescents: Cognitive effects and remedies'**
Adolescents in the developed world are sleeping less compared to previous generations. Reduced sleep is most prominent in East Asian countries where scholastic achievement is highly venerated. A snapshot of current sleep behaviors and factors underlying short sleep in one such country will be presented. Even in high performing adolescents, sleep restriction to 5h/night over a simulated school week causes degradation in vigilance, working memory, processing speed and mood. Such changes are exacerbated by as second cycle of sleep restriction. The encoding of schematic knowledge is affected but some other higher cognitive functions like creativity remain remarkably resistant to a week of sleep restriction. Napping for one hour in the afternoon can be of help for some cognitive operations. Starting school later has a positive effect on mood. Providing tools for evaluating time use can help shift behavior. The benefit of an integrated approach towards improving adolescent sleep involving multiple stakeholders will be discussed.

**Debra Skene, BPharm, MSc, PhD**
**University of Surrey (United Kingdom)**
**Wednesday, October 11**
**11:15am – 12:00pm I Congress Hall**

**K14: Circadian rhythm sleep disorders: Challenges in diagnosis and treatment**
The mismatch between the circadian timing system and behavioral rhythms in sleep/wake and feeding/fasting has both acute and chronic adverse effects on many physiological systems. Elucidation of the molecular clockwork, the melanopsin-mediated photic pathways and discovery of peripheral clocks throughout the body has provided not only new opportunities but also challenges in the diagnosis and treatment of circadian rhythm disorders. Accurate diagnosis of both central and peripheral clock timing in humans and the role of photic and nonphotic time cues (meals, melatonin) in synchronizing/resetting these rhythms will be discussed.

**Mary Morrell, PhD**
**London, Sleep breathing disorders (United Kingdom), President of British Sleep Society**
**Wednesday, October 11**
**12:30pm – 1:15pm I Congress Hall**

**K15: Control of sleep-related breathing**
This keynote lecture will explore the interactions between sleep and respiratory control that lead to sleep-related breathing disorders. In particular how measurement of physiological parameters such as upper-airway collapsibility, arousal threshold and loop gain may predict the development of sleep-related breathing disorders and responses to treatment. Such a personalised approach my improve adherence with therapy and help to target those who will benefit most from new treatments. Specifically in vulnerable groups such older people and patients with heart failure, in whom changes in sleep and respiratory control predispose to high rates of sleep-related breathing disorders.

**Doug McEvoy, MD**
**Adelaide Institute for Sleep Health (Australia)**
**Wednesday, October 11**
**1:15pm – 2:00pm I Congress Hall**

**K16: Cardiovascular risk, OSA and CPAP (SAVE study)**
Summary can be viewed online at www.worldsleepcongress.com.

# Schedule at a Glance

## Saturday

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| **14th Czech-Slovak and 19th Congress of the Czech Society for Sleep Research and Sleep Medicine** | 8:00am - 11:00pm I Meeting Hall 1A & 1B |
| **C01 Pediatric sleep medicine** | 8:00am - 5:00pm I Club E |
| C02 Insomnia therapeutics | 8:00am - 5:00pm I Club A |
| C100 International RLS Study Group: RLS is not just leg kicking | 8:00am - 5:30pm I Club H |
| C05 Technology and effective business models in sleep medicine | 8:00am - 12:00pm I Club C |
| C06 Biology and pharmacology of sleep | 8:00am - 12:00pm I Club B |
| C07 Circadian medicine | 8:00am - 12:00pm I Club D |
| C08 Ambulatory sleep medicine | 1:00pm – 5:00pm I Club C |
| C09 Sleep stages scoring and apnea scoring using computer lab equipment | 1:00pm - 5:00pm I Room 221 |
| C10 Differential diagnosis of sleep disorders: Video seminar of different sleep disorders and review of treatment options | 1:00pm - 5:00pm I Club B |
| C101 Affiliated Meeting of Academy of Applied Myofunctional Sciences (AAMS) | 12:30pm - 6:00pm I Club D |

## Sunday

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| C03 State of the field | 8:00am - 5:00pm I Club E |
| C04 Modifying the upper airway for sleep apnea management | 8:00am - 4:30pm I Club D |
| C11 Restless legs syndrome | 8:00am - 12:00pm I Club A |
| C12 Pushing the envelope of sleep apnea medicine | 8:00am - 12:00pm I Club C |
| C13 Heart and sleep | 8:00am - 12:00pm I Club B |
| **ISSTA 5th International Sleep Science and Medicine Expert Forum** | 8:00am - 12:00pm I Room 220 |
| T101 Technologist Program | 9:00am - 5:00pm I Club H |
| C14 Dental sleep medicine | 12:30pm - 4:30pm I Club C |
| C15 Sleep and neurodegeneration | 12:30pm - 4:30pm I Club A |
| C16 Sleep related movements: Standards for scoring, interpreting, reporting and publishing | 12:30pm - 4:30pm I Club B |
| **Romanian Association for Pediatric Sleep Disorders: How early is too early for education in pediatric sleep - beyond the influence of light and circadian biology** | 1:00pm – 2:30pm I Room 220 |
| Opening Ceremony: Concert - Prague Orchestra | 6:00pm - 10:00pm I Municipal House |

## Monday

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|---|---|
| K01 The evolution of human sleep based on present-day hunter-gatherers | 8:00am - 9:00am I Congress Hall |
| S01 SERVE-HF and beyond | 9:00am - 10:30am I Congress Hall |
| S02 Sleep and hypertension - causality and co-morbidities | 9:00am - 10:30am I Meeting Hall IV |
| S03 Sleep and stress: A relationship lasting a lifetime | 9:00am - 10:30am I Meeting Hall V |
| **S04 The importance of sleep in children around the world: Factors which affect outcomes** | 9:00am - 10:30am I North Hall |
| S05 Sleep and circadian factors in metabolic risk: A translational perspective | 9:00am - 10:30am I Club A and B |
| S06 Role of neuroimaging: Brain characteristics in sleep disorders | 9:00am - 10:30am I Meeting Hall 1A |
| S07 The role of genetic biomarkers in sleep medicine | 9:00am - 10:30am I Meeting Hall 1B |
| S08 Iron metabolism: Genetics, environment and restless legs syndrome (RLS) | 9:00am - 10:30am I Club D and E |

Monday

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| S09 Physiological responses of oromaxillofacial anatomy in obstructive sleep apneics undergoing maxillomandibular advancement (MMA) | 9:00am - 10:30am I Terrace 1 |
| T01 Hands-on head wiring, with paediatric aspects of polysomnography | 9:00am - 10:30am I Club H |
| K02 Central hypersomnias through the eyes of time | 10:30am - 11:15am I Congress Hall |
| S10 REM-sleep and depression: Research into clinically meaningful biomarkers | 10:30am - 12:00pm I Meeting Hall IV |
| S11 The role of nocturnal eating on insomnia, diurnal sleepiness and obesity | 10:30am - 12:00pm I Meeting Hall V |
| S12 The interplay between sleep and academic performance: From neural mechanisms to educational policy | 10:30am - 12:00pm I North Hall |
| S13 OSA and atherogenesis: Reversible or not? | 10:30am - 12:00pm I Club A and B |
| S15 Local sleep and local wake: From basic science to sleep arousal disorders | 10:30am - 12:00pm I Meeting Hall 1B |
| S16 Nasal obstruction and its role in sleep disordered breathing | 10:30am - 12:00pm I Terrace 1 |
| O01 Sleep breathing disorders oral abstract presentations | 10:30am – 12:00pm I Club D and E |
| O02 Insomnia oral abstract presentations | 10:30am – 12:00pm I Club H |
| K03 Racial difference in sleep disorders | 11:15am - 12:00pm I Congress Hall |
| Poster Abstracts 1 | 12:00pm - 12:30pm I Panorama Hall |
| TEVA Industry Satellite Symposium: Challenges of recognizing and treating excessive sleepiness | 12:30pm - 2:00pm I Congress Hall |
| Merck Industry Satellite Symposium: New approaches to personalizing treatment of insomnia: Why and how? | 12:30pm - 2:00pm I Meeting Hall IV |
| Philips Industry Satellite Symposium: Boosting slow wave sleep to improve cognitive outcomes | 12:30pm - 2:00pm I North Hall |
| World Sleep Day Networking Event | 1:00pm I Room 201 |
| S17 New evidence on the treatment of insomnia comorbid with depression, pain, sleep apnea or circadian disorders | 2:00pm - 3:30pm I Congress Hall |
| S18 Beyond academic walls: Society education as an essential field in sleep science | 2:00pm - 3:30pm I Meeting Hall IV |
| S19 Sleep disorders in the adolescent population: The missing link | 2:00pm - 3:30pm I North Hall |
| S20 Advances in obstructive sleep apnea pathogenesis and non-CPAP therapies | 2:00pm - 3:30pm I Club A and B |
| S21 European Narcolepsy Network (EU-NN) - Narcolepsy: From etiology to treatment | 2:00pm - 3:30pm I Meeting Hall 1A |
| S22 The waking, sleeping and dreaming brain: New circuits and insights | 2:00pm - 3:30pm I Meeting Hall 1B |
| S23 In search of alternatives to dopaminergic ligands in RLS/WED: The emerging role of glutamate and adenosine | 2:00pm - 3:30pm I Club D and E |
| S24 Personalization of mandibular advancement devices: Digital analysis of the movements achieved and mathematical model for the study of the jaw Kinematics. | 2:00pm - 3:30pm I Terrace 1 |
| O03 Sleep breathing disorders oral abstract presentations | 2:00pm – 3:30pm I Meeting Hall V |
| T02 Cardiopulmonary resuscitation for sleep technologists part 1 | 2:00pm - 3:30pm I Club H |
| K04 Dental Sleep Medicine | 3:30pm - 4:15pm I Congress Hall |
| S25 Measuring quality in the delivery of sleep medicine: Metrics and patient reported outcomes | 3:30pm - 5:00pm I Meeting Hall IV |
| S26 Factors in night and rotating shift work associated with poor sleep and health | 3:30pm - 5:00pm I Meeting Hall V |


View the electronic final program to read full summary, learning objectives, target audience and more on worldsleepcongress.com

Monday

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| S27 Functioning of the restless legs syndrome (RLS) brain: Excitability and control | 3:30pm - 5:00pm I North Hall |
| S28 Arousability and loop gain: The factors that bridge insomnia and sleep-disordered breathing | 3:30pm - 5:00pm I Club A and B |
| S29 New developments in narcolepsy diagnosis, research and therapeutics | 3:30pm - 5:00pm I Meeting Hall 1A |
| S30 Behavioral and neurophysiological influences of waking system on sleep | 3:30pm - 5:00pm I Meeting Hall 1B |
| O04 Neurological sleep disorders affecting sleep oral abstract presentations | 3:30pm – 5:00pm I Club D and E |
| O05 Psychiatric disorders affecting sleep/wake oral abstract presentations | 3:30pm – 5:00pm I Terrace 1 |
| O06 Neural plasticity, memory, parasomnia and pharmacology oral abstract presentations | 3:30pm – 5:00pm I Club H |
| K05 History of pediatric sleep and the contribution of sleep microstructure | 4:15pm - 5:00pm I Congress Hall |
| Poster Abstracts 2 | 5:00pm - 5:30pm I Panorama Hall |
| S31 Parasomnias: Recent advances in etiology, assessment and treatment | 5:30pm - 7:00pm I Congress Hall |
| S32 Novel treatments for age-related sleep disruption | 5:30pm - 7:00pm I Meeting Hall IV |
| S34 Pediatric OSA: Diagnostic and treatments involving a multidisciplinary team | 5:30pm - 7:00pm I North Hall |
| S35 Minimally invasive implantable approaches for OSA | 5:30pm - 7:00pm I Club A and B |
| S36 Understanding the potential role for Mn in RLS etiology using novel human and animal models | 5:30pm - 7:00pm I Meeting Hall 1A |
| S37 Basic research & new treatment approaches in sleep related breathing disorders | 5:30pm - 7:00pm I Meeting Hall 1B |
| S38 Young Investigator: Sleep research in neurodegeneration | 5:30pm - 7:00pm I Club D and E |
| S39 Obstructive sleep apnea severity and the role of oral appliances | 5:30pm - 7:00pm I Terrace 1 |
| O07 Narcolepsy Oral Abstract Presentations | 5:30pm – 7:00pm I Meeting Hall V |
| T03 Cardiopulmonary resuscitation for sleep technologists part 2 | 5:30pm - 7:00pm I Club H |
| Gala Dinner | 7:30pm - 10:30 pm I Slovansky dum (Slavic House) |

Tuesday

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|---|---|
| K06 Sleep and Synaptic homeostasis | 8:15am - 9:00am I Congress Hall |
| S41 Sleep and sex: What can go wrong? | 9:00am - 10:30am I Meeting Hall IV |
| S42 Sleep dependent brain oscillations as early markers of neurodegeneration | 9:00am - 10:30am I Meeting Hall V |
| S43 Sleep related learning and behavioural functioning in children with developmental disorders | 9:00am - 10:30am I North Hall |
| S44 Myofunctional therapy as an adjunct treatment for sleep disordered breathing: Validation of screening tools and objective measurements of progress for an emerging standard of care | 9:00am - 10:30am I Club A and B |
| S46 New approaches to studies of genetics of sleep and its disorders | 9:00am - 10:30am I Meeting Hall 1B |
| S47 Insomnia phenotypes: Identification and treatment response | 9:00am - 10:30am I Club D and E |
| S48 NON-PAP treatment of obstructive-sleep-apnea in late teen-agers and early adulthood: What can be done, orthodontia and surgery? | 9:00am - 10:30am I Terrace 1 |

Tuesday

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| T04 Group scoring discussion: Respiratory related breathing disorders | 9:00am - 10:30am I Club H |
| K07 Sleep: From single neuron to behavior | 10:30am - 11:15am I Congress Hall |
| S49 Daytime sleepiness: Newest research results & experts' opinions | 10:30am - 12:00pm I Meeting Hall IV |
| S50 Multiple sclerosis, sleep and sleep disorders | 10:30am - 12:00pm I Meeting Hall V |
| S51 Diagnosis, morbidity and treatment of pediatric OSA: What's new? | 10:30am - 12:00pm I North Hall |
| S52 Dynamic circuit connecting the circadian clock and sleep/wakefulness | 10:30am - 12:00pm I Club A and B |
| S53 How the reticular activating system (RAS) modulates perception and movement | 10:30am - 12:00pm I Meeting Hall 1A |
| S54 Menopause matters: Hormones, hot flashes and sleep disorders | 10:30am - 12:00pm I Meeting Hall 1B |
| S55 OSA treatment in adult [men and women] non compliant with nasal PAP, indication and potential treatment: surgical approaches and nerve implantation | 10:30am - 12:00pm I Terrace 1 |
| O08 REM behavior disorders oral abstract presentations | 10:30am – 12:00pm I Club D and E |
| O09 Sleep breathing disorders oral abstract presentations | 10:30am – 12:00pm I Club H |
| K08 Restless legs syndrome: Towards a new concept of the disease | 11:15am - 12:00pm I Congress Hall |
| Poster Abstracts 3 | 12:00pm - 12:30pm I Panorama Hall |
| Cataplexy: From fundamentals to the clinic | 12:30pm - 2:00pm I Congress Hall |
| Evolution of sleep medicine – Challenging the status quo | 12:30pm - 1:15pm I North Hall |
| Member Meetings of WASM and WSS | 1:00pm - 2:00pm I Club A and B |
| S56 What can we learn from recent large negative clinical trials in sleep-disordered breathing? | 2:00pm - 3:30pm I Congress Hall |
| S57 Ascertainments of RBD and its clinical implications for neurodegeneration | 2:00pm - 3:30pm I Meeting Hall IV |
| S58 Environmental challenges: The impact of artificial light on sleep and circadian biology | 2:00pm - 3:30pm I Meeting Hall V |
| S59 Developmental aspects of sleep's influence on memory and general cognitive abilities | 2:00pm - 3:30pm I North Hall |
| S60 Sleep loss and socio-emotional functioning | 2:00pm - 3:30pm I Club A and B |
| S61 Idiopathic hypersomnia: A neglected disorder | 2:00pm - 3:30pm I Meeting Hall 1A |
| S62 Sleep slow waves: From cells to consciousness | 2:00pm - 3:30pm I Meeting Hall 1B |
| S63 OSA, Upper-airway surgery and MAD: Techniques to select location, surgical techniques to be used, personalization of mandibular-advancement-device | 2:00pm - 3:30pm I Terrace 1 |
| O10 Restless legs syndrome (RLS/WED) oral abstract presentations | 2:00pm – 3:30pm I Club D and E |
| T05 Breathing Re-Education to achieve nasal and normal minute volume for sleep | 2:00pm - 3:30pm I Club H |
| K09 Chronic insomnia and the immune response | 3:30pm - 4:15pm I Congress Hall |
| S64 Understanding the pathophysiology of RBD and REM sleep | 3:30pm - 5:00pm I Meeting Hall IV |
| S65 Sleep-related hypermotor epilepsy (SHE): From the basic mechanisms to the differential diagnosis | 3:30pm - 5:00pm I Meeting Hall V |
| S66 Deficient sleep in children and adolescents: Generating solutions for a global epidemic | 3:30pm - 5:00pm I North Hall |

Tuesday

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|---|---|
| S67 Respiratory muscle function and intervention of upper airway in patients with sleep disordered breathing | 3:30pm - 5:00pm I Club A and B |
| S68 Sleep disorders in post-menopausal women: The impact on health | 3:30pm - 5:00pm I Meeting Hall 1A |
| S69 Effects of sleep deprivation: Novel agents and mechanisms | 3:30pm - 5:00pm I Meeting Hall 1B |
| O11 Sleep breathing disorders oral abstract presentations | 3:30pm – 5:00pm I Club D and E |
| O12 Behavior, cognition and dreaming and neurological sleep disorders affecting sleep oral abstract presentations | 3:30pm – 5:00pm I Terrace 1 |
| O13 Basic research oral abstract presentations | 3:30pm – 5:00pm I Club H |
| K10 Treating sleep and circadian problems: A transdiagnostic approach | 4:15pm - 5:00pm I Congress Hall |
| Poster Abstracts 4 | 5:00pm - 5:30pm I Panorama Hall |
| S71 Sleep, clocks and neurodegeneration | 5:30pm - 7:00pm I Meeting Hall IV |
| S72 The duality of sleep movement | 5:30pm - 7:00pm I Meeting Hall V |
| S73 Practical aspect of pediatric sleep medicine | 5:30pm - 7:00pm I North Hall |
| S74 Extracting sleep breathing phenotypes from lab and home data | 5:30pm - 7:00pm I Club A and B |
| S75 Sleep and mental health in a changing society | 5:30pm - 7:00pm I Meeting Hall 1A |
| S76 Sleep, slow waves and brain temperature: Insights from hibernators | 5:30pm - 7:00pm I Meeting Hall 1B |
| S77 Young Investigator: Sleep research in respiratory sleep medicine | 5:30pm - 7:00pm I Club D and E |
| O14 Aging and excessive daytime sleepiness oral abstract presentations | 5:30pm – 7:00pm I Terrace 1 |
| T06 The 3 C's: Credentialing, Certification, CECs | 5:30pm - 7:00pm I Club H |
| RS1 Society Symposium ASRS and IASSA: Sleep medicine in Asia: Across the discipline | 7:00pm - 9:00pm I Meeting Hall IV |
| RS2 Society Symposium ASA: Biomarkers for sleep disordered breathing: Clinical, physiological, neurocognitive and genetic | 7:00pm - 9:00pm I Terrace 1 |
| RS3 Society Symposium ESRS and WSS: Sleepiness and accidents | 7:00pm - 9:00pm I North Hall |
| RS4 Society Symposium SRS: Circadian rhythm sleep-wake disorders: Looking to the future | 7:00pm - 9:00pm I Meeting Hall V |

Wednesday

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|---|---|
| K11 H1N1, seasonality and childhood narcolepsy | 8:00am - 9:00am I Congress Hall |
| S78 Sleep at high altitude | 9:00am - 10:30am I Meeting Hall IV |
| S79 Cerebral networks during sleep and after sleep deprivation | 9:00am - 10:30am I Meeting Hall V |
| S80 Sleep during early stage of life affects long-term outcomes | 9:00am - 10:30am I North Hall |
| S81 Sleep, brain-heart relationships and sudden death risk | 9:00am - 10:30am I Club A and B |
| S82 Animal models for restless legs syndrome: New developments and future challenges | 9:00am - 10:30am I Club D and E |
| T07 Group scoring discussion: PLMD | 9:00am - 10:30am I Room 221 |
| K12 Parasomnias: A window into dream | 9:45am - 10:30am I Congress Hall |
| K13 Sleep restriction in adolescents: Cognitive effects and remedies' | 10:30am - 11:15am I Congress Hall |
| S83 The relationship between sleep, pain and fatigue following traumatic brain injury: From bench to bedside | 10:30am - 12:00pm I Meeting Hall IV |
| S84 Cortical nNOS neurons: A nexus between homeostatic sleep drive and EEG slow wave activity? | 10:30am - 12:00pm I Meeting Hall V |
| S85 Suicide, sleep and circadian rhythms in adolescents | 10:30am - 12:00pm I North Hall |
| S86 Vitamin D and sleep | 10:30am - 12:00pm I Club A and B |
| O15 Chronobiology/circadian disorders oral abstract presentations | 10:30am – 12:00pm I Club D and E |

Wednesday

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|---|---|
| O16 Sleep breathing disorders oral abstract presentations | 10:30am – 12:00pm I Terrace 1 |
| O17 Sleep health and other Issues oral abstract presentations | 10:30am – 12:00pm I Club H |
| K14 Circadian rhythm sleep disorders: Challenges in diagnosis and treatment | 11:15am - 12:00pm I Congress Hall |
| Poster Abstracts 5 | 12:00pm - 12:30pm I Panorama Hall |
| K15 Control of sleep-related breathing | 12:30pm - 1:15pm I Congress Hall |
| K16 Cardiovascular risk, OSA and CPAP (SAVE study) | 1:15pm - 2:00pm I Congress Hall |
| S87 Phenotyping and genotyping sleep apnea | 2:00pm - 3:30pm I Congress Hall |
| S88 Novel biomarkers for sleep insufficiency and sleep disorders | 2:00pm - 3:30pm I Meeting Hall IV |
| S89 Restless legs syndrome, augmentation and dopamine treatment - clinical data and emerging new models | 2:00pm - 3:30pm I Meeting Hall V |
| S90 Sleep across cultures in young children from around the world | 2:00pm - 3:30pm I North Hall |
| S91 Improving insomnia treatments: Less pain, more gain? | 2:00pm - 3:30pm I Club D and E |
| O18 Technology and technical oral abstract presentations | 2:00pm – 3:30pm I Club A and B |
| O19 Sleep breathing disorders oral abstract presentations | 2:00pm – 3:30pm I Terrace 1 |
| T08 Oximetry interpretation | 2:00pm - 3:30pm I Club H |
| S92 Creating a framework for analyses of movement patterns of challenging/disruptive sleep and wake behaviours | 3:30pm - 5:00pm I Congress Hall |
| S93 Infra-slow (< 0.1 Hz) oscillations: from the cell to the clinic | 3:30pm - 5:00pm I Meeting Hall IV |
| S94 Circadian rhythm sleep-wake disorders and insomnia: What are the consequences and how do we optimize treatment? | 9:00am - 10:30am I Terrace 1 |
| S95 Hypertrophic cardiomyopathy and sleep disordered breathing: Implications for atrial arrhythmias and sudden cardiac death | 3:30pm - 5:00pm I North Hall |
| S96 Autonomic disorders in sleep medicine | 3:30pm - 5:00pm I Club A and B |
| S33 Sleep and the kidney | 3:30pm - 5:00pm I Club H |
| O20 Basic research oral abstract presentations | 3:30pm – 5:00pm I Club D and E |
| O21 Insomnia oral abstract presentations | 3:30pm – 5:00pm I Meeting Hall V |
| O22 Restless legs syndrome (RLS/WED) and movement disorders oral abstract presentations | 3:30pm – 5:00pm I Terrace 1 |
| Poster Abstracts 6 | 5:00pm - 5:30pm I Panorama Hall |
| S97 Sleep and sexual dysfunction | 5:30pm - 7:00pm I Meeting Hall V |
| S99 Young Investigator: Oral presentation | 5:30pm - 7:00pm I Club D and E |
| S98: Sleep and interventions in children and young people with autism spectrum disorder | 5:30pm - 7:00pm I North Hall |
| S100 The characteristics of type 2 narcolepsy in Asian patients | 5:30pm - 7:00pm I Congress Hall |
| O23 Sleep breathing disorders and research oral abstract presentations | 5:30pm – 7:00pm I Terrace 1 |
| T09 Experiences in sleep medicine around the world | 5:30pm - 7:00pm I Club H |
| Closing Ceremony | 7:00pm - 7:30pm I Congress Hall |

# Prague Metro Pass

All attendees of World Sleep 2017 will receive a complimentary Metro & Bus Pass for any public transportation between the dates of October 7-11, 2017.

**Passes are included in your delegate bag.**



View the electronic final program to read full summary, learning objectives, target audience and more on worldsleepcongress.com

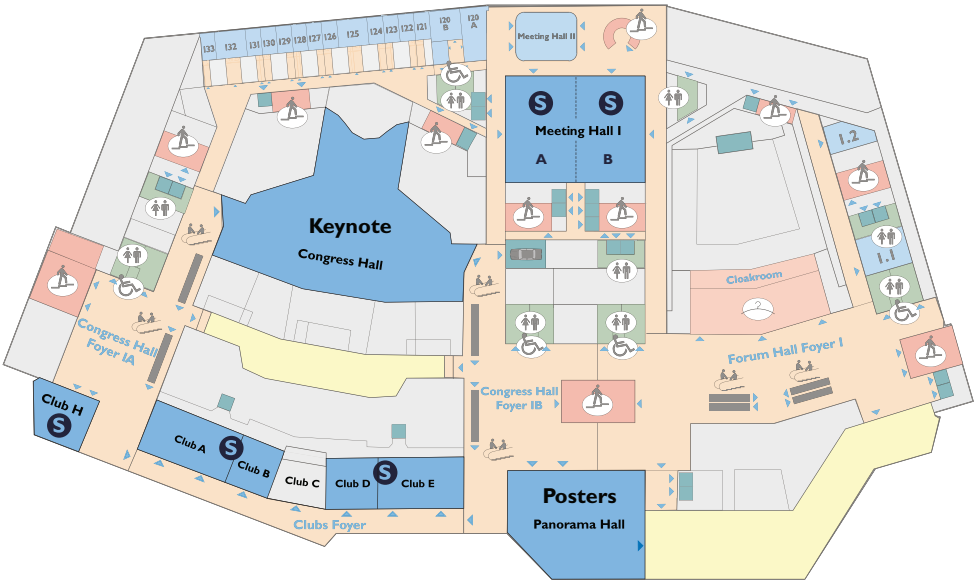
# Prague Congress Centre

## Ground Level

Registration Desk
Coat Check

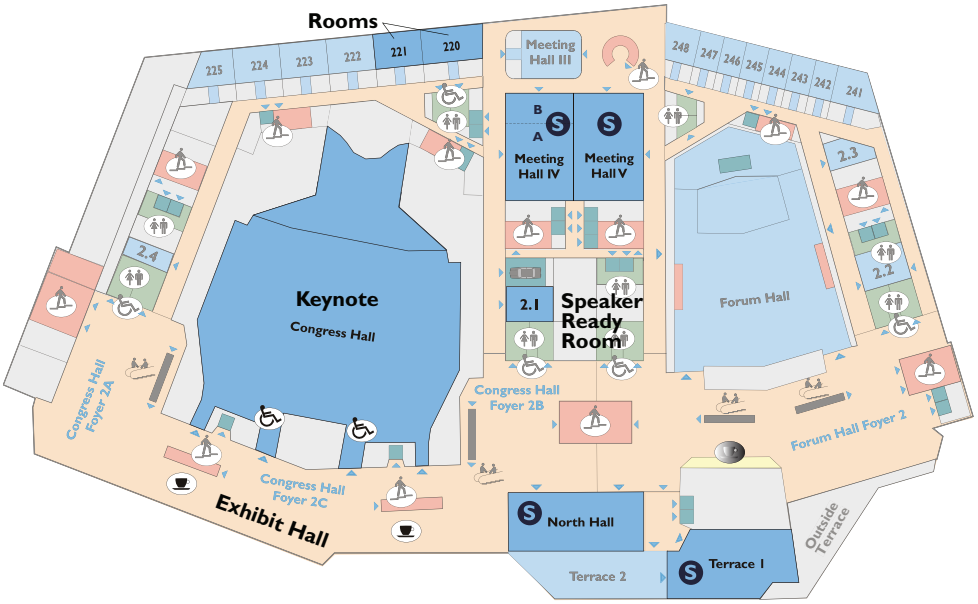
## First Floor

Congress Hall – Keynote
Club AB – Breakout Sessions
Club DE – Breakout Sessions
Club H – Breakout Sessions
Panorama Hall – Abstract Posters
Meeting Hall IA – Breakout Sessions
Meeting Hall IB – Breakout Sessions




## Second Floor

Exhibit Hall
Congress Hall – Keynote
Room 220 – Executive Office
Room 221 – Board Room
Room 2.1 – Speaker Ready Room
North Hall – Breakout Sessions
Meeting Hall IV – Breakout Sessions
Meeting Hall V - Breakout Sessions
Terrace 1 - Breakout Sessions



# Scientific Content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Symposia I Oral Abstracts I Technologist Sessions I Poster Presentations




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## 14th Czech-Slovak and 19th Congress of the Czech Society for Sleep Research and Sleep Medicine

8:00am - 5:00pm I Meeting Hall 1A & 1B

8:00am - 9:00am
**Registration**

9:00am - 10:30am
**World Sleep - Czech Sleep Society Symposium**

**The significance of periodic and non-periodic limb movements during**
*L. Ferini-Strambi (Italy)*

**Actigraphy and periodic limb movements**
*D. Kemlink (Czech Republic)*

**Idiopathic REM sleep behavior in Parkinson disease?**
*A. Iranzo (Spain)*

**Rhythmic movement disorder**
*I. Příhodová (Czech Republic)*

11:00am - 12:00pm
**Sleep in neurological diseases**

12:00pm - 1:00pm
**Sleep disordered breathing and cardio-metabolic diseases**

1:00pm - 2:00pm
**Lunch**

2:00pm - 4:00pm
**Diagnosis and treatment of sleep disordered breathing**

4:00pm - 5:00pm
**Plenary meeting of the Czech Sleep Society**

5:30pm - 6:30pm
**Industry sponsored symposium**

8:00pm - 11:00pm
**Dinner**

## C01 Pediatric sleep medicine

8:00am - 5:00pm I Club E

**Chairs:**
D. Gozal (United States), O. Bruni (Italy), R. Silvestri (Italy)

8:00am - 8:20am
**Introduction**
*R. Silvestri (Italy)*

8:20am - 9:00am
**Insomnia: Clinical and diagnostic aspects**
*O. Bruni (Italy)*

9:00am - 9:30am
**Comorbidity of insomnia**
*J. Owens (United States)*

9:30am - 10:00am
**The effects of media on sleep in pediatric age**
*J. Van den Bulck (The Netherlands)*

10:00am - 10:20am
**Coffee break**

10:20am - 11:00am
**Pediatric sleep apnea: Clinical and diagnostic aspects**
*D. Gozal (United States)*

11:00am - 11:30am
**Morbidity of OSA in children**
*L. Kheirandish-Gozal (United States)*

11:30am - 12:00pm
**T&A and beyond**
*H.-L. Tan (United Kingdom)*

12:00pm - 12:30pm
**Group discussion**

12:30pm - 1:30pm
**Lunch**

1:30pm - 2:10pm
**Narcolepsy and REM related parasomnia**
*M. Lecendreux (France)*

2:10pm - 2:50pm
**Disorders of arousal and nocturnal epileptic seizures**
*L. Nobili (Italy)*

2:50pm - 3:30pm
**PLMD-RLS: diagnosis, clinical aspects and therapy**
*R. Silvestri (Italy)*

3:30pm - 3:50pm
**Coffee break**

3:50pm - 4:20pm
**Rhythmic movement disorder, bruxism, enuresis**
*I. Příhodová (Czech Republic)*

4:20pm - 4:50pm
**Sleep in neurodevelopmental disorders**
*S. Miano (Italy)*

4:50pm- 5:00pm
**Question and answer**

## C02 Insomnia therapeutics

8:00am - 5:00pm I Club A

**Chairs:**
C. Espie (United Kingdom), C. Morin (Canada)

8:00am - 8:15am
**Introduction**
*C. Espie (United Kingdom), C. Morin (Canada)*

8:15am - 9:00am
**The contemporary evidence base and current clinical guidelines for the treatment of insomnia disorder**
*D. Riemann (Germany)*

9:00am - 9:45am
**Selecting and using pharmacotherapy for insomnia: An everyday clinical practice update**
*R. Benca (United States)*

9:45am - 10:15am
**Coffee break**

10:15am - 11:00am
**Applications of CBT for insomnia in medical populations: The example of cancer**
*J. Savard (Canada)*

11:00am - 11:45am
**Rational combination of CBT and PCT in insomnia management**
*C. Morin (Canada)*

11:45am - 12:30pm
**Incorporating light therapy into the treatment of insomnia**
*B. Bjorvatn (Norway)*

12:30pm - 1:30pm
**Lunch**

1:30pm - 2:15pm
**'Third wave' psychological therapies (e.g. mindfulness) and their role in the management of insomnia**
*M.R. Irwin (United States)*

2:15pm - 3:00pm
**Digital medicine for insomnia: the potential of technology in the management of insomnia**
*C. Espie (United Kingdom)*

3:00pm - 3:15pm
**Coffee Break**

3:15pm - 4:00pm
**Novel and emerging behavioural therapeutics for insomnia**
*S.D. Kyle (United Kingdom)*

4:00pm - 5:00pm
**Discussion panel**

## C100 International RLS Study Group: RLS is not just leg kicking

8:00am - 5:30pm I Club H

**Chairs:**
D. Garcia-Borreguero (Spain)

8:00am - 8:10pm
**Welcome to IRLSSG in Prague**
*K. Sonka (Czech Republic)*

8:10am - 8:30am
**Obesity and RLS**
X. Gao (United States)

8:30am - 8:50am
**RLS severity and BMI**
*F. Provini (Italy)*

8:50am - 9:10am
**RLS and BMI in stroke patients**
*M. Manconi (Switzerland)*

9:10am - 9:30am
**Cerebral hemodynamic disturbances in RLS with PLMs**
*K.Y. Jung (Republic of Korea)*

9:30am - 9:50am
**Resting state and thalamic role in RLS**
*Y.W. Cho (Republic of Korea)*

9:50am - 10:20am
**Coffee break**

10:20am - 10:40am
**Sleep related leg movements: Beyond PLM**
*R. Allen (United States)*

10:40am - 11:00am
**Beyond PLMS: The neurophysiology of short-interval leg movements during sleep**
*R. Ferri (Italy)*

11:00am - 11:20am
**Periodic vs. respiratory related leg movements**
*S. Fulda (Switzerland)*

11:20am - 11:40am
**PLMS mimicking RBD**
*A. Iranzo (Spain)*
**Wayne Hening Award Abstract presentations**

11:40am - 11:50am
**Circadian locomotor activity in Meis1 knock-out mice**
*A. Salminen (Germany)*

11:50am - 12:00pm
**Validation of an automatic scoring algorithm for the analysis of periodic limb movements according to the WASM2016 guidelines**
*D. Alvarez-Estevez (The Netherlands)*

12:00pm - 12:10pm
**Association of BTBD9 and MAP2K5/SKOR1 With Restless Legs Syndrome in Chinese Population**
*G. Li (China)*

12:10pm - 12:20pm
**Plantar reflex excitability fluctuations in Restless legs syndrome patients**
*S. Kerr (South Africa)*

12:20pm - 12:30pm
**Prevalence and associated factors of restless legs syndrome and periodic limb movement in EPISONO cohort**
*L. Kim (Brazil)*

12:30pm - 1:30pm
**Lunch break**

1:30pm - 1:50pm
**Actigraphy and PLMS**
*D. Kemlink (Czech Republic)*

1:50pm - 2:10pm
**Ped RLS TF report**
*A. Walters (United States)*

2:10pm - 3:10pm
**Opiates vs. alpha 2 delta in RLS**
*F. Sixel-Döring (Germany), D. Garcia-Borreguero (Spain)*

3:10pm - 3:40pm
**Coffee break**

3:40pm - 3:50pm
**International projects – our experience**
*J. Winkelmann (Germany), A. Walters (United States)*

3:50pm - 4:30pm
**International projects – networking for science group session**
*D. Garcia-Borreguero (Spain)*

4:30pm - 5:30pm
**IRLSSG business meeting**
*D. Garcia-Borreguero (Spain)*

## C05 Technology and effective business models in sleep medicine

8:00am - 12:00pm I Club C

**Chairs:**
N. Ramakrishnan (India), M. Bianchi (United States)

8:00am - 8:10am
**Introduction**
*M. Bianchi (United States), N. Ramakrishnan (India)*

8:10am - 8:50am
**Technology in diagnostic and therapeutic devices in OSA: Where to from here?**
*W. Randerath (Germany)*

8:50am - 9:30am
**Value based sleep: What is it, why it matters and how to maximize it?**
*E. Wickwire (United States)*

9:30am - 9:50am
**Coffee break**

9:50am - 10:30am
**Telemedicine to diagnose and manage sleep disorders**
*J. Teran-Santos (Spain)*

10:30am - 11:10am
**Turning your clinical sleep lab into a big-data enterprise**
*M. Bianchi (United States)*

11:10am - 11:50am
**Novel methods of teaching and training: The business of sleep education**
*R. Grunstein (Australia)*

11:50am - 12:00pm
**Question and answer**
*N. Ramakrishnan (India), M. Bianchi (United States)*

## C06 Biology and pharmacology of sleep

8:00am - 12:00pm I Club B

**Chairs:**
T. Roth (United States), P. Shiromani (United States), T. Kilduff (United States), S. Veasey (United States)

8:00am - 8:05am
**Introduction: Summary of panel and objectives**
*P. Shiromani (United States)*

8:05am - 8:45am
**Brain circuits regulating sleep-wake states**
*P. Shiromani (United States)*

8:45am - 9:40am
**Molecular targets for sleep/wake pharmaceuticals**
*T. Kilduff (United States)*

9:40am - 10:00am
**Coffee break**

10:00am - 10:55am
**Pharmacological treatment of sleep disorders**
*T. Roth (United States)*

10:55am - 11:50am
**Lasting effects of chronic short sleep on brain health and aging**
*S. Veasey (United States)*

11:50am - 12:00pm
**Panel discussion**

## C07 Circadian medicine

8:00am - 12:00pm I Club D

**Chairs:**
P. Zee (United States), A. Sumova (Czech Republic), D. Skene (Switzerland)

8:00am - 8:10am
**Introduction**
*P. Zee (United States)*

8:10am - 8:40am
**Human circadian rhythms and entrainment**
*T. Roenneberg (Germany)*

8:40am - 9:10am
**Clocks, melatonin and diabetes**
*J. Johnston (United Kingdom)*

9:10am - 9:40am
**Clocks, metabolism and cardiovascular regulation**
*K. Wright (United States)*

9:40am - 10:10am
**Coffee Break**

10:10am - 10:40am
**Clocks and mental health**
*C. McClung (United States)*

10:40am - 11:10am
**Clocks and immunity**
*P. Zee (United States)*

11:10am - 11:50am
**Challenges in clinical diagnosis and treatment of CRSWD**
*P. Zee (United States), S. Abbott (United States)*

11:50am - 12:00pm
**Question and answer**

## C08 Ambulatory sleep medicine

1:00pm – 5:00pm I Club C

**Chairs:**
S. Keenan (United States)

This course will cover the gathering of data outside the sleep lab, across medical and consumer devices and telemedicine, including data from therapy devices. The future and ongoing development of sleep medicine in the world lies in the power of our tools and the management of data. The focus will be on how to best use (and not use) technology, with an aim for greatest impact on society. What if we had the tools we needed to shift the paradigm? How can we empower individuals to optimize their sleep and achieve optimal health? How can we maximize efficiency of sleep health care delivery and maintain the highest standards of patient care? Please join us and be part of the discussion.

## C09 Sleep stages scoring and apnea scoring using computer lab equipment

1:00pm - 5:00pm I Room 221

**Chairs:**
T. Penzel (Germany)

1:00pm - 1:10pm
**Introduction**
*T. Penzel (Germany)*

1:10pm - 1:50pm
**Recommended & alternative sensors in PSG**
*A. Obeidat (United States)*

1:50pm - 2:30pm
**AASM guidelines for scoring sleep stages in adults**
*A. Obeidat (United States)*

2:30pm - 2:50
**Coffee break**

2:50pm - 3:30pm
**AASM guidelines for scoring respiratory events in adults**
*A. Obeidat (United States)*

3:30pm - 4:10pm
**AASM guidelines for motor related events in adults**
*A. Obeidat (United States)*

4:10pm - 4:50pm
**Group scoring**
*A. Obeidat (United States)*

4:50pm - 5:00pm
**Question and answer**
*A. Obeidat (United States)*

## C10 Differential diagnosis of sleep disorders: Video seminar of different sleep disorders and review of treatment options

1:00pm - 5:00pm I Club B

**Chairs:**
B. Högl (Austria), A. Iranzo (Spain)

1:00pm - 1:10pm
**Introduction**
*B. Högl (Austria)*

1:10pm - 1:50pm
**Differential diagnosis of narcolepsy and cataplexy**
*A. Iranzo (Spain)*

1:50pm - 2:30pm
**Differential diagnosis on sleep apnea**
*W. Randerath (Germany)*

2:30pm - 2:50pm
**Coffee break**

2:50pm - 3:30pm
**Differential diagnosis on restless legs syndrome and periodic limb movements in sleep**
*B. Högl (Austria)*

3:30pm - 4:10pm
**Differential diagnosis of REM behavior sleep disorder**
*A. Stefani (Austria)*

4:10pm - 4:50pm
**Differential diagnosis of the NREM parasomnias**
*L. Nobili (Italy)*

4:50pm - 5:00pm
**Question and answer**
*A. Iranzo (Spain)*

7:00pm - 9:00pm
**Dinner**

## C101 AAMS: Myofunctional therapy in modification of the upper airway in OSA

12:30pm - 6:00pm I Club D

**Chairs:**
C. Guilleminault (United States), M. Moeller (United States)

12:30pm – 12:45pm
**Opening remarks: Myofunctional therapy and sleep disordered breathing**
C. Guilleminault (United States)

12:45pm – 1:05pm
**A survey of myofunctional therapy and sleep disorders**
M. Moeller (United States)

1:05pm – 1:30pm
**Targeting the pharyngeal muscles to treat OSA: A phenotyping perspective**
D. Eckert (Australia)

1:30pm – 1:55pm
**Patients' perspectives on myofunctional therapy and OSA: A call for action**
J. Moeller (United States)

1:55pm – 2:20pm
**Pathways to update standards of care: How myofunctional therapy works in OSA**
E. Bianchini (Brazil)

2:20pm – 2:45pm
**AAMS - Interdisciplinary approaches in the treatment of orofacial myofunctional anomalies in sleep**
H. Vaher (Estonia), T. Jagomagi (Estonia)

2:45pm – 3:10pm
**From emerging adjunct treatment to 1st line treatment: The OMT journey for OSAS in Italy**
M.P. Villa (Italy)

3:10pm – 3:25pm
**Break**

3:25pm – 3:50pm
**From reconstruction to re-education: The evolution of a sleep surgery protocol with DOME, MMA, hypoglossal nerve stimulation, and myofunctional therapy**
S. Liu (United States)

3:50pm – 4:15pm
**A missing link in OSA pathogenesis: Low tongue posture as a phenotype in OSA**
A. Yoon (United States)

4:15pm – 4:40pm
**Rapid return function after MMA: OMT, recovery & QOL**
Y.-F. Chen (United States)

4:40pm – 5:05pm
**The impact of orofacial myofunctional therapy in the upper airway: Wake and sleep**
D.K.-K. Ng (Hong Kong)

5:05pm – 5:30pm
**From the needles of dionysius: Evolution in the treatment of sleep apnea**
M. Kryger (United States)

5:30pm – 6:00pm
**Panel discussion**

# Learn about sleep disorders through Oxford's Online Programme in Sleep Medicine

www.ndcn.ox.ac.uk/oxford-online-programme-sleep-medicine

- Leads to an MSc/PGDip
- Two-year part-time programme
- Hosted by world-leading Sleep & Circadian Neuroscience Institute
- Includes modules on insomnia, circadian rhythm disruption and sleep-related breathing disorders
- Teaching delivered online and via a summer school in Oxford
- Standalone modules can also be completed as part of CPD

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## C03 State of the field

8:00am - 5:00pm I Club E

**Chairs:**
A. Pack (United States), R.J. Thomas (United States)

8:00am - 8:05am
**Introduction**
*R.J. Thomas (United States)*

8:05am - 8:40am
**Genetic approaches to sleep science**
*E. Mignot (United States)*

8:40am - 9:20am
**Mapping and biology of sleep neurocircuitry**
*A. Adamantidis (Switzerland)*

9:20am - 10:00am
**Homeostatic mechanisms in sleep regulation**
*V. Vyazovskiy (United Kingdom)*

10:00am - 10:15am
**Coffee break**

10:15am - 10:45am
**Sleep apnea: New concepts, mechanisms, and therapies**
*A. Pack (United States)*

10:45am - 11:15am
**Sleep pathology as an oncogenetic factor**
*D. Gozal (United States)*

11:15am - 11:45am
**Wearable devices and sleep science/practice**
*R.J. Thomas (United States)*

11:45am - 12:00am
**Question and answer**
*R.J. Thomas (United States)*

12:00pm - 12:45pm
**Lunch**

12:45pm - 1:15pm
**Surgical approaches to sleep apnea: 2017 update**
*J. Suri (India)*

1:15pm - 1:45pm
**Mechanisms and management of insomnia**
*C. Morin (Canada)*

1:45pm - 2:15pm
**Current concepts and management of hypersomnia**
*D. Rye (United States)*

2:15pm - 2:45pm
**Neurodegeneration and sleep: Bidirectional engagement**
*E. Musiek (United States)*

2:45pm - 3:00pm
**Coffee break**

3:00pm - 3:45pm
**Translational circadian sciene**
*K. Wright (United States)*

3:45pm - 4:15pm
**Oral appliance therapy**
*P. Cistulli (Australia)*

4:15pm - 4:45pm
**Sleep and brain disorders**
*C. Bassetti (Switzerland)*

4:45pm - 5:00pm
**Question and answer**
*A. Pack (United States)*

## C04 Modifying the upper airway for sleep apnea management

8:00am - 4:30pm I Club D

**Chairs:**
C. Guilleminault (United States)

8:00am - 8:20am
**Introduction: Importance of UA for OSA**
*C. Guilleminault (United States)*

8:20am - 9:10am
**The nose and SDB-50**
*C. Torre (United States)*

9:10am - 10:00am
**The role of pharyngeal anatomy and airway collapsibility in the pathogenesis of OSA**
*A. Schwartz (United States)*

10:00am - 10:20am
**Coffee break**

10:20am - 11:10am
**Evaluation of the upper-airway: Different approaches and comparison of results**
*C.C.-H. Lin (Taiwan)*

11:10am - 12:05pm
**Surgical techniques for palatal and pharyngeal obstruction: Advantages, disadvantages, complications, and long term follow-up**
*P. Baptista (Spain)*

12:05pm - 12:35pm
**Lunch**

12:35pm - 1:25pm
**Maxillo-Mandibular Advancement surgery: Indication, technique, followup, complications**
*J. Cifuentes (Chile)*

1:25 - 2:15
**OSA, glossectomy and usage of robot**
*S.-T. Toh (Singapore)*

2:15pm - 2:35pm
**Coffee break**

2:35pm - 3:25pm
**Distraction Osteogenesis Maxillary Expansion in young adult: Indication and results**
*S. Liu (United States)*

3:25pm - 4:15pm
**XII nerve stimulation surgical approach, challenges and long term followup**
*N. de Vries (The Netherlands)*

4:15pm - 4:30pm
**Question and answer**
*C. Guilleminault (United States)*

## C11 Restless legs syndrome
8:00am - 12:00pm I Club A

**Chairs:**
R. Allen (United States), D. Garcia-Borreguero (Spain)

8:00am - 8:05am
**Introduction**
*D. Garcia-Borreguero (Spain)*

8:05am - 8:35am
**Difficult cases in RLS diagnosis**
*B. Högl (Austria)*

8:35am - 9:05am
**Main advantages and problems in dopaminergic treatment**
*J.W. Winkelman (United States)*

9:05am - 9:35am
**Using glutamatergic drugs**
*D. Garcia-Borreguero (Spain)*

9:35am - 10:00am
**Coffee break**

10:00am - 10:30am
**The role of opiates in RLS**
C.J. Earley (United States)

10:30am - 11:00am
**New IRLSSG standards of practice for iron treatment**
*R. Allen (United States)*

11:00am - 11:30am
**IV iron treatment for treatment resistant RLS**
*W. Ondo (United States)*

11:30am - 12:00pm
**Towards an integrated treatment alghorithm**
*S. Chokroverty (United States)*

## C12 Pushing the envelope of sleep apnea medicine
8:00 - 12:00 I Club C

**Chairs:**
J. Puertas (Spain), J. Verbraecken (Belgium)

8:00am - 8:05am
**Introduction**
*J. Verbraecken (Belgium), J. Puertas (Spain)*

8:05am - 8:40am
**Standard treatments for obstructive and central sleep apnea and their cardiovascular outcome**
*M. Eijsvogel (The Netherlands)*

8:40am - 9:15am
**Treatment of complex breathing disorders during sleep**
*W. Randerath (Germany)*

9:15am - 9:50am
**Routine and advanced monitoring of sleep apnea therapies**
*J. Montserrat (Spain)*

9:50am - 10:10am
**Coffee break**

10:10am - 10:45am
**CPAP and cognitive and metabolic functions**
*M. Bonsignore (Italy)*

10:45am - 11:20am
**Treatment of mild OSA: Treat it or not, and how**
*W. McNicholas (Ireland)*

11:20am - 11:55am
**How to deal with residual sleepiness and CPAP intolerance**
*S. Launois (France)*

11:55am - 12:00pm
**Question and answer**
*J. Verbraecken (Belgium), J. Puertas (Spain)*

## C13 Course 13: Heart and sleep
8:00 - 12:00 I Club B

**Chairs:**
D. McEvoy (Australia), D. Bradley (Canada)

8:00am - 8:10am
**Introduction**
D. Bradley (Canada)

8:10am - 8:30am
**The current state of play - SAVE and a meta-analysis of CV event trials**
D. McEvoy (Australia)

8:30am - 9:10am
**OSA: Atrial fibrillation and other arrhythmias**
D. Linz (Australia)

9:10am - 9:50am
**Cardiovascular effects of intermittent hypoxia**
C. Arnaud (France)

9:50am - 10:10am
**Coffee break**

10:10am - 10:50am
**Biomarkers of cardiovascular risk in OSA**
*M. Sanchez-de-la-Torre (Spain)*

10:50am - 11:30am
**Effect of exercise on sleep apnea in patients with cardiovascular diseases**
*M. Mendelson (France)*

11:30am - 12:00pm
**Future opportunities for trials and experimental studies**
*D. Bradley (Canada)*

## ISSTA 5th International Sleep Science and Medicine Expert Forum

8:00am - 12:00pm I Room 220

2017 Annual Assembly of Members of International Sleep Science & Technology Association (ISSTA) / 5th International Sleep Science and Medicine Expert Forum

*Separate registration required.*

*Visit https://www.ifessweb.com for registration and details.*

## T101 Technologist Program

9:00am - 5:00pm I Club H

**Chairs:**
S. Keenan (United States), O. Ludka (Czech Republic)

9:00am - 9:05am
**Opening address**

9:05am - 9:50am
**Parasomnias, movement disorders and forensics in sleep medicine: Sleep technology at its most exciting and most challenging**
*M. Mahowald (United States)*

9:50am - 10:20am
**Variability in scoring of respiratory events during sleep**
*E. Sif Arnardottir (Iceland)*

10:20am - 10:40am
**Coffee break**

10:40am - 11:10am
**Cognitive behavioral therapy**
*V. Castronovo (Italy)*

11:10am - 11:40am
**Orofacial myofuntional therapy**
*J. Moeller (United States)*

11:40am - 12:10pm
**Overview of normal human sleep: Clinical and technical considerations**
*S. Keenan (United States)*

12:10pm - 12:15pm
**Question and answer**

12:15pm - 1:15pm
**Lunch break**

1:15pm - 2:00pm
**Overview of childhood sleep disorders**
*S. Sullivan (United States)*

2:00pm - 2:30pm
**Driving and sleep apnea: European driver's license**
*M. Gonçalves (Portugal)*

2:30pm - 3:00pm
**New technology based on sound collection**
*K. Melehan (Australia)*

3:00pm - 3:20pm
**Coffee break**

3:20pm - 3:50pm
**The impact of lack of early diagnosis of sleep disorders: The need for community outreach**
*S. Keenan (United States)*

3:50pm - 4:20pm
**Sleep disordered breathing in adults with down syndrome**
*L. Hill (United Kingdom)*

4:20pm - 4:30pm
**Question and answer**

## C14 Dental sleep medicine

12:30pm - 4:30pm I Club C

**Chairs:**
C. Guilleminault (United States), G. Lavigne (Canada)

12:30pm - 12:35pm
**Introduction**
*G. Lavigne (Canada)*

12:35pm - 1:15pm
**Pediatric RME and childhood OSA including long term follow-up**
*P. Pirelli (Italy)*

1:15pm - 1:55pm
**Bone to bone rapid maxillary expension**
*B. Vande Vannet (Belgium)*

1:55pm - 2:25pm
**Distraction Osteogenesis Maxillary Expansion: New Surgical RME for OSA**
*A. Yoon (United States)*

2:25pm - 2:45pm
**Coffee break**

2:45 - 3:25
**Dental devices and obstructive sleep-apnea**
*M. Marklund (Sweden)*

3:25pm - 3:55pm
**MFT and orthodontics**
*J. Moeller (United States)*

3:55pm - 4:25pm
**Conclusion: The developing field of dental sleep medicine**
*N. Huhn (Canada)*

4:25pm - 4:30pm
**Question and answer**
*G. Lavigne (Canada)*

## C15 Sleep and neurodegeneration

12:30 - 4:30 I Club A

**Chairs:**
L. Ferini-Strambi (Italy), A. Iranzo (Spain)

12:30pm - 12:40pm
**Introduction**
*L. Ferini-Strambi (Italy)*

12:40pm - 1:20pm
**Idiopathic REM sleep behavior disorder: Diagnosis, management and an opportunity for neuroprotective trials**
*A. Stefani (Austria)*

1:20pm - 2:00pm
**Sleep disorders in Parkinson disease: Disease duration and phenotype effects**
*M.L. Fantini (France)*

2:00pm - 2:40pm
**Sleep disorders in IgLON5 disease**
*A. Iranzo (Spain)*

2:40pm - 3:00pm
**Coffee break**

3:00pm - 3:40pm
**Sleep disorders in Alzheimer disease: From the possible opportunity for AD prevention to the clinical management**
*L. Ferini-Strambi (Italy)*

3:40pm - 4:20pm
**Sleep disorders and nocturnal stridor in multiple system atrophy**
*V. Cochen DeCock (France)*

4:20pm - 4:30pm
**Conclusion**
*A. Iranzo (Spain)*

## C16 Sleep related movements: Standards for scoring, interpreting, reporting and publishing

12:30pm - 4:30pm I Club B

**Chairs:**
R. Allen (United States), R. Ferri (Italy), S. Fulda (Switzerland)

12:30pm - 1:00pm
**Periodic leg movements scoring: Updated 2016 international rules for the scoring of periodic leg movement issues and importance of respiratory event related leg movements**
*S. Fulda (Switzerland)*

1:00pm - 1:45pm
**Practice scoring examples by new criteria- Participants computer files using automatic scoring programs – with practical examples**
*S. Fulda (Switzerland), R. Allen (United States), R. Ferri (Italy), D. Alvarez Estevez (Spain)*

1:45pm - 2:15pm
**Automatic detection, evaluation of leg movements moving beyond PLM, with examples**
*R. Allen (United States), D. Alvarez Estevez (Spain)*

2:15pm - 2:45pm
**Fragmentary leg movements and high frequency leg movements scoring: Fragmentary leg movements and high frequency leg movements scoring. Review presentation with practice scoring.**
*B. Högl (Austria)*

2:45pm - 3:05pm
**Coffee break**

3:05pm - 3:35pm
**REM sleep behavior disorders scoring: Visual scoring of REM sleep without atonia and complex behaviour in RBD with practical examples**
*F. Sixel-Döring (Germany)*

3:35pm - 4:00pm
**Automatic scoring of REM sleep without atonia**
*R. Ferri (Italy)*

4:00pm - 4:30pm
**Sleep related bruxism scoring: Electrode placements, Visual scoring and reporting**
*T. Kato (Japan)*

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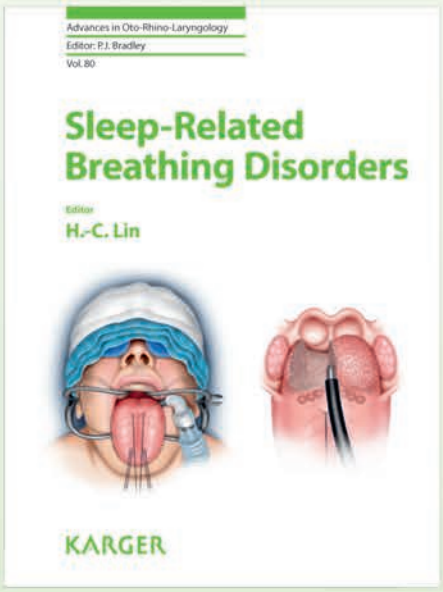
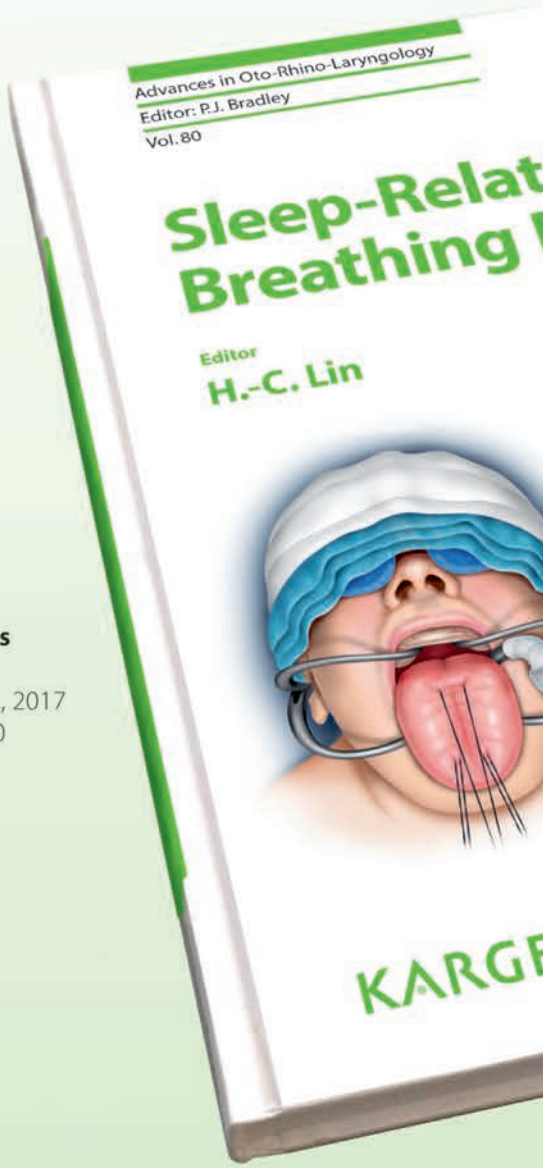
A multidisciplinary approach
by leading international experts

# Sleep-Related Breathing Disorders

Editor: **Hsin-Ching Lin**

Many sleep-related breathing disorders (SRBD), especially obstructive sleep apnea, originate from upper airway abnormalities. The connection to cardio- and cerebrovascular comorbidities is significant and the impact on the general health of patients is noteworthy. In recent years, important advances have been made in the research, diagnosis, and treatment of SRBD due to a multidisciplinary approach. This volume incorporates contributions in which the efforts and expertise of more than thirty outstanding experts are shared. It provides a concise, practical, and comprehensive review of sleep medicine and will enable researchers and physicians to stay updated on the latest developments.

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**Novel Ways to Enhance Slow Wave Sleep**
Phyllis Zee, MD, PhD. Chief of Sleep Medicine, Northwestern University

**Acoustical Enhancement of Slow Wave Sleep**
Clare Anderson, PhD. Associate Professor, Monash University

**Chair:** Teofilo Lee-Chiong, MD
**Date:** Monday, 9th October 2017
**Time:** 12:30 - 14:00
**Location:** "North Hall" room

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Nirkko • Seiji Nishino • Gillian Nixon • Daniela Noain • Lino Nobili • Kyung-Ha Noh • Marta Novak • Jan Novak • Maria Ntafouli • Carlos O´Connor Reina • Conor O'Dochartaigh • Amr Obeidat • Siobhan O'Daly • JH Oh • Seong Min Oh • Masako Ohira • Yo Oishi • Natela Okujava • Mutsumi Okura • Olatunji Olaoye • Umberto Olcese • Olaf Oldenburg • Maria João Oliveira • Luis Vicente Franco Oliveira • Vanda Oliveira Clemente • William Ondo • Martina Ondrová • Mihaela Oros • Maritta Orth • Marit Otto • Qiong Ou • Simon Øverland • Judith Owens • Murat Ozgeren • Iva Prihodová • Allan Pack • Sang Ho Pae • Evelina Pajediene • Dinesh Pal • Laura Palagini • Andreas Palm • Jose Alberto Palma • Luciana Palombini • Maria Panagiotou • Vikram Pandit • Efrosini Papaconstantinou • Nelly A Papalambros • Chan Soon Park • Do-Yang Park • Jong-Uk Park • Arpita Parmar • Liborio Parrino • Claudia Pascovich • Stephanie Patton • Walter Paulus • Václav Pavelec • Georgia Pavlopoulou • Pavla Perinová • Antonio Pedrera-Mazarro • John Peever • Anna Peiffer • Simon Peimer • Patricio Peirano • Yüksel Peker • Zerrin Pelin • Érika Pellerin • Thomas Penzel • Paul Peppard • Cláudia Pereira • Sandra Pérez Ramos • Lampros Perogamvros • Dirk Pevernagie • Christelle Peyron • Luu Pham • Pierre Philip • Rohit Philip • Maria Pia Villa • Giovanni Piantoni • Andres Pinto • Ronaldo Piovezan • Paola Pirelli • Patrizia Pisanu • Fabio Pizza • Fabio Placidi • Bettina Platt • Giuseppe Plazzi • Roxana Maria Pleava • Alexandra Polishchuk • Lorenzo Polizzi • Michael Polkey • Päivi Polo-Kantola • Vsevolod Polotsky • Mikhail Poluektov • Mihael H. Polymeropoulos • Tarja Porkka-Heiskanen • Elizabeth Portugal Velloso • Katarzyna Postrzech-Adamczyk • Gregory Potter • Marc Poulin • Catherine Poulin-Collins • Paolo Pozzi • Brijesh Prajapat • Surya Prakash • Michael Prerau • Uni Gamayani Primadi • Anshu Priya • Federica Provini • Javier Puertas • F. Javier Puertas • Arunkumar Pugalenthi • Monica Puligheddu • Bethasiwi Purbasari • Konstantin Purtov • Yingjun Qian • Mirja Quante • Maria Antonia Quera-Salva • Stacey Quo • Shantha Rajaratnam • Nagarajan Ramakrishnan • Candelaria Ramirez • Alberto Ramos • Alberto Ramos, MD, MSPH • Wilfried Randerath • Pietro Luca Ratti • Laura B Ray • Mark Rea • Catia Reis • Ricardo Reis • Rong Ren • Seonkyeong Rhie • Kathy Richards • Amanda Richdale • Dieter Riemann • Marta Rios • Giovanni Rizzo • Geraldo Rizzo • Seung Hoon Ro • M. Carmen Rodriguez Morales • Beatriz Rodríguez-Morilla • TA Roehrs • Till Roenneberg • Jee Hoon Roh • Eva Roitmann • Michele Romano • Kalina Rossa • Thomas Roth • Marine Roussel • Sylvie Royant-Parola • Perrine Ruby • Noelia Ruiz Herrera • Lukas Ruzek • David Rye • Tiago Sá • Outi Saarenpää-Heikkilä • Sohrab Saberi Moghadam • Abdelkebir Sabil • Dena Sadeghi • Khosro Sadeghniiat Haghighi • Patricia Sagaspe • Carin Sahlin • Bandana Saini • Yann Saint-Georges-Chaumet • Katerina Sajgalikova • Egle Sakalauskaite-Juodeikiene • Dimitrios Sakellariou • Irine Sakhelashvili • Rachel Salas • Michael Saletu • Aaro Salminen • Alessandro Salvatoni • Walkyria Sampaio • Manuel Sanchez-de-la-Torre • Christina Sandlund • Pilar Santelices • Taeko Sasai-Sakuma • Ryo Sasaki • Toshihiko Sato • Makoto Satoh • Cornelia Sauter • Jose Savard • Hemant Sawnani • Eugenio Scamati • Serena Scarpelli • Carlos Schenck • Karine Scheuermaier • Mink Schinkelshoek • Alessandro Schirru • Angelika Schlarb • Markus Schmidt • Sarah Fiona Schoch • Preetam Schramm • Brittany J Schultz • Richard Schwab • Alan Schwartz • Jean-Charles Schwartz • Johanna Schwarz • Natalia Schwarzkopf • Paula K Schweitzer • Holly Scott • Anna J. Scovelle • Madeleine F. Scriba • Stallon Sebastian • Francisco Segarra • Snehi Sehgal Kapur • Ali Seifinejad • Michikazu Sekine • Min Young Seo • Jaehonn Seol • Min Jae Seong • Joana Serra • Javad Setareh • Marco Sforza • Farhan Shah • Azmeh Shahid • Mehrdad Shakeri • Wenye Shao • Colin Michael Shapiro • Brian A. Sharpless • Yuliya Shaukovich • Shoi Shi • Akiyoshi Shimura • Hyun-Woo Shin • Chol Shin • Jin Shin • Hongbeom Shin • Koichi Shirakawa • Peter Shiromani • Tamar Shochat • Garima Shukla • Zhan Shu-qin • Pavel Šiarnik • Jerry Siegel • Mariusz Sieminski • Erna Sif Arnardottir • Maria-Raquel G. Silva • Inalu Barbosa Silva • Rosalia Silvestri • Narong Simakajornboon • Guido Simonelli • Simona Simonidesová • Valentina Simonova • Gurdev Dave Singh • Dimitra Siopi • Friederike Sixel-Döring • Anne Skeldon • Debra Skene • Jana Slonkova • David Slouka • Marcel Smits • Michal Šmotek • Adriane Soehner • Sairabanu Sokwalla • Virend Somers • Urho Sompa • Pamela Song • Karel Sonka • Carolina Sousa • Goffredina Spanò • Rebecca Spencer • Karine Spiegel • S Sriji • Erik St. Louis • Katalin Šterbová • Kristine Marie Stangenes • Reinhard Stark • Ambra Stefani • Joerg Steier • Herma Steinebach • David Stevens • Julia E Stone • Robyn Stremler • Kingman Strohl • Patrick J Strollo • Marie Strømstad • Michael Strunc • Monique Carolina Suarez • Sooyeon Suh • Yukiyoshi Sumi • Alena Sumova • Wanqi Sun • Tina Sundelin • Rikard Sunnhed • Jun-Sang Sunwoo • JC Suri • Tejas M Suri • Maria Suurna • Keisuke Suzuki • Yoshitaka Suzuki • Masaaki Suzuki • Yasuhiro Suzuki • Jina Swartz • Alexander M. Sweetman • Zoltan Szakacs • András Szentkirályi • Naoko Tachibana • Mehdi Tafti • Jacques Taillard • Yoshikazu Takaesu • Pradeep Talwalkar • Hui-Leng Tan • Lu Tan • Tokusei Tanahashi • Kosuke Tanioka • Leila Tarokh • Zaruhi Tavadyan • Jin Yu Tay • Selver Burcu Tellioglu • Priscila Tempaku • Joaquin Teran-Santos • Jenny Theorell-Haglöw • Robert Joseph Thomas • Michael J Thorpy • Henning Tiemeier • Hua Ting • Vikas Kumar Tiwari • Tomoyuki Tobushi • Sonia Togeiro • Song-Tar Toh • Rodrigo Tomazini Martins • Carlos Torre • Pablo Torterolo • Claudia Trenkwalder • Manjari Tripathi • Ivana Trojova • Philip Tucker • Sergio Tufik • William J. Tyler • Orna Tzischinsky • George Uhl • Jan Ulfberg • Yoo Hyun Um • Yasemin Unal • Chandimani Undugodage • Amaia Urrutia Gajate • Andrew Vakulin • Pablo Valdez • Matilde Valencia-Flores • Carlos Valera-Dávila • Stella Valiensi • Raphael Vallat • Jan Van den Bulck • Vincent T van Hees • Wessel M.A. van Leeuwen • Emer Van Ryswyk • Eus Van Someren • Bart Vande Vannet • Moya Vandeleur • Gilles Vandewalle • Päivi Vanttola • Maria Värendh • Andrew W. Varga • Anne Vassalli • Sigrid Veasey • Olivia Veatch • Christian Veauthier • Karolina Veldová • Andreas Velten • Anne Venner • Rahul Venugopal • Johan Verbraecken • Joris Verster • Aleksandar Videnovic • Javier Vila • Maria Pia Villa • Piergiuseppe Vinai • Pedro Pileggi Vinha • Lal Chandra Vishwakarma • Bogdan Voinescu • Carina Volk • Bruno von Amann • Dimitrios Vourdas • Victor Vovc • Vladyslav Vyazovskiy • Harneet Walia • Douglas Wallace • Arthur Walters • Yuping Wang • Bei Wang • Peipei Wang • David Wang • Tao Wang • Allan Wang • Han Wang • Yulin Wang • Norio Watanabe • Frederik Weber • Silke Weber • Shelly Weiss • Andrew Wellman • Adam Wichniak • Emerson Wickwire • Tomasz Wieczorek • Henna-Kaisa Wigren • Veronica Wilbur • Ines Wilhem • Rhiannan Williams • Yun Kwok Wing • John W. Winkelman • Juliane Winkelmann • Catherine Wiseman-Hakes • William Wohlgemuth • Mark Lawrence Wong • Kenneth Wright • Yunxiao Wu • Fei-Ling Wu • Melanie Wüst • Khanaphaphon Wuttiumporn • Yunyan Xia • Fulong Xiao • Kang-Ping Xiong • Ying Xu • Liyue Xu • Zhifei Xu • Huajun Xu • Zhou Xuan Zi • Gohei Yamada • Tomoko Yamagata • Toshitaka Yamakawa • Akihiro Yamanaka • Madoka Yamazaki • Tang Yan • Xue Yan • Timothy Yang • Liu Yanjiao • Chun Yao • Naksidil Yazihan • Garik Yeganyan • Pei-Lu Yi • Gokce Yilmaz Akdogan • Shankai Yin • Akihiko Yokoe • Audrey Yoon • In-Young Yoon • Dae Wui Yoon • Vladimir Yordanov • Takuya Yoshiike • Yasuko Yoshioka • Arika Yoshizaki • Peter Young • Haibo Yuan • Xiang-Shan Yuan • Meral Yuksel • Nevin FW Zaki • Dora Zalai • Abigail Zaraspe • Helmut Zarbl • Phyllis Zee • Feng Zhai • Xilong Zhang • Zhang-Jin Zhang • Jingjing Zhang • Ze Zhang • Yingying Zhao • Xue Zhou • Xindi Zhu • Nataly Zion



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## K01 The evolution of human sleep based on present-day hunter-gatherers

J. Siegel (United States)
**Keynote** 8:00am - 9:00am I Congress Hall

## S01 SERVE-HF and beyond

9:00am - 10:30am I Congress Hall

**Chairs:**
S. Javaheri (United States), C. Kushida (United States)

9:00am - 9:03am
**Introduction**
*S. Javaheri (United States)*

9:03am - 9:20am
**Central sleep apnea in heart failure**
*W. Randerath (Germany)*

9:20am - 9:37am
**SERVE-HF update**
*P. Levy (France)*

9:37am - 9:54am
**ADVENT-HF update**
*D. Bradley (Canada)*

9:54am - 10:11am
**Oxygen therapy for central sleep apnea in heart failure**
*S. Javaheri (United States)*

10:11am - 10:28am
**Phrenic nerve stimulation to treat central sleep apnea in heart failure**
*A. Malhotra (United States)*

10:28am - 10:30am
**Question and answer**
*C. Kushida (United States)*

## S02 Sleep and hypertension - causality and co-morbidities

9:00am - 10:30am I Meeting Hall IV

**Chairs:**
G. Shukla (India)

9:00am - 9:05am
**Introduction**
*G. Shukla (India)*

9:05am - 9:25am
**Obstructive sleep apnea in hypertension - mechanisms and therapy**
*V. Somers (United States)*

9:25am - 9:45am
**'Syndrome Z' - teasing out the interlinking of obstructive sleep apnea and hypertension**
*J. Suri (India)*

9:45am - 10:05am
**Sleep disorders in resistant hypertension - how big is the burden?**
*G. Shukla (India)*

10:05am - 10:25am
**Restless legs syndrome and periodic limb movement disorder and the link with hypertension**
*R. Ferri (Italy)*

10:25am - 10:30am
**Question and answer**
*G. Shukla (India)*

## S03 Sleep and stress: A relationship lasting a lifetime

9:00am - 10:30am I Meeting Hall V

**Chairs:**
L. Palagini (Italy)

9:00am - 9:03am
**Introduction**
*L. Palagini (Italy)*

9:03am - 9:20am
**Roads leading to insomnia: The role of stress from the perinatal period through adult life**
*L. Palagini (Italy)*

9:20am - 9:37am
**Perinatal stress and hypnic derangements in adults: News from animal models**
*S. Bastianini (Italy)*

9:37am - 9:54am
**Acute stress and modulation of central and peripheral circadian clocks in mice**
*P. Franken (Switzerland)*

9:54am - 10:11am
**Social defeat in rats as a model to study stress-induced changes in the circadian function and sleep**
*P. Meerlo (The Netherlands)*

10:11am - 10:28am
**The role of stress reactivity in insomnia and circadian disorders**
*C. Drake (United States)*

10:28am - 10:30am
**Question and answer**
*L. Palagini (Italy)*

## S04 The importance of sleep in children around the world: Factors which affect outcomes

9:00am - 10:30am I North Hall

**Chairs:**
R. Horne (Australia)

9:00am - 9:05am
**Introduction**
*R. Horne (Australia)*

9:05am - 9:25am
**Sleep practices and sleep problems in Māori and New Zealand children from different socioeconomic backgrounds**
*D. Elder (New Zealand)*

9:25am - 9:45am
**The effects of altitude on sleep patterns and habits in children**
*C. Hill (United Kingdom)*

9:45am - 10:05am
**Adverse consequences of sleep deprivation in Hong Kong adolescents – cardiovascular perspective**
*A. Li (Hong Kong)*

10:05am - 10:25am
**Are the consequences of obstructive sleep apnoea compounded by obesity in children?**
*R. Horne (Australia)*

10:25am - 10:30am
**Question and answer**
*R. Horne (Australia)*

## S05 Sleep and circadian factors in metabolic risk: A translational perspective

9:00am - 10:30am I Club A and B

**Chairs:**
M. Grandner (United States)

9:00am - 9:05am
**Introduction**
*M. Grandner (United States)*

9:05am - 9:25am
**Basic circadian regulation of metabolism**
*U. Albrecht (Switzerland)*

9:25am - 9:45am
**Sleep and energy balance in humans**
*K. Wright (United States)*

9:45am - 10:05am
**Clinical impact of sleep deprivation and extension on metabolic risk**
*K. Spiegel (France)*

10:05am - 10:25am
**Impact of sleep and circadian processes on population health**
*M. Grandner (United States)*

10:25am - 10:30am
**Question and answer**
*M. Grandner (United States)*

## S06 Role of neuroimaging: Brain characteristics in sleep disorders

9:00am - 10:30am I Meeting Hall 1A

**Chairs:**
S.B. Hong (Republic of Korea), Y. Inoue (Japan)

9:00am - 9:05am
**Introduction**
*Y. Inoue (Japan)*

9:05am - 9:25am
**The association between brain structure and cognition in OSA: Largescale Korean MRI (n>1200) study**
*R. Kim (Republic of Korea)*

9:25am - 9:45am
**Accelerated brain aging in OSA: Korean population study**
*C. Shin (Republic of Korea)*

9:45am - 10:05am
**Brain structural changes in narcolepsy and insomnia**
*S.B. Hong (Republic of Korea)*

10:05am - 10:25am
**Quantitative analysis of EEG and brain dysfunction in sleep disorders**
*I.-Y. Yoon (Republic of Korea)*

10:25am - 10:30am
**Question and answer**
*S.B. Hong (Republic of Korea)*

## S07 The role of genetic biomarkers in sleep medicine

9:00am - 10:30am I Meeting Hall 1B

**Chairs:**
S. Tufik (Brazil)

9:00am - 9:05am
**Introduction**
*S. Tufik (Brazil)*

9:05am - 9:25am
**Large-scale genomic studies to identify sleep-related risk factors**
*M. Tafti (Switzerland)*

9:25am - 9:45am
**Genetics of insomnia**
*H. Tiemeier (The Netherlands)*

9:45am - 10:05am
**Genome-wide association study of sleep bruxism in the episono cohort**
*R. Amaral Jr. (Brazil)*

10:05am - 10:25am
**Obstructive sleep apnea syndrome and genetics: Data from a population based cohort in Brazil**
*P. Farias Tempaku (Brazil)*

10:25am - 10:30am
**Question and answer**
*S. Tufik (Brazil)*

## S08 Iron metabolism: Genetics, environment and restless legs syndrome (RLS)

9:00am - 10:30am I Club D and E

**Chairs:**
R. Allen (United States)

9:00am - 9:02am
**Introduction**
*R. Allen (United States)*

9:02am - 9:19am
**Complex genetics of brain iron regulation**
*B.C. Jones (United States)*

9:19am - 9:36am
**Iron uptake into the RLS brain: The Blood-Brain-Barrier**
*J. Connor (United States)*

9:36am - 9:53am
**Brain imaging - iron status relation to RLS symptoms**
*G. Rizzo (Italy)*

9:53am - 10:10am
**Iron deficiency anemia and RLS**
*C.J. Earley (United States)*

10:10am- 10:27am
**RLS IV iron treatment - markers of success**
*R. Allen (United States)*

10:27am - 10:30am
**Question and answer**
*R. Allen (United States)*

## S09 Physiological responses of oromaxillofacial anatomy in obstructive sleep apneics undergoing maxillomandibular advancement (MMA)

9:00am - 10:30am I Terrace 1

**Chairs:**
C.C.-H. Lin (Taiwan)

9:00am - 9:02am
**Introduction**
*C.C.-H. Lin (Taiwan)*

9:02am - 9:16am
**To rotate or not to rotate: The surgical planning in MMA**
*D.C. Y. Ho (Taiwan)*

9:16am - 9:30am
**Myofunctional management during MMA**
*V. Pandit (India)*

9:30am - 9:44am
**Translation and transformation of tongue and soft palate after MMA**
*R. Sasaki (Japan)*

9:44am - 9:58am
**Three-dimensional changes in pharyngeal airway in OSA patients undergoing MMA**
*E.C. K. Chan (Hong Kong)*

9:58am - 10:12am
**Segmental Maxillomandibular Rotational Advancement: why, when and how?**
*C.C.-H. Lin (Taiwan)*

10:12am - 10:30am
**Question and answer**
*C.C.-H. Lin (Taiwan)*

## T01 Hands-on head wiring, with paediatric aspects of polysomnography

9:00am - 10:30am I Club H

**Chairs:**
S. Keenan (United States), O. Ludka (Czech Republic)

**Speakers:**
*L. Hill (United Kingdom), S. Briscoe (United Kingdom)*

## K02 Central hypersomnias through the eyes of time

S. Nevšímalová (Czech Republic)
**Keynote** 10:30am - 11:15am I Congress Hall

## S10 REM-sleep and depression: Research into clinically meaningful biomarkers

10:30am - 12:00am I Meeting Hall IV

**Chairs:**
T. Mikoteit (Switzerland)

10:30am – 10:35am
**Introduction**
*T. Mikoteit (Switzerland)*

10:35am – 11:00am
**Preclinical models to understand REM sleep in depression**
*M. Kimura (Germany)*

11:00am – 11:25am
**REM sleep derived biomarkers for depression: heart rate variability and prefrontal theta cordance**
*T. Mikoteit (Switzerland)*

11:25am – 11:50am
**Depression and sleep in patients with multiple sclerosis**
*D. Sadeghi (Islamic Republic of Iran)*

11:50am – 12:00pm
**Question and answer**
*T. Mikoteit (Switzerland)*

## S11 The role of nocturnal eating on insomnia, diurnal sleepiness and obesity

10:30am - 12:00pm I Meeting Hall V

**Chairs:**
P. Vinai (Italy)

10:30am - 10:35am
**Introduction**
*P. Vinai (Italy)*

10:35am - 10:55am
**Insomia, diurnal sleepiness and sensivity to reward: A review**
*A. Da Ros (Italy)*

10:55am - 11:15am
**Sleep monitoring in patients with night eating syndrome with and whitout binge eating disorder**
*Y. Latzer (Israel)*

11:15am - 11:35am
**Psychopathology of patients with NES either affected or not by binge eating disorders**
*O. Tzischinsky (Israel)*

11:35am - 11:55am
**Obesity, sleepiness and nocturnal eating: What drives what?**
*P. Vinai (Italy)*

11:55am - 12:00pm
**Question and answer**
*P. Vinai (Italy)*

## S12 The interplay between sleep and academic performance: From neural mechanisms to educational policy

10:30am - 12:00pm I North Hall

**Chairs:**
R. Gruber (Canada)

10:30am - 10:32am
**Introduction**
*R. Gruber (Canada)*

10:32am - 10:49am
**Overview of mechanisms that underlie the interplay between sleep and academic performance**
*R. Gruber (Canada)*

10:49am - 11:06am
**The impact of improved and extended sleep on key processes needed for academic success**
*E. De Bruin (The Netherlands)*

11:06am - 11:23am
**The impact of sleep restriction on key processes needed for academic success**
*J.J. Gooley (Singapore)*

11:23am - 11:40am
**The role of sleep in memory consolidation and cognitive abilities – implications to academic success**
*S. Fogel (Canada)*

11:40am - 11:57am
**Translating the evidence regarding the interplay between sleep and academic performance into practical strategies for improving academic performance around the world**
*J. Owens (United States)*

11:57am - 12:00pm
**Question and answer**
*R. Gruber (Canada)*

## S13 OSA and atherogenesis: Reversible or not?

10:30am - 12:00pm I Club A and B

**Chairs:**
D. Gozal (United States), J.M. Marin (Spain)

10:30am - 10:35am
**Introduction**
*D. Gozal (United States)*

10:35am - 10:55am
**Intermittent hypoxia, lipids and atherogenesis in murine models**
*V. Polotsky (United States)*

10:55am - 11:15am
**Chronic intermittent hypoxia, macrophage epigenetics and atherosclerosis in mice: Is it reversible?**
*D. Gozal (United States)*

11:15am - 11:35am
**Intermittent hypoxia in humans: Vascular correlates and potential mechanisms**
*M. Poulin (Canada)*

11:35am - 11:55am
**Atherosclerosis in OSA: The EPIOSA study**
*J.M. Marin (Spain)*

11:55am - 12:00pm
**Question and answer**
*J.M. Marin (Spain)*

## S15 Local sleep and local wake: From basic science to sleep arousal disorders

10:30am - 12:00pm I Meeting Hall 1B

**Chairs:**
R. Benca (United States)

10:30am - 10:35am
**Introduction**
*A. Castelnovo (United States)*

10:35am - 10:55am
**Local sleep and local waking: Insights from animal models**
*V. Vyazovskiy (United Kingdom)*

10:55am - 11:15am
**Fluid boundaries in wake and sleep: Adaptive and maladaptive features in human sleep**
*L. Nobili (Italy)*

11:15am - 11:35am
**Local changes in slow wave activity: A trait feature of sleep arousal disorders?**
*A. Castelnovo (United States)*

11:35am - 11:55am
**Disorders of arousal: Future research areas**
*C. Schenck (United States)*

11:55am - 12:00pm
**Question and answer**
*A. Castelnovo (United States)*

## S16 Nasal obstruction and its role in sleep disordered breathing

10:30am - 12:00am I Terrace 1

**Chairs:**
C. Torre (United States)

10:30am - 10:35am
**Introduction**
*C. Torre (United States)*

10:35am - 10:55am
**Understanding nasal obstruction and compromised nasal flow dynamics**
*C. Torre (United States)*

10:55am - 11:15am
**Pediatric nonsurgical nasal cavity expansion**
*S. Quo (United States)*

11:15am - 11:35am
**Distraction osteogenesis maxillary expansion with palatal implants for OSA in adults**
*A. Yoon (United States)*

11:35am - 11:55am
**MMA following maxillary expansion: What have we learned**
*S. Liu (United States)*

11:55am - 12:00am
**Question and answer**
*C. Torre (United States)*

## O01 Sleep breathing disorders oral abstract presentations

10:30am – 12:00pm I Club D and E

10:30am – 10:45am
**RISK FACTORS OF OBSTRUCTIVE SLEEP APNEA SYNDROME IN CHINESE CHILDREN**
*Z. Xu (China)*

10:45am – 11:00am
**AN INTEGRATED META-OMICS BASED APPROACH IN PEDIATRIC OBSTRUCTIVE SLEEP APNEA SYNDROME**
*H. Xu (China)*

11:00am – 11:15am
**CIRCULATING LEVELS OF MICRORNA-210 AND MICRORNA-126 ARE INCREASED IN HYPERTENSIVE PATIENTS SUFFERING FROM OBSTRUCTIVE SLEEP APNEA: PILOT RESULTS**
*J. Novak (Czech Republic)*

11:15am – 11:30am
**BIOMECHANICAL AND STRESS DISTRIBUTION EFFECTS OF MAXILLARY EXPANSION METHODS (SARPE, MARPE, DOME) USING FINITE ELEMENT MODEL**
*Y.-F. Chen (United States)*

11:30am – 11:45am
**LONG TERM ORAL APPLIANCE THERAPY IMPROVES DAYTIME FUNCTION AND MOOD IN UPPER AIRWAY RESISTANCE SYNDROME PATIENTS**
*L. Godoy (Brazil)*

11:45am – 12:00pm
**THE EFFECT OF EXTENDED WAKEFULNESS ON POSTURAL CONTROL IN OBSTRUCTIVE SLEEP APNEA AND HEALTHY CONTROLS**
*D. Stevens (Australia)*

## O02 Insomnia oral abstract presentations

10:30am – 12:00pm I Club H

10:30am – 10:45am
**SHORT AND LONG TERM PROLONGED RELEASE MELATONIN TREATMENT FOR SLEEP DISORDERS IN CHILDREN WITH AUTISM SPECTRUM DISORDERS: RESULTS OF A PHASE III RANDOMIZED CLINICAL TRIAL**
*P. Gringras (United Kingdom)*

10:45am – 11:00am
**YOUNG WOMEN WITH SHORT SLEEP DURATION AND INSOMNIA RUN A HIGH RISK OF DEVELOPING HYPERTENSION AND DIABETES MELLITUS. A 10-YEAR FOLLOW-UP OF THE POPULATION-BASED SHE STUDY**
*J. Theorell-Haglöw (Sweden)*

11:00am – 11:15am
**HYPERACTIVITY OF THE OREXIN SYSTEM AND CHRONIC INSOMNIA IN A MOUSE MODEL OF ALCOHOL DEPENDENCE**
*C. Blanco-Centurion (United States)*

11:15am – 11:30am
**DISRUPTED WHITE MATTER INTEGRITY IN INSOMNIA AND MAJOR DEPRESSIVE DISORDER: CORRELATIONS WITH SUBJECTIVE AND OBJECTIVE SLEEP PARAMETERS**
*J.W. Winkelman (United States)*

11:30am – 11:45am
**THE EFFECTS OF INSOMNIA SYMPTOMS AND OBJECTIVE SHORT SLEEP DURATION ON MEMORY PERFORMANCE IN ADOLESCENTS AND YOUNG ADULTS**
*J. Ling (Hong Kong)*

11:45am – 12:00pm
**ASSOCIATION BETWEEN STRESS-INDUCED AROUSAL AND NOCTURNAL SLEEP: A PRELIMINARY STUDY**
*I.Y. Chen (Canada)*

## K03 Racial difference in sleep disorders

Y. Inoue (Japan)
**Keynote** 11:15am - 12:00pm I Congress Hall

## TEVA Industry Satellite Symposium: Challenges of recognizing and treating excessive sleepiness

12:30pm - 2:00pm I Congress Hall

**Chairs:**
J. Schwartz (United States)

12:30pm – 12:45pm
**Opening Remarks**
*J. Schwartz (United States)*

12:45pm – 1:15pm
**Excessive sleepiness (ES) in OSA**
*R. Grunstein (Australia)*

1:15pm – 1:45pm
**Therapeutic approaches to ES**
*J. Schwartz (United States)*

1:45pm – 2:00pm
**Panel discussion**
*J. Schwartz (United States), R. Grunstein (Australia)*

## Merck Industry Satellite Symposium: New approaches to personalizing treatment of insomnia: Why and how?

12:30pm - 2:00pm I Meeting Hall IV

12:30pm – 12:40pm
**Welcome and introduction**
*C. Morin (Canada)*

12:40pm – 1:00pm
**Health consequences of insomnia: Cognition, mood and medical impact**
*C. Morin (Canada)*

1:00pm – 1:20pm
**Personalization of insomnia therapy: Matching treatment mechanisms with patient needs**
*A. Krystal*

1:20pm – 1:40pm
**Orexin receptor antagonists in the management of insomnia – Mechanisms and clinical implications**
*T. Roth*

1:40pm – 2:00pm
**Closing remarks and question and answer**
*C. Morin (Canada)*

## Philips Industry Satellite Symposium: Boosting slow wave sleep to improve cognitive outcomes

12:30pm - 2:00pm I North Hall

**Chairs:**
T. Lee-Chiong (United States)

12:30pm – 12:35pm
**Introduction**
*T. Lee-Chiong (United States)*

12:35pm – 1:05pm
**Novel ways to enhance slow wave sleep**
**P. Zee (United States)**

1:05pm – 1:35pm
**Acoustical enhancement of slow wave sleep**
*C. Anderson (Australia)*

1:35pm – 2:00pm
**Question and answer**
*T. Lee-Chiong (United States)*

## S17 New evidence on the treatment of insomnia comorbid with depression, pain, sleep apnea or circadian disorders

2:00pm - 3:30pm I Congress Hall

**Chairs:**
C. Morin (Canada), Y.K. Wing (Hong Kong)

2:00pm - 2:02pm
**Introduction**
*C. Morin (Canada)*

2:02pm - 2:19pm
**Treating sleep disturbances in treatment resistant depression – does it help?**
*Y.K. Wing (Hong Kong)*

2:19pm - 2:36pm
**Treatment of pain, depression, and sleep disturbances in rheumatoid arthritis patients**
*M.R. Irwin (United States)*

2:36pm - 2:53pm
**Cognitive behavioral therapy for insomnia in patients with comorbid obstructive sleep apnea**
*A.M. Sweetman (Australia)*

2:53pm - 3:10pm
**Triple vulnerability? Circadian tendency, sleep deprivation and adolescence: A randomized controlled trial**
*A. Harvey (United States)*

3:10pm - 3:27pm
**Sequential therapies with CBT and medication for insomnia with and without comorbid psychiatric disorders**
*C. Morin (Canada)*

3:27pm - 3:30pm
**Question and answer**
*Y.K. Wing (Hong Kong)*

## S18 Beyond academic walls: Society education as an essential field in sleep science

2:00pm - 3:30pm I Meeting Hall IV

**Chairs:**
M.L. Andersen (Brazil)

2:00pm - 2:05pm
**Introduction**
*M.L. Andersen (Brazil)*

2:05pm - 2:25pm
**Scientific communication in sleep: Why, how and to whom**
*P. Araujo (Brazil)*

2:25pm - 2:45pm
**Education campaigns to improve sleep of socioeconomically disadvantaged children**
*J.A. Mindell (United States)*

2:45pm - 3:05pm
**Strategies to increase sleep awareness in health professionals**
*L. Kim (Brazil)*

3:05pm - 3:25pm
**Sleep timing: Health consequences and social gains**
*T. Roenneberg (Germany)*

3:25pm - 3:30pm
**Question and answer**
*M.L. Andersen (Brazil)*

## S19 Sleep disorders in the adolescent population: The missing link

2:00pm - 3:30pm I North Hall

**Chairs**
S. Weiss (Canada), S. Kothare (United States)

2:00 pm- 2:01pm
**Introduction**
S. Weiss (Canada)

2:01pm - 2:03pm
**Summary**
*S. Kothare (United States)*

2:03pm - 2:20pm
**Sleep disordered breathing in adolescents: The missing link**
*D.K.-K. Ng (Hong Kong)*

2:20pm - 2:37pm
**Sleep disorders and mental health comorbidities in adolescents**
*O. Bruni (Italy)*

2:37pm - 2:54pm
**Seizures vs. nonepileptic events in sleep in adolescents**
*G. Shukla (India)*

2:54pm - 3:11pm
**Sleep co-morbidity with traumatic brain injury (TBI) in adolescents**
*S. Kothare (United States)*

3:11pm - 3:28pm
**Sleep disorders in adolescents with neurodevelopmental disorders**
*S. Weiss (Canada)*

3:28pm - 3:30pm
**Question and answer**
*S. Weiss (Canada)*

## S20 Advances in obstructive sleep apnea pathogenesis and non-CPAP therapies

2:00pm - 3:30pm I Club A and B

**Chairs:**
R. Heinzer (Switzerland)

2:00pm - 2:05pm
**Introduction**
*R. Heinzer (Switzerland)*

2:05pm - 2:25pm
**The role of pharyngeal anatomy and airway collapsibility in the pathogenesis of OSA**
*A. Schwartz (United States)*

2:25pm - 2:45pm
**Importance of the upper airway muscles and arousal threshold in the pathogenesis of OSA**
*D. Eckert (Australia)*

2:45pm - 3:05pm
**The role of respiratory control in the pathogenesis of OSA**
*A. Wellman (United States)*

3:05pm - 3:25pm
**Current and future pathways for non-CPAP therapies to treat OSA**
*M. Kohler (Switzerland)*

3:25pm - 3:30pm
**Question and answer**
*R. Heinzer (Switzerland)*

## S21 European Narcolepsy Network (EU-NN) - Narcolepsy: From etiology to treatment

2:00pm - 3:30pm I Meeting Hall 1A

**Chairs:**
C. Bassetti (Switzerland)

2:00pm - 2:02pm
**Introduction**
*C. Bassetti (Switzerland)*

2:02pm - 2:19pm
**Introduction to the EU-NN**
*G. Mayer (Germany)*

2:19pm - 2:36pm
**Clinical picture of narcolepsy and its borderland (based on the EU-NN database)**
*R. Khatami (Switzerland)*

2:36pm - 2:53pm
**Auto-immunity and the etiology of narcolepsy - the human story**
*U. Kallweit (Switzerland)*

2:53pm - 3:10pm
**Auto-immunity and the etiology of narcolepsy - the animal story**
*C. Peyron (France)*

3:10pm - 3:27pm
**Treatment for narcolepsy (and its assessment)**
*R. Fronczek (The Netherlands)*

3:27pm - 3:30pm
**Question and answer**
*C. Bassetti (Switzerland)*

## S22 The waking, sleeping and dreaming brain: New circuits and insights

2:00pm - 3:30pm I Meeting Hall 1B

**Chairs:**
P.M. Fuller (United States), M. Lazarus (Japan)

2:00pm - 2:02pm
**Introduction**
*P.M. Fuller (United States)*

2:02pm - 2:19pm
**Dopaminergic control of sleep and waking**
*L. de Lecea (United States)*

2:19pm - 2:36pm
**A novel inhibitory wake-promoting hypothalamic circuit**
*A. Venner (United States)*

2:36pm - 2:53pm
**The role of the nucleus accumbens in sleep regulation**
*Y. Oishi (Japan)*

2:53pm - 3:10pm
**Regulatory mechanisms of sleep and memory by hypothalamic neurons**
*A. Yamanaka (Japan)*

3:10pm - 3:27pm
**Hypothalamic control of REM sleep**
*A. Adamantidis (Switzerland)*

3:27pm - 3:30pm
**Question and answer**
*M. Lazarus (Japan)*

## S23 In search of alternatives to dopaminergic ligands in RLS/WED: The Emerging role of glutamate and adenosine

2:00pm - 3:30pm I Club D and E

**Chairs:**
D. Garcia-Borreguero (Spain)

2:00pm - 2:02pm
**Introduction**
*D. Garcia-Borreguero (Spain)*

2:02pm - 2:19pm
**The role of hyperarousal in the neurophysiology of RLS and PLMS**
*R. Ferri (Italy)*

2:19pm - 2:36pm
**Adenosine neurotransmission in RLS**
*S. Ferré (United States)*

2:36pm- 2:53pm
**Adenosine-dopamine receptor interactions in the spinal cord of RLS animal models**
*S. Clemens (United States)*

2:53pm - 3:10pm
**Glutamate, adenosine and sleep deprivation**
*H.-P. Landolt (Switzerland)*

3:10pm- 3:27pm
**Implications for future treatments**
*D. Garcia-Borreguero (Spain)*

3:27pm - 3:30pm
**Question and answer**
*D. Garcia-Borreguero (Spain)*

## S24 Personalization of mandibular advancement devices: Digital analysis of the movements achieved and mathematical model for the study of the jaw kinematics.

2:00pm - 3:30pm I Terrace 1

**Chairs:**
J. Vila (Spain)

2:00pm - 2:05pm
**Introduction**

2:05pm - 2:25pm
**Identification of anatomical and funcional features related to the mandible as a step in the design of a customized MAD**
*P. Mayoral (Spain)*

2:25pm - 2:45pm
**Different design features of available MADs**
*F. Milano (Italy)*

2:45pm - 3:05pm
**Analysis of the movements of the mandible and hyoid bone in the treatment of OSA with MAD**
*J. Vila (Spain)*

3:05pm - 3:25pm
**Mathematical model of the jaw kinematics and its application to MAD design**
*A. Bataller (Spain)*

3:25pm - 3:30pm
**Question and answer**
*P. Mayoral (Spain)*

## O03 Sleep breathing disorders oral abstract presentations

2:00pm – 3:30pm I Meeting Hall V

2:00pm – 2:15pm
**SHARED-DECISION MAKING TOOL FOR OBSTRUCTIVE SLEEP APNEA**
*A. Duggins (United States)*

2:15pm – 2:30pm
**EFFECT OF UPPER AIRWAY SURGERIES ON CARDIOVASCULAR RISK PROFILES AND GLOBAL CARDIOVASCULAR RISK IN OSAHS PATIENTS**
*S. Yin (China)*

2:30pm – 2:45pm
**IMPROVEMENT OF SLEEP APNEA SYNDROME AND DAYTIME SLEEPINESS AFTER SURGICALLY ASSISTED RAPID MAXILLARY EXPANSION IN ADULT PATIENTS**
*P.P. Vinha (Brazil)*

2:45pm – 3:00pm
**LONGITUDINAL EFFECTS OF PERIODIC BREATHING ON CEREBRAL OXYGENATION IN TERM AND PRETERM BORN INFANTS**
*R. Horne (Australia)*

3:00pm – 3:15pm
**NASAL OBSTRUCTION DECREASE AFTER TWO YEARS OF PAP TREATMENT**
*M. Värendh (Sweden)*

3:15pm – 3:30pm
**IS THE RESPIRATORY STABILITY DURING SLEEP IN PATIENTS WITH SEVERE HEART FAILURE INFLUENCED BY THE NOCTURNAL OXYGEN LEVEL: A SUB-ANALYSIS OF THE PROST STUDY USING A NOVEL RESPIRATORY STABILITY INDEX**
*T. Tobushi (Japan)*

## T02 Cardiopulmonary resuscitation for sleep technologists part 1

2:00pm - 3:30pm I Club H

**Chairs:**
S. Keenan (United States), O. Ludka (Czech Republic)

**Speakers:**
*I. Cundrle Jr. (Czech Republic), L. Ruzek (Czech Republic), O. Ludka (Czech Republic)*

## K04 Dental Sleep Medicine

C.C.-H. Lin (Taiwan)
**Keynote** 3:30pm - 4:15pm I Congress Hall

## S25 Measuring quality in the delivery of sleep medicine: Metrics and patient reported outcomes

3:30pm - 5:00pm I Meeting Hall IV

**Chairs:**
C. Iber (United States)

3:30pm - 3:35pm
**Introduction**
*C. Iber (United States)*

3:35pm - 4:00pm
**Beyond the epworth: Patient reported outcomes in obstructive sleep apnea syndrome**
*H. Walia (United States)*

4:00pm - 4:25pm
**Patient reported outcomes in narcolepsy: How to adapt treatment to the patient**
*F. Han (China)*

4:25pm - 4:50pm
**Improving access and quality using virtual care**
*C. Iber (United States)*

4:50pm - 5:00pm
**Question and answer**
*C. Iber (United States)*

## S26 Factors in night and rotating shift work associated with poor sleep and health

3:30pm - 5:00pm I Meeting Hall V

**Chairs:**
T. Shochat (Israel)

3:30pm - 3:33pm
**Introduction**
*T. Shochat (Israel)*

3:33pm - 3:50pm
**The influence of bio-psychological predictors on subjective sleepiness of female nurses during the night shift with and without a short planned nap**
*N. Zion (Israel)*

3:50pm - 4:07pm
**Sleep patterns and functioning during night and morning rotating shifts in the transition from 8 to 12-hour rosters among airline employees**
*O. Tzischinsky (Israel)*

4:07pm - 4:24pm
**Are quick returns (<11 hours between consecutive shifts) typically seen in rotating shift work schedules more detrimental to health than night work?**
*B. Bjorvatn (Norway)*

4:24pm - 4:41pm
**Artificial light and health in indoor workers**
*A. Lowden (Sweden)*

4:41pm - 4:58pm
**Futuristic solutions to the physiological problems of shift work based on circadian rhythm principles**
*C. Eastman (United States)*

4:58pm - 5:00pm
**Question and answer**
*T. Shochat (Israel)*

## S27 Functioning of the restless legs syndrome (RLS) brain: Excitability and control

3:30pm - 5:00pm I North Hall

**Chairs:**
R. Allen (United States)

3:30pm - 3:35pm
**Introduction**
*R. Allen (United States)*

3:35pm - 3:55pm
**Cortical excitability and RLS**
*R. Salas (United States)*

3:55pm - 4:15pm
**Resting state connectivity**
*Y.W. Cho (Republic of Korea)*

4:15pm - 4:35pm
**TMS stimulation and connectivity in RLS**
*Y. Wang (China)*

4:35pm - 4:55pm
**Connectivity and attentional control**
*J. Kassubek (Germany)*

4:55pm - 5:00pm
**Question and answer**
*R. Allen (United States)*

## S28 Arousability and loop gain: The factors that bridge insomnia and sleep-disordered breathing

3:30pm - 5:00pm I Club A and B

**Chairs:**
L. Parrino (Italy), D. Pevernagie (Belgium)

3:30pm - 3:35pm
**Introduction**
*L. Parrino (Italy)*

3:35pm - 3:55pm
**Failure to control the AHI - a clinician's perspective**
*D. Pevernagie (Belgium)*

3:55pm - 4:15pm
**The role of arousability and loop gain in the pathogenesis of SDB**
*M. Bosi (Italy)*

4:15pm - 4:35pm
**Sleep fragmentation in anxiety and chronic stress**
*T. Akerstedt (Stockholm, Sweden)*

4:35pm - 4:55pm
**Sleep disordered breathing and insomnia: Overlap and comorbidity**
*L. Parrino (Italy)*

4:55pm - 5:00pm
**Question and answer**
*D. Pevernagie (Belgium)*

## S29 New developments in narcolepsy diagnosis, research and therapeutics

3:30pm - 5:00pm I Meeting Hall 1A

**Chairs:**
T. Kilduff (United States), C. Peyron (France)

3:30pm - 3:35pm
**Introduction**
*T. Kilduff (United States)*

3:35pm - 3:55pm
**Age-dependent narcolepsy phenotypes in patients**
*G. Plazzi (Italy)*

3:55pm - 4:15pm
**Development of narcolepsy in healthy mice following an autoimmune attack**
*C. Peyron (France)*

4:15pm - 4:35pm
**Generation of sleep disorder model mice by ablation of specific types of neurons**
*A. Yamanaka (Japan)*

4:35pm - 4:55pm
**TAAR1 agonists as potential narcolepsy therapeutics**
*T. Kilduff (United States)*

4:55pm - 5:00pm
**Question and answer**
*T. Kilduff (United States)*

## S30 Behavioral and neurophysiological influences of waking system on sleep

3:30pm - 5:00pm I Meeting Hall 1B

**Chairs:**
M.L. Andersen (Brazil), E. Garcia-Rill (United States)

3:30pm - 3:35pm
**Introduction**
*M.L. Andersen (Brazil)*

3:35pm - 3:55pm
**Neural basis of waking system**
*E. Garcia-Rill (United States)*

3:55pm - 4:15pm
**Involvement of the Primate PPN in transition from wakefulness to sleep**
*L. Goetz (France)*

4:15pm - 4:35pm
**Behavioral consequences of extended wakefulness**
*M.L. Andersen (Brazil)*

4:35pm - 4:55pm
**Stimulation of the pedunculopontine: implications on sleep**
*I. Arnulf (Paris, France)*

4:55pm - 5:00pm
**Question and answer**
*E. Garcia-Rill (United States)*

## O04 Neurological sleep disorders affecting sleep oral abstract presentations

3:30pm – 5:00pm I Club D and E

3:30pm – 3:45pm
**IMPAIRED CONSCIOUSNESS STATES IN MYOTONIC DYSTROPHY-TYPE 1 MEDIATION BY γ-AMINO BUTYRIC ACID (GABA)**
*D. Rye (United States)*

3:45pm – 4:00pm
**SUBJECTIVE AND OBJECTIVE FEATURES OF SLEEP DISORDERS IN PATIENTS WITH ACUTE ISCHEMIC OR HAEMORRHAGIC STROKE**
*E. Pajediene (Lithuania)*

4:00pm – 4:15pm
**IMPAIRMENT OF AUTONOMIC NERVOUS SYSTEM IN AMYOTROPHIC LATERAL SCLEROSIS**
*M. Puligheddu (Italy)*

4:15pm – 4:30pm
**SPECIFIC NEURONAL PROCESSES IN LATERAL HYPOTHALAMUS ACCOUNT FOR THE MAIN SLEEP AND FEEDING SYMPTOMS IN PRADER-WILLI SYNDROMES**
*E. Balzani (Italy)*

4:30pm – 4:45pm
**CYCLIC ALTERNATING PATTERN AND INTERICTAL EPILEPTIFORM DISCHARGES DURING MORNING SLEEP DEPRIVED EEG IN TEMPORAL LOBE EPILEPSY**
*A. Schirru (Italy)*

4:45pm – 5:00pm
**AGENESIS OF THE CORPUS CALLOSUM: EFFECT ON SLEEP ARCHITECTURE**
*R. Castriotta (United States)*

## O05 Psychiatric disorders affecting sleep/wake oral abstract presentations

3:30pm – 5:00pm I Terrace 1

3:30pm – 3:45pm
**TROUBLED SLEEP, RESTLESS LEGS AND CATAPLEXY IN ADULTS WITH ADHD**
*B. Bjorvatn (Norway)*

3:45pm – 4:00pm
**REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION COMBINED WITH VENLAFAXINE FOR MAJOR DEPRESSIVE DISORDER WITH COMORBID ANXIETY AND INSOMNIA: A CONTROLLED POLYSOMNOGRAPHIC AND DIFFUSION MRI STUDY**
*Z.-J. Zhang (Hong Kong)*

4:00pm – 4:15pm
**CORRELATION BETWEEN PHYSICAL ACTIVITY, ANXIETY AND SLEEP**
*M. Bodnari (Republic of Moldova)*

4:15pm – 4:30pm
**INVESTIGATION OF SLEEP AND COGNITIVE FUNCTIONS ON FIRST EPISODE DRUG-NAIVE NON-AFFECTIVE PSYCHOTIC PATIENTS**
*N. Yazihan (Turkey)*

4:30pm – 4:45pm
**NAPPING REDUCES ATTENTIONAL BIASES FOR NEGATIVE INTERPERSONAL STIMULI IN CLINICAL DEPRESSION**
*K.N.T. Lau (Hong Kong)*

4:45pm – 5:00pm
**CIRCADIAN RHYTHM SLEEP-WAKE DISORDERS PREDICT SHORTER TIME TO RELAPSE OF MOOD EPISODES IN EUTHYMIC PATIENTS WITH BIPOLAR DISORDER: A PROSPECTIVE 48-WEEK STUDY**
*Y. Takaesu (Japan)*

## O06 Neural plasticity, memory, parasomnia and pharmacology oral abstract presentations

3:30pm – 5:00pm I Club H

3:30pm – 3:45pm
**OBSTRUCTIVE SLEEP APNEA AS A POTENTIAL EFFECT OF GABAPENTIN IN OLDER MEN**
*R. Piovezan (Brazil)*

3:45pm – 4:00pm
**THE CONSEQUENCES OF SLEEP-DISORDERED BREATHING (SDB) ON THE CONSOLIDATION OF DIFFERENT MEMORY PROCESSES IN CHILDREN AND ADULTS**
*E. Csábi (Hungary)*

4:00pm – 4:15pm
**THE EFFECTS OF ACUTE, SHORT-TERM VISUAL DEPRIVATION ON LOW-FREQUENCY EEG ACTIVITY DURING WAKEFULNESS AND SLEEP**
*G. Bernardi (Switzerland)*

4:15pm – 4:30pm
**NEW VIDEO-POLYSOMNOGRAPHIC CRITERIA FOR THE DIAGNOSIS OF DISORDERS OF AROUSAL**
*R. Lopez (France)*

4:30pm – 4:45pm
**DOES HORMONE REPLACEMENT THERAPY PROMOTE BETTER QUALITY OF SLEEP IN WOMEN? RESULTS FROM A LARGE CROSS-SECTIONAL NORWEGIAN STUDY (HUNT 3)**
*M. Cvancarova Småstuen (Norway)*

4:45pm – 5:00pm
**SLEEP HOMEOSTATIC PROCESS IN CORTICAL AND CORTICOTHALAMIC CULTURES: A MODEL FOR SLEEP REGULATION**
*S. Saberi Moghadam (Switzerland)*

## K05 History of pediatric sleep and the contribution of sleep microstructure

O. Bruni (Italy)
**Keynote** 4:15pm - 5:00pm I Congress Hall

## S31 Parasomnias: Recent advances in etiology, assessment and treatment

5:30pm - 7:00pm I Congress Hall

**Chairs:**
B.A. Sharpless (United States)

5:30pm - 5:32pm
**Introduction**
*B.A. Sharpless (United States)*

5:32pm - 5:49pm
**REM sleep behavior disorder**
*M. Mahowald (United States)*

5:49pm - 6:06pm
**Recurrent isolated sleep paralysis**
*B.A. Sharpless (United States)*

6:06pm - 6:23pm
**NREM Parasomnias**
*C. Bassetti (Switzerland)*

6:23pm - 6:40pm
**Parasomnias related to medical and psychiatric conditions**
*K. Doghramji (United States)*

6:40pm - 6:57pm
**Exploding head syndrome**
*B.A. Sharpless (United States)*

6:57pm - 7:00pm
**Question and answer**
*B.A. Sharpless (United States)*

## S32 Novel treatments for age-related sleep disruption

5:30pm - 7:00pm I Meeting Hall IV

**Chairs:**
J. Duffy (United States)

5:30pm - 5:35pm
**Introduction**
*J. Duffy (United States)*

5:35pm - 5:55pm
**Light treatment to improve sleep quality in older adults**
*K. Scheuermaier (South Africa)*

5:55pm - 6:15pm
**Cognitive training to improve sleep quality in older adults**
*I. Haimov (Israel)*

6:15pm - 6:35pm
**Effects of physical activity on insomnia symptoms in later life**
*K. Morgan (United Kingdom)*

6:35pm - 6:55pm
**Cognitive-behavioral treatment for insomnia in older adults: Effects on sleep, brain and body**
*D. Buysse (United States)*

6:55pm - 7:00pm
**Question and answer**
*J. Duffy (United States)*

## S34 Pediatric OSA: Diagnostic and treatments involving a multidisciplinary team

5:30pm - 7:00pm I North Hall

**Chairs:**
C. Guilleminault (United States)

5:30pm - 5:35pm
**Introduction**
*C. Guilleminault (United States)*

5:35pm - 5:55pm
**From dysfunction to dysmorphoses in development of pediatric OSA**
*C. Guilleminault (United States)*

5:55pm - 6:15pm
**Lingual frenulum: Role in pediatric OSA and its clinical investigation**
*A. Yoon (United States)*

6:15pm - 6:35pm
**Maxillary deficiency, pediatric OSA risk and zygomatic involvement**
*S. Quo (United States)*

6:35pm - 6:55pm
**Passive myofunctional therapy, long term follow-up: PSG and imaging**
*Y.-s. Huang (Taiwan)*

6:55pm - 7:00pm
**Question and answer**
*C. Guilleminault (United States)*

## S35 Minimally invasive implantable approaches for OSA

5:30pm - 7:00pm I Club A and B

**Chairs:**
V. Pavelec (Czech Republic)

5:30pm - 5:35pm
**Introduction**
*V. Pavelec (Czech Republic)*

5:35pm - 5:55pm
**Base of tongue implants: Where we are now**
*V. Pavelec (Czech Republic)*

5:55pm - 6:15pm
**Implantable upper airway neurostimulation: Current approach**
*M. Suurna (United States)*

6:15pm - 6:35pm
**Implantable upper airway neurostimulation: New horizons**
*O. Jacobowitz (United States)*

6:35pm - 6:55pm
**European experience with different concepts of upper airway neurostimulation**
*J. Maurer (Germany)*

6:55pm - 7:00pm
**Question and answer**
*V. Pavelec (Czech Republic)*

## S36 Understanding the potential role for Mn in RLS etiology using novel human and animal models

5:30pm - 7:00pm I Meeting Hall 1A

**Chairs:**
J. Connor (United States)

5:30pm - 5:35pm
**Introduction**
*J. Connor (United States)*

5:35pm - 6:00pm
**Identification of a novel role for BTBD9 in regulating Mn signaling in C. elegans**
*M. Aschner (United States)*

6:00pm - 6:25pm
**Brain and serum Mn levels and their relationship to iron status and genetic risk factors (BTBD9 and MEIS1)**
*A. Walters (United States)*

6:25pm - 6:50pm
**Understanding the role of Mn dyshomeostasis in RLS etiology using peripheral lymphocytes as a model**
*S. Patton (United States)*

6:50pm - 7:00pm
**Question and answer**
*J. Connor (United States)*

## S37 Basic research & new treatment approaches in sleeprelated breathing disorders

5:30pm - 7:00pm I Meeting Hall 1B

**Chairs:**
A. Büttner-Teleaga (Germany)

5:30pm - 5:35pm
**Introduction**
*A. Büttner-Teleaga (Germany)*

5:35pm - 5:55pm
**REMS loss as indicator of neuronal apoptosis and degeneration**
*B. Mallick (India)*

5:55pm - 6:15pm
**Association of breathing pauses with genes (animal model)**
*K. Strohl (United States)*

6:15pm - 6:35pm
**New treatment strategy, nasal airway stent (NAS) in SBD**
*M. Satoh (Japan)*

6:35pm - 6:55pm
**Clinical importance of alternative treatments in SBD**
*A. Büttner-Teleaga (Germany)*

6:55pm - 7:00pm
**Question and answer**
*A. Büttner-Teleaga (Germany)*

## S38 Young Investigator: Sleep research in neurodegeneration

5:30pm - 7:00pm I Club D and E

5:30pm - 5:45pm
**DIFFERENT MARKERS IN IDIOPATHIC RAPID EYE MOVEMENT (REM) SLEEP BEHAVIOR DISORDER (RBD), POSSIBLE PREDICTORS OF CONVERSION TO DIFFERENT TYPES OF ALPHA-SINUCLEINOPATHIES**
*C. Gutierrez Muñoz (Spain)*

5:45pm – 6:00pm
**ENVELOPE ANALYSIS OF ELECTROMYOGRAM IN REM SLEEP BEHAVIOR DISORDER PATIENTS**
*D. Espinoza (Chile)*

6:00pm – 6:15pm
**STRIATAL DYSFUNCTION AND DIMINISHED FUNCTIONAL CONNECTIVITY IN IDIOPATHIC REM SLEEP BEHAVIOR DISORDER WITH SUBTLE MOTOR ALTERATION**
*G. Yamada (Japan)*

6:15pm – 6:30pm
**INCREASED SERUM CYSTATIN C IN PARKINSON'S DISEASE WITH OBJECTIVE SLEEP DISTURBANCE**
*K.-P. Xiong (China)*

6:30pm – 6:45pm
**DIAGNOSING REM SLEEP BEHAVIOUR DISORDER IN PARKINSON DISEASE WITHOUT A GOLD STANDARD: A LATENT CLASSES MODELS STUDY**
*M. Figorilli (France)*

6:45pm – 7:00pm
**FAMILIAL AGGREGATION OF REM SLEEP BEHAVIOR DISORDER AND NEURODEGENERATIVE BIOMARKERS: A CASE-CONTROL FAMILY STUDY**
*Y. Liu (Hong Kong)*

## S39 Obstructive sleep apnea severity and the role of oral appliances

5:30pm - 7:00pm I Terrace 1

**Introduction**
M. Braem (Belgium)

5:30pm - 5:35pm
**Introduction**
*M. Braem (Belgium)*

5:35pm - 5:55pm
**Mild obstructive sleep apnoea: Clinical relevance and approaches to management**
*W. McNicholas (Ireland)*

5:55pm - 6:15pm
**Physiological traits related to obstructive sleep apnea and prediction of treatment response to an oral appliance**
*B. Edwards (Australia)*

6:15pm - 6:35pm
**Other clinical ways to identify predictors of success and analyze combination treatments and their role in the treatment with OAS**
*M. Braem (Belgium)*

6:35pm - 6:55pm
**OA vs CPAP: comparative effectiveness**
P. Cistulli (Australia)

6:55pm - 7:00pm
**Question and answer**
*M. Braem (Belgium)*

## O07 Narcolepsy Oral Abstract Presentations

5:30pm – 7:00pm I Meeting Hall V

5:30pm – 5:45pm
**EVIDENCE FOR A NARCOLEPSY SPECTRUM DISORDER IN FAMILY MEMBERS OF PATIENTS WITH TYPE 1 NARCOLEPSY**
*P. Wang (China)*

5:45pm – 6:00pm
**MEASUREMENT OF NARCOLEPSY SYMPTOMS: THE NARCOLEPSY SEVERITY SCALE**
*I. Jaussent (France)*

6:00pm – 6:15pm
**A DOUBLE-BLIND, PLACEBO-CONTROLLED, RANDOMIZED-WITHDRAWAL, MULTICENTER STUDY OF THE EFFICACY AND SAFETY OF SODIUM OXYBATE IN PEDIATRIC SUBJECTS WITH NARCOLEPSY WITH CATAPLEXY**
*G. Plazzi (Italy)*

6:15pm – 6:30pm
**NOCTURNAL REM WITHOUT ATONIA, A DIAGNOSTIC BIOMARKER FOR PEDIATRIC NARCOLEPSY**
*S. Bin-Hasan (Canada)*

6:30pm – 6:45pm
**WIDESPREAD WHITE MATTER CONNECTIVITY ABNORMALITIES IN NARCOLEPSY TYPE 1 PATIENTS: A DIFFUSION TENSOR IMAGING STUDY**
*J.K. Gool (The Netherlands)*

6:45pm – 7:00pm
**A STANDARDIZED TEST TO DOCUMENT CATAPLEXY**
*F. Pizza (Italy)*

## T03 Cardiopulmonary resuscitation for sleep technologists part 2

5:30pm - 7:00pm I Club H

**Chairs:**
S. Keenan (United States), O. Ludka (Czech Republic)

**Speakers:**
*I. Cundrle Jr. (Czech Republic), L. Ruzek (Czech Republic), O. Ludka (Czech Republic)*

24th Congress of the

# European Sleep Research Society

Basel, Switzerland I 25 – 28 September 2018

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## K06 Sleep and Synaptic homeostasis

C. Cirelli (United States)
**Keynote** 8:00am - 9:00am I Congress Hall

## S41 Sleep and sex: What can go wrong?

9:00am - 10:30am I Meeting Hall IV

**Chairs:**
C. Schenck (United States)

9:00am - 9:05am
**Introduction**
*C. Schenck (United States)*

9:05am - 9:25am
**The basic science of sex physiology and how it can pathologically relate to sleep**
*M.L. Andersen (Brazil)*

9:25am - 9:45am
**Update and synthesis of the world literature on sexsomnia and ictal sexsomnia**
*C. Schenck (United States)*

9:45am - 10:05am
**Abnormal sexual behaviors associated with Kleine-Levin Syndrome**
*I. Arnulf (France)*

10:05am - 10:25am
**Forensics aspects of sexsomnia and review of legal cases**
*F. Ingravallo (Italy)*

10:25am - 10:30am
**Question and answer**
*C. Schenck (United States)*

## S42 Sleep dependent brain oscillations as early markers of neurodegeneration

9:00am - 10:30am I Meeting Hall V

**Chairs:**
J.-F. Gagnon (Canada)

9:00am - 9:05am
**Introduction**
*J.-F. Gagnon (Canada)*

9:05am - 9:25am
**Sleep EEG features as prodromal markers of Parkinson's disease dementia and alzheimer's disease**
*J.-F. Gagnon (Canada)*

9:25am - 9:45am
**Sleep and EEG profiles of amyloid- vs tau-expressing mouse models of dementia**
*B. Crouch (United Kingdom)*

9:45am - 10:05am
**Sleep EEG biomarkers of huntington's disease: Contributions of age, sex, huntingtin (htt) gene and sleep-wake regulation**
*A. Lazar (United Kingdom)*

10:05am - 10:25am
**Changes in abnormal brain oscillations can predict the efficacy of therapeutics in huntington's disease mice**
*S. Kantor (United Kingdom)*

10:25am - 10:30am
**Question and answer**
*J.-F. Gagnon (Canada)*

## S43 Sleep related learning and behavioural functioning in children with developmental disorders

9:00am - 10:30am I North Hall

**Chairs:**
D. Dimitriou (United Kingdom)

9:00am - 9:05am
**Introduction**
*D. Dimitriou (United Kingdom)*

9:05am - 9:25am
**Sleep and cognition in children with down syndrome**
*G. Spanò (United Kingdom)*

9:25am - 9:45am
**Poor sleep in childhood ADHD and its impact on daytime functioning**
*F. Knight (United Kingdom)*

9:45am - 10:05am
**Poor sleep and atypical learning trajectories in Williams syndrome**
*J. Hayton (United Kingdom)*

10:05am - 10:25am
**Sleep related learning patterns are different in different developmental disorders**
*D. Dimitriou (United Kingdom)*

10:25am - 10:30am
**Question and answer**
*D. Dimitriou (United Kingdom)*

## S44 Myofunctional therapy as an adjunct treatment for sleep disordered breathing: Validation of screening tools and objective measurements of progress for an emerging standard of care

9:00am - 10:30am I Club A and B

**Chairs:**
M. Moeller (United States), O. Bruni (Italy)

9:00am - 9:02am
**Introduction**
*M. Moeller (United States)*

9:02am - 9:19am
**Evaluation and measurements of a 12 week orofacial myofunctional therapy program for sleep disordered children**
*D.K.-K. Ng (Hong Kong)*

9:19am - 9:36am
**Universal screening tools for speech pathologists: Orofacial myofunctional disorders as clinical markers for OSA**
*O. Bruni (Italy)*

9:36am - 9:53am
**Myofunctional therapy for adult snoring and OSA: Changes in tongue fat and airway in a RCT**
*E. Bianchini (Brazil)*

9:53am - 10:10am
**Myofunctional therapy and tongue tone in chilrdren with sleep disordered breathing**
*M. Pia Villa (Italy)*

10:10am- 10:27am
**Standardizing myofunctional exercises for chilrdren with residual OSAS**
*M. Evangelisti (Italy)*

10:27am - 10:30am
**Question and answer**
*O. Bruni (Italy)*

## S46 New approaches to studies of genetics of sleep and its disorders

9:00am - 10:30am I Meeting Hall 1B

**Chairs:**
A. Pack (United States)

9:00am - 9:02am
**Introduction**
*A. Pack (United States)*

9:02am - 9:19am
**New strategies based on clinical sleep centers**
*E. Mignot (United States)*

9:19am - 9:36am
**Use of new approaches to mice**
*A. Pack (United States)*

9:36am - 9:53am
**Characterizing pleiotropic effects of genetic variation**
*O. Veatch (United States)*

9:53am - 10:10am
**Phenotypic approaches to sleep disorders**
*P. Cistulli (Australia)*

10:10am- 10:27am
**Understanding complex genetic interactions using machine learning**
*D. Mazzotti (United States)*

10:27am - 10:30am
**Question and answer**
*A. Pack (United States)*

## S47 Insomnia phenotypes: Identification and treatment response

9:00am - 10:30am I Club D and E

**Chairs:**
W. Wohlgemuth (United States)

9:00am - 9:05am
**Introduction**
*W. Wohlgemuth (United States)*

9:05am - 9:25am
**Sleep architecture profiles in insomnia patients**
*W. Wohlgemuth (United States)*

9:25am - 9:45am
**Trait and life history profiles reveal stable insomnia subtypes**
*E. Van Someren (The Netherlands)*

9:45am - 10:05am
**Predictors of Insomnia severity index profiles among veterans with obstructive sleep apnea**
*D. Wallace (United States)*

10:05am - 10:25am
**Insomnia with objective short sleep duration: Impact on hypertension risk and insomnia treatment response**
*J. Edinger (United States)*

10:25am - 10:30am
**Question and answer**
*W. Wohlgemuth (United States)*

## S48 NON-PAP treatment of obstructive-sleep apnea in late teenagers and early adulthood: What can be done, orthodontia and surgery

9:00am - 10:30am I Terrace 1

**Chairs:**
C. Guilleminault (United States), P. Pirelli (Italy)

9:00am - 9:02am
**Introduction**
*C. Guilleminault (United States)*

9:02am - 9:19am
**Role of dental devices, negative and positive responses – including long term-in young adults with OSA**
*M. Marklund (Sweden)*

9:19am - 9:36am
**Maxillo-mandibular advancement in young OSA adult, including long term results, positive and negative findings**
*C. C.-H. Lin (Taiwan)*

9:36am - 9:53am
**Bone to bone palatal expansion orthodontia and surgery in late teenagers and early adulthood: problems, complication, indications and results**
*B. Vande Vannet (Belgium)*

9:53am - 10:10am
**Transverse maxillary deficiency in obstructive sleep apnea syndrome (OSAS): Benefits of utilizing a palatine plate**
*T. Loncle (France)*

10:10am - 10:27am
**Distraction Osteogenesis Maxillary Expansion (DOME)**
*S. Liu (United States)*

10:27am - 10:30am
**Question and answer**
*P. Pirelli (Italy)*

## T04 Group scoring discussion: Respiratory related breathing disorders

9:00am - 10:30am I Club H

**Chairs:**
T. Penzel (Germany)

9:00am - 9:10am
**Introduction**
*T. Penzel (Germany)*

9:10am - 9:50am
**Recommended and alternative sensors in PSG**
*A. Obeidat (United States)*

9:50am - 10:30am
**AASM guidelines for scoring sleep stages in adults**
*A. Obeidat (United States)*

## K07 Sleep: from single neuron to behavior

M. Tafti (Switzerland)
**Keynote** 10:30am - 11:15am I Congress Hall

## S49 Daytime sleepiness: Newest research results and experts' opinions

10:30am - 12:00pm I Meeting Hall IV

**Chairs:**
A. Büttner-Teleaga (Germany)

10:30am - 10:35am
**Introduction**
*A. Büttner-Teleaga (Germany)*

10:35am - 10:55am
**Sleep disorders and excessive sleepiness: Who needs treatment for safety critical tasks**
*M. Howard (Australia)*

10:55am - 11:15am
**EDS in kleine-levin syndrome – an update about the new research**
*F. Han (China)*

11:15am - 11:35am
**Experts' opinions: EDS and its effects hypersomnia and neurological diseases**
*S. Kotterba (Germany)*

11:35am - 11:55am
**Experts' opinions: EDS and its effects in sleep breathing disorders (e.g. OSA/CSA)**
*M. Orth (Germany)*

11:55am - 12:00pm
**Question and answer**
*A. Büttner-Teleaga (Germany)*

## S50 Multiple sclerosis, sleep and sleep disorders

10:30am - 12:00pm I Meeting Hall V

**Chairs:**
L. Ferini-Strambi (Italy)

10:30am - 10:32am
**Introduction**
*L. Ferini-Strambi (Italy)*

10:32am - 10:49am
**Sleep-related motor disorders in MS**
*M. Manconi (Switzerland)*

10:49am - 11:06am
**EDS and narcolepsy-like phenotypes in MS and related disorders**
*C. Bassetti (Switzerland)*

11:06am - 11:23am
**Parasomnias and MS**
*G. Mayer (Germany)*

11:23am - 11:40am
**Imaging explaining sleep-disorders and fatigue in MS**
*G. Rizzo (Italy)*

11:40am - 11:57am
**The impact of drugs for MS on sleep**
*L. Ferini-Strambi (Italy)*

11:57am - 12:00pm
**Question and answer**
*L. Ferini-Strambi (Italy)*

## S51 Diagnosis, morbidity and treatment of pediatric OSA: What's new?

10:30am - 12:00pm I North Hall

**Chairs:**
D. Gozal (United States), L. Kheirandish-Gozal (United States)

10:30am - 10:35am
**Introduction**
*D. Gozal (United States)*

10:35am - 10:55am
**The morbidity of pediatric OSAS: The hidden iceberg**
*D. Gozal (United States)*

10:55am - 11:15am
**OSAS diagnosis: When PSG is relatively unavailable**
*H.-L. Tan (United Kingdom)*

11:15am - 11:35am
**Adenotonsillectomy for pediatric OSAS: The good, the bad and the ugly**
*M.L. Alonso-Alvarez (Spain)*

11:35am - 11:55am
**Non-surgical options for pediatric OSAS**
*L. Kheirandish-Gozal (United States)*

11:55am - 12:00pm
**Question and answer**
*L. Kheirandish-Gozal (United States)*

## S52 Dynamic circuit connecting the circadian clock and sleep/wakefulness

10:30am - 12:00pm I Club A and B

**Chairs:**
K.-i. Honma (Japan)

10:30am - 10:35am
**Introduction**
*K.-i. Honma (Japan)*

10:35am - 10:55am
**Oscillators in the suprachiasmatic nucleus regulating seasonality in sleepwake rhythm**
*S. Honma (Japan)*

10:55am - 11:15am
**Responsiveness of the circadian system to environmental challenge during the lifespan**
*A. Sumova (Czech Republic)*

11:15am - 11:35am
**ZBTB20 acts as a circadian output regulator of activity rhythms**
*Y. Xu (China)*

11:35am - 11:55am
**Integration: dynamic circuits connecting the circadian clock and sleep/wakefulness**
*K.-i. Honma (Japan)*

11:55am - 12:00pm
**Question and answer**
*K.-i. Honma (Japan)*

## S53 How the reticular activating system (RAS) modulates perception and movement

10:30am - 12:00pm I Meeting Hall 1A

**Chairs:**
S. Datta (United States)

10:30am - 10:32am
**Introduction**
*S. Datta (United States)*

10:32am - 10:49am
**Mechanisms modulating the control of waking vs REM sleep**
*S. Datta (United States)*

10:49am - 11:06am
**RAS interactions with cerebellar motor control**
*E. Scamati (Italy)*

11:06am - 11:23am
**Gamma band coherence during waking and REM sleep**
*P. Torterolo (Uruguay)*

11:23am - 11:40am
**Effects of deep brain stimulation of the RAS in parkinson's disease**
*P. Mazzone (Italy)*

11:40am - 11:57am
**Gamma activity and its modulation of arousal and movement**
*E. Garcia-Rill (United States)*

11:57am - 12:00pm
**Question and answer**
*S. Datta (United States)*

## S54 Menopause matters: Hormones, hot flashes and sleep disorders

10:30am - 12:00pm I Meeting Hall 1B

**Chairs:**
F. Baker (United States)

10:30am - 10:35am
**Introduction**
*F. Baker (United States)*

10:35am - 10:55am
**Mechanisms underlying the influence of female sex steroids on sleepwake regulatory systems**
*J. Mong (United States)*

10:55am - 11:15am
**Why does sleep quality decrease during the menopausal transition?**
*P. Polo-Kantola (Finland)*

11:15am - 11:35am
**Impact of hot flashes and hormone fluctuations on sleep in perimenopausal women with insomnia**
*F. Baker (United States)*

11:35am - 11:55am
**The role of menopause in the development of sleep-disordered breathing in women**
*E. Lindberg (Sweden)*

11:55am - 12:00pm
**Question and answer**
*F. Baker (United States)*

## S55 OSA treatment in adult [men and women] non compliant with nasal PAP, indication and potential treatment: Surgical approaches and nerve implantation

10:30am - 12:00pm I Terrace 1

**Chairs:**
C.C.-H. Lin (Taiwan), S.-W. Kim (Republic of Korea)

10:30am - 10:35am
**Introduction**
*C.C.-H. Lin (Taiwan)*

10:35am - 10:55am
**Computer aided surgical simulation for maxillomandibular advancement**
*S.S. Hsu (Taiwan)*

10:55am - 11:15am
**Maxillomandibular advance with CCW rotation for surgical treatment of OSA**
*J. Cifuentes (Chile)*

11:15am - 11:35am
**European experience with different concepts of upper airway neurostimulation**
*J. Maurer (Germany)*

11:35 - 11:45
**Patient screening, selection and surgical device implantation**
*M. Boon (United States)*

11:45am - 11:55am
**Transcutaneous electrical stimulation of the upper airway dilator muscles in patients with obstructive sleep apnoea**
*J. Steier (United Kingdom)*

11:55am - 12:00pm
**Question and answer**
*S.-W. Kim (Republic of Korea)*

## O08 REM behavior disorders oral abstract presentations

10:30am – 12:00pm I Club D and E

10:30am – 10:45am
**INCREASED EEG DESYNCHRONIZATION DURING PHASIC REM SLEEP IN IDIOPATHIC REM SLEEP BEHAVIOR DISORDER**
*J.-S. Sunwoo (Republic of Korea)*

10:45am – 11:00am
**SEVERITY OF REM SLEEP MUSCLE ATONIA LOSS IN IDIOPATHIC REM SLEEP BEHAVIOUR DISORDER CORRELATES WITH THE DEGREE OF ABNORMALITIES IN THE VESTIBULAR EVOKED MYOGENIC POTENTIALS**
*M. Puligheddu (Italy)*

11:00am – 11:15am
**INVESTIGATING BIOMARKERS FOR PREDICTING THE CONVERSION TO ALPHA-SYNUCLEINOPATHIES IN PATIENTS AFFECTED BY REM SLEEP BEHAVIOR DISORDER: A COMPREHENSIVE ANALYSIS OF CLINICAL, NEUROPSYCHOLOGICAL, NEUROIMAGING, AND CEREBROSPINAL-FLUID DATA**
*C. Liguori (Italy)*

11:15am – 11:30am
**ABNORMAL ACTIVITY IN THE REWARD SYSTEM IN PARKINSON'S DISEASE PATIENTS WITH RAPID EYE MOVEMENTS SLEEP BEHAVIOR DISORDER**
*C. Beal (France)*

11:30am – 11:45am
**PREVALENCE AND ASSOCIATED FACTORS FOR REM SLEEP BEHAVIOUR DISORDER: A NATION-WIDE POPULATION-BASED STUDY OF 30,097 CANADIAN ADULTS**
*C. Yao (Canada)*

11:45am – 12:00pm
**INSOMNIA AS A SOMATIC REPRESENTATION OF ANXIETY IN THE SYMPTOMATOLOGY OF DEPRESSION**
*T. Yoshiike (Japan)*

## O09 Sleep breathing disorders oral abstract presentations

10:30am – 12:00pm I Club H

10:30am – 10:45am
**LIMITATIONS OF THE APNEA-HYPOPNEA INDEX FOR ASSESSING THE CLINICAL SEVERITY OF OBSTRUCTIVE SLEEP APNEA IN CHILDREN**
*Y.-S. Chang (Taiwan)*

10:45am – 11:00am
**UPPER AIRWAY STIMULATION EFFECTIVELY TREATS REM OBSTRUCTIVE SLEEP APNEA**
*F. Luyster (United States)*

11:00am – 11:15am
**CPAP WITHDRAWAL ON 24-HOUR BLOOD PRESSURE AND ARTERIAL STIFFNESS IN WOMEN AND MEN WITH OBSTRUCTIVE SLEEP APNEA. A RANDOMIZED CONTROLLED TRIAL**
*C. Sahlin (Sweden)*

11:15am – 11:30am
**A MULTICENTER PILOT STUDY ON THE INDICATIONS OF THE NEGATIVE PRESSURE SLEEP THERAPY SYSTEM FOR THE TREATMENT OF OBSTRUCTIVE SLEEP APNEA**
*C.M. Lin (Taiwan)*

11:30am – 11:45am
**PREOPERATIVE APNEA-HYPOPNEA INDEX PREDICTS INCREASED POSTOPERATIVE INTRATHORACIC PRESSURE DURING SLEEP IN PATIENTS WHO UNDERWENT ENDOSCOPIC SINUS SURGERY**
*M. Suzuki (Japan)*

11:45am – 12:00pm
**REM-ASSOCIATED SLEEP DISORDERED BREATHING: PREVALENCE AND CLINICAL SIGNIFICANCE IN THE HYPNOLAUS COHORT**
*P. Acosta-Castro (Spain)*

## K08 Restless legs syndrome: Towards a new concept of the disease

J. Winkelmann (Germany)
**Keynote** 11:15am - 12:00pm I Congress Hall

## Bioproject Satellite Symposium: Cataplexy: From fundamentals to the clinic

12:30pm - 2:00pm I Congress Hall

**Chairs:**
G.J. Lammers (The Netherlands)

12:30pm – 12:36pm
**Cataplexy: From fundamentals to the clinic**
*G.J. Lammers (The Netherlands)*

12:36pm – 1:04pm
**Neurobiology of REM sleep and Cataplexy: a short update**
*C. Peyron (France)*

1:04pm – 1:32pm
**Histamine neurones, REM sleep and cataplexy**
*J.-C. Schwartz (France)*

1:32pm – 2:00pm
**Cataplexy data: HARMONY CTP and HARMONY III clinical trials data**
*Z. Szakacs, Budapest (Hungary)*

## NOX Medical Industry Workshop: Evolution of sleep medicine – challenging the status quo

12:30pm – 1:15pm I North Hall

12:30pm – 12:45pm
**Opening Remarks**
*L. Parrino (Italy)*

12:45pm – 1:00pm
**Evolution of Sleep medicine part 1**
*A. Pack (United States)*

1:00pm – 1:15pm
**Evolution of Sleep medicine part 2**
*E. Sif Arnardottir (Iceland)*

## S56 What can we learn from recent large negative clinical trials in sleep-disordered breathing?

2:00pm - 3:30pm I Congress Hall

**Chairs:**
A. Pack (United States)

2:00pm - 2:05pm
**Introduction**
*A. Pack (United States)*

2:05pm - 2:25pm
**Critique of SERVE-HF study**
*D. Bradley (Canada)*

2:25pm - 2:45pm
**Commentary on APPLES study**
*C. Kushida (United States)*

2:45pm - 3:05pm
**The CHAT study**
*D. Gozal (United States)*

3:05pm - 3:25pm
**Why was the SAVE study negative?**
*D. McEvoy (Australia)*

3:25pm - 3:30pm
**Question and answer**
*A. Pack (United States)*

## S57 Ascertainments of RBD and its clinical implications for neurodegeneration

2:00pm - 3:30pm I Meeting Hall IV

**Chairs:**
C. Trenkwalder (Germany)

2:00pm - 2:02pm
**Introduction**
*C. Trenkwalder (Germany)*

2:02pm - 2:19pm
**Assessment of RBD with questionnaires and scales in the population: How valid reliable are they?**
*Y.K. Wing (Hong Kong)*

2:19pm - 2:36pm
**Assessment of prodromal RBD using vPSG– earlier rather than early?**
*F. Sixel-Döring (Germany)*

2:36pm- 2:53pm
**Worldwide cohorts address RBD for prodromal parkinson – is it worth the effort?**
*C. Trenkwalder (Germany)*

2:53pm - 3:10pm
**RBD – the non-converters: What do they tell us?**
*B. Högl (Austria)*

3:10pm- 3:27pm
**Ethical aspects of RBD prognostic counseling – what do patients want and need to know?**
*E. St. Louis (United States)*

3:27pm - 3:30pm
**Question and answer**
*C. Trenkwalder (Germany)*

## S58 Environmental challenges: The impact of artificial light on sleep and circadian biology

2:00pm - 3:30pm I Meeting Hall V

**Chairs:**
A. Skeldon (United Kingdom)

2:00pm - 2:05pm
**Introduction**
*A. Skeldon (United Kingdom)*

2:05pm - 2:25pm
**Measuring and specifying lighting for the circadian system**
*M. Figuero (United States)*

2:25pm - 2:45pm
**Assessing the impact of light-at-night on circadian function and mood**
*A. Coogan (Ireland)*

2:45pm - 3:05pm
**The modern versus natural lighting environment and its impact on sleep and circadian biology**
*K. Wright (United States)*

3:05pm - 3:25pm
**The interaction of light and social constraints with sleep and circadian biology**
*A. Skeldon (United Kingdom)*

3:25pm - 3:30pm
**Question and answer**
*A. Skeldon (United Kingdom)*

## S59 Developmental aspects of sleep's influence on memory and general cognitive abilities

2:00pm - 3:30pm I North Hall

**Chairs:**
K. Hoedlmoser (Austria), O. Bruni (Italy)

2:00pm - 2:05pm
**Introduction**
*K. Hoedlmoser (Austria)*

2:05pm - 2:25pm
**The impact of sleep on the consolidation of newly acquired word meanings in infants (9-16 months)**
*I. Wilhem (Switzerland)*

2:25pm - 2:45pm
**Sleep and cognition in preschool-age (3-5 yrs) children – a nap study**
*R. Spencer (United States)*

2:45pm - 3:05pm
**Sleep and cognition from elementary school (8-10yrs) up to adolescence (14-16yrs): A longitudinal approach**
*K. Hoedlmoser (Austria)*

3:05pm - 3:25pm
**Sleep and cognition in early adolescence (12-14 yrs): Results from a twin study**
*L. Tarokh (Switzerland)*

3:25pm - 3:30pm
**Question and answer**
*O. Bruni (Italy)*

## S60 Sleep loss and socio-emotional functioning

2:00pm - 3:30pm I Club A and B

**Chairs:**
J. Axelsson (Sweden)

2:00pm - 2:05pm
**Introduction**
*J. Axelsson (Sweden)*

2:05pm - 2:30pm
**Sleep in relation to neural systems: implications for emotion regulation and psychopathology**
*P. Franzén (United States)*

2:30pm - 2:55pm
**The effects of sleep loss on social perception and interpersonal interactions**
*T. Sundelin (Sweden)*

2:55pm - 3:20pm
**Emotion and face recognition in insomnia**
*L. Beattie (United Kingdom)*

2:20pm - 3:30pm
**Question and answer**
*J. Axelsson (Sweden)*

## S61 Idiopathic hypersomnia: A neglected disorder

2:00pm - 3:30pm I Meeting Hall 1A

**Chairs:**
I. Arnulf (France)

2:00pm - 2:05pm
**Introduction**
*I. Arnulf (France)*

2:05pm - 2:25pm
**Phenotypes of idiopathic hypersomnia**
*K. Sonka (Czech Republic)*

2:25pm - 2:45pm
**Idiopathic hypersomnia: A female disorder?**
*I. Arnulf (France)*

2:45pm - 3:05pm
**New insights into the mechanisms of hypersomnia**
*D. Rye (United States)*

3:05pm - 3:25pm
**Treatments of idiopathic hypersomnia**
*G. Mayer (Germany)*

3:25pm - 3:30pm
**Question and answer**
*I. Arnulf (France)*

## S62 Sleep slow waves: From cells to consciousness

2:00pm - 3:30pm I Meeting Hall 1B

**Chairs:**
R. Huber (Switzerland)

2:00pm - 2:02pm
**Introduction**
*R. Huber (Switzerland)*

2:02pm - 2:19pm
**Local and global dynamics of cortical slow waves in mice**
*V. Vyazovskiy (United Kingdom)*

2:19pm - 2:36pm
**How do slow waves affect sensory responses? Insights from intracranial electrophysiology and scalp EEG**
*Y. Nir (Israel)*

2:36pm- 2:53pm
**Mapping of EEG slow waves in health and disease**
*R. Huber (Switzerland)*

2:53pm - 3:10pm
**Slow-waves, brain complexity and consciousness**
*M. Massimini (Italy)*

3:10pm- 3:27pm
**Local sleep changes in sleep and psychiatric disorders**
*R. Benca (United States)*

3:27pm - 3:30pm
**Question and answer**
*R. Huber (Switzerland)*

## S63 OSA, upper-airway surgery and MAD: Techniques to select location, surgical techniques to be used, personalization of mandibular-advancement-device

2:00pm - 3:30pm I Terrace 1

**Chairs:**
N. Montesdeoca (Spain), C.C.-H. Lin (Taiwan)

2:00pm - 2:02pm
**Introduction**
*N. Montesdeoca (Spain)*

2:02pm - 2:19pm
**Advance in surgical technique for adenotonsillectomy**
*S.-W. Kim (Republic of Korea)*

2:19pm - 2:36pm
**Protocol for identifying level of obstruction: DISE vs. sleep MRI**
*P.V. Krishnan (India)*

2:36pm - 2:53pm
**Virtual surgery and simulation analyses on upper airway of obstructive sleep apnea patients**
*I.H. Lo (Taiwan)*

2:53pm - 3:10pm
**Selected surgical techniques for palatal and pharyngeal obstruction**

*P. Baptista (Spain)*

3:10pm- 3:27pm
**Analysis of the movements of the mandible and hyoid bone in the treatment of OSA with MAD**
*J. Vila (Spain)*

3:27pm - 3:30pm
**Question and answer**
*C.C.-H. Lin (Taiwan)*

## O10 Restless legs syndrome (RLS/WED) oral abstract presentations

2:00pm – 3:30pm I Club D and E

2:00pm – 2:15pm
**VALIDATION OF AN AUTOMATIC SCORING ALGORITHM FOR THE ANALYSIS OF PERIODIC LIMB MOVEMENTS ACCORDING TO THE WASM2016 GUIDELINES**
*D. Alvarez-Estevez (The Netherlands)*

2:15pm – 2:30pm
**ASSOCIATION OF BTBD9 AND MAP2K5/SKOR1 WITH RESTLESS LEGS SYNDROME IN CHINESE POPULATION**
*G. Li (China)*

2:30pm – 2:45pm
**COMORBIDITIES TO RESTLESS LEGS SYNDROME - RESULTS FROM THE DANISH BLOOD DONOR STUDY**
*M. Didriksen (Denmark)*

2:45pm – 3:00pm
**CIRCADIAN VARIATION OF FLEXOR WITHDRAWAL AND CROSSED EXTENSOR REFLEXES IN RESTLESS LEGS SYNDROME**
*C. Dafkin (South Africa)*

3:00pm – 3:15pm
**POLYSOMNOGRAPHIC FINDINGS IN RESTLESS LEGS SYNDROME (RLS) PATIENTS WITH SEVERE AUGMENTATION**
*M.-L. Muntean (Germany)*

3:15pm – 3:30pm
**USING THE BEHAVIORS INDICATORS TEST-RESTLESS LEGS (BIT-RL) TO DIAGNOSE RESTLESS LEGS SYNDROME (RLS) IN ALZHEIMER'S PATIENTS WITH DEMENTIA AND NOCTURNAL AGITATED BEHAVIORS (ADNA)**
*K. Richards (United States)*

## T05 Breathing re-education to achieve nasal and normal minute volume for sleep

2:00pm - 3:30pm I Club H

**Chairs:**
S. Keenan (United States), O. Ludka (Czech Republic)

**Speakers:**
*P. McKeown (United Kingdom)*

## K09 Chronic insomnia and the immune response

M.R. Irwin (United States)
**Keynote** 3:30pm - 4:15pm I Congress Hall

## S64 Understanding the pathophysiology of RBD and REM sleep

3:30pm - 5:00pm I Meeting Hall IV

**Chairs:**
R. Ferri (Italy)

3:30pm - 3:35pm
**Introduction**
*R. Ferri (Italy)*

3:35pm - 3:55pm
**REM sleep circuitry abnormalities in RBD**
*J. Peever (Canada)*

3:55pm - 4:15pm
**Brain neuroimaging abnormalities in patients with RBD**
*D. Arnaldi (Italy)*

4:15pm - 4:35pm
**Electromyographic correlates in RBD**
*P. Jennum (Denmark*

4:35pm - 4:55pm
**Spectral EEG changes during REM sleep in RBD and their modifications by clonazepam**
*R. Ferri (Italy)*

4:55pm - 5:00pm
**Question and answer**
*R. Ferri (Italy)*

## S65 Sleep-related hypermotor epilepsy (SHE): From the basic mechanisms to the differential diagnosis

3:30pm - 5:00pm I Meeting Hall V

**Chairs:**
L. Nobili (Italy), F. Provini (Italy)

3:30pm - 3:35pm
**Introduction**
*F. Provini (Italy)*

3:35pm - 3:55pm
**Physiopathological mechanisms of sleep-related seizures**
*L. Nobili (Italy)*

3:55pm - 4:15pm
**From nocturnal paroxysmal dystonia to SHE**
*F. Provini (Italy)*

4:15pm - 4:35pm
**Semeiological and anatomoclinical correlation of sleep-related hypermotor seizures**
*P. Kahane (France)*

4:35pm - 4:55pm
**SHE and nrem parasomnias: The key features for the differential diagnosis**
*C. Derry (United Kingdom)*

4:55pm - 5:00pm
**Question and answer**
*L. Nobili (Italy)*

## S66 Deficient sleep in children and adolescents: Generating solutions for a global epidemic

3:30pm - 5:00pm I North Hall

**Chairs:**
J. Owens (United States)

3:30pm - 3:33pm
**Introduction**
*J. Owens (United States)*

3:33pm - 3:50pm
**Overview of a global epidemic**
*Y.K. Wing (Hong Kong)*

3:50pm - 4:07pm
**School-based sleep education in Canada**
*R. Gruber (Canada)*

4:07pm - 4:24pm
**Applied technology for delivering sleep health messages**
*M. Quante (Germany)*

4:24pm - 4:41pm
**School-based educational interventions in the UK**
*C. Espie (United Kingdom)*

4:41pm - 4:58pm
**Healthy school start times: A US perspective**
*J. Owens (United States)*

4:58pm - 5:00pm
**Question and answer**
*J. Owens (United States)*

## S67 Respiratory muscle function and intervention of upper airway in patients with sleep disordered breathing

3:30pm - 5:00pm I Club A and B

**Chairs:**
Y.-M. Luo (China)

3:30pm - 3:33pm
**Introduction**
*Y.-M. Luo (China)*

3:33pm - 3:50pm
**Respiratory muscle reflex responses to the onset of flow limitation in obstructive sleep apnoea**
*P. Catcheside (Australia)*

3:50pm - 4:07pm
**Neural respiratory drive in patients with COPD, OSA and overlap syndrome**
*Y.-M. Luo (China)*

4:07pm - 4:24pm
**Principle, feasibility and efficacy of transvenous nerve stimulation for treatment of sleep apnea**
*X. Zhang (China)*

4:24pm - 4:41pm
**Transcutaneous electrical stimulation of the upper airway dilator muscles in patients with obstructive sleep apnoea**
*J. Steier (United Kingdom)*

4:41pm - 4:58pm
**Predicting the need for NIV in ALS**
*M. Polkey (United Kingdom)*

4:58pm - 5:00pm
**Question and answer**
*Y.-M. Luo (China)*

## S68 Sleep disorders in post-menopausal women: The impact on health

3:30pm - 5:00pm I Meeting Hall 1A

**Chairs:**
R. Silvestri (Italy)

3:30pm - 3:35pm
**Introduction**
*R. Silvestri (Italy)*

3:35pm - 3:55pm
**Treatment of menopausal insomnia**
*P. Polo-Kantola (Finland)*

3:55pm - 4:15pm
**Effects of the postmenopausal cardio-respiratory changes on woman health and metabolism**
*M. Bonsignore (Italy)*

4:15pm - 4:35pm
**Sleep rhythms alterations in elderly women and their impact on cognitive decline**
*B.M. Guarneri (Italy)*

4:35pm - 4:55pm
**The impact of RLS on women cardiovascular health and quality of life**
*M. Manconi (Switzerland)*

4:55pm - 5:00pm
**Question and answer**
*R. Silvestri (Italy)*

## S69 Effects of sleep deprivation: Novel agents and mechanisms

3:30pm - 5:00pm I Meeting Hall 1B

**Chairs:**
T. Porkka-Heiskanen (Finland)

3:30pm - 3:35pm
**Introduction**
*T. Porkka-Heiskanen (Finland)*

3:35pm - 3:55pm
**Astrocytes mediate the reshaping of cortical synapses in response to sleep loss**
*M. Bellesi (Italy)*

3:55pm - 4:15pm
**Microglia and sleep: The effects of sleep deprivation on microglial function**
*H.-K. Wigren (Finland)*

4:15pm - 4:35pm
**Sleep loss and the microbiome**
*K. Wright (United States)*

4:35pm - 4:55pm
**Sleep and circadian metabolomics: Effect of sleep deprivation**
*D. Skene (Switzerland)*

4:55pm - 5:00pm
**Question and answer**
*T. Porkka-Heiskanen (Finland)*

## O11 Sleep breathing disorders oral abstract presentations

3:30pm – 5:00pm I Club D and E

3:30pm – 3:45pm
**REAL-TIME IDENTIFICATION OF UPPER AIRWAY OCCLUSION USING ELECTRICAL IMPEDANCE TOMOGRAPHY IN PATIENTS WITH OBSTRUCTIVE SLEEP APNEA**
*S.-W. Kim (Republic of Korea)*

3:45pm – 4:00pm
**VALIDATION OF THREE-DIMENSIONAL AIRWAY IMAGING FOR SCREENING FOR SLEEP APNEA IN PEDIATRIC PATIENTS**
*A. Masoud (Saudi Arabia)*

4:00pm – 4:15pm
**DIFFERENCES IN THE DURATION OF OBSTRUCTIVE SLEEP APNEA EVENTS AMONG HIGHLAND TIBETANS AND HANS AND LOWLAND HANS AT LOW ALTITUDE**
*L. Tan (China)*

4:15pm – 4:30pm
**PREDICTING RESPONSE TO OXYGEN THERAPY IN OBSTRUCTIVE SLEEP APNEA PATIENTS USING VENTILATORY CHEMOREFLEX TEST DURING WAKEFULNESS**
*D. Wang (Australia)*

4:30pm – 4:45pm
**CLINICAL VALIDATION OF A DIAGNOSTIC PATCH FOR THE DETECTION OF SLEEP APNEA**
*M. Merchant (United States)*

4:45pm – 5:00pm
**RISK FACTORS FOR RESPIRATORY COMPLICATIONS AFTER ADENOTONSILLECTOMY IN OSA CHILDREN**
*S. Weber (Brazil)*

## O12 Behavior, cognition and dreaming and neurological sleep disorders affecting sleep oral abstract presentations

3:30pm – 5:00pm I Terrace 1

3:30pm – 3:45pm
**THE EFFECT OF CHRONIC SLEEP RESTRICTION AND PRIOR SLEEP DURATION ON SLEEP INERTIA MEASURED USING COGNITIVE PERFORMANCE**
*E. Klerman (United States)*

3:45pm – 4:00pm
**SIMULTANEOUS EEG-FMRI REVEALS SPINDLE-RELATED NEURAL CORRELATES OF HUMAN INTELLECTUAL ABILITIES DURING NREM SLEEP**
*S. Fogel (Canada)*

4:00pm – 4:15pm
**SLEEP SPINDLE ACTIVITY SIGNIFICANTLY CORRELATES WITH IMPLICIT STATISTICAL LEARNING CONSOLIDATION IN OBSTRUCTIVE SLEEP APNEA PATIENTS**
*D. Stevens (Australia)*

4:15pm – 4:30pm
**AGE-DEPENDENT EFFECTS OF SLEEP DEPRIVATION ON TASK PERFORMANCE AND MIND WANDERING**
*J. Schwarz (Sweden)*

4:30pm – 4:45pm
**EMOTIONAL WORKING MEMORY IN OLDER ADULTS AFTER TOTAL SLEEP DEPRIVATION**
*A. Gerhardsson (Sweden)*

4:45pm – 5:00pm
**IMPACT OF MILD COGNITIVE IMPAIRMENT ON DREAM MENTATION IN PARKINSON'S DISEASE**
*M. Roussel (France)*

## O13 Basic research oral abstract presentations

3:30pm – 5:00pm I Club H

3:30pm – 3:45pm
**ON THE EFFECTS OF TWO VERSIONS OF SLOW WAVE SLEEP DEPRIVATION IN THE RELATION TO REM SLEEP**
*L. Maisuradze (Georgia)*

3:45pm – 4:00pm
**EEG SIGNATURES OF BRAIN MATURATION IN CHILDREN: AGE-RELATED AND ACROSS-NIGHT DYNAMICS IN SPATIAL PROPAGATION OF SLOW OSCILLATIONS**
*S. Kurth (Switzerland)*

4:00pm – 4:15pm
**QUANTIFICATION OF CHANGES IN GLUTAMATE LEVELS IN HEALTHY YOUNG ADULTS ACROSS THE SLEEP WAKE CYCLE USING PROTON MAGNETIC RESONANCE SPECTROSCOPY**
*C. Volk (Switzerland)*

4:15pm – 4:30pm
**THE EFFECTS OF ENERGY SUBSTITUTION DURING SLEEP DEPRIVATION ON THE FOLLOWING REBOUND SLEEP**
*Z. Lelkes (Hungary)*

4:30pm – 4:45pm
**MOLECULAR PROFILING OF THE LATERAL HYPOTHALAMIC NEURONS IDENTIFIED MOLECULES FOR DISEASE AND DEVELOPMENT**
*A. Seifinejad (Switzerland)*

4:45pm – 5:00pm
**SLEEP RESTRICTION INCREASES TELOMERE LENGTH IN SKIN OF RATS**
*R. Gimenes Albuquerque (Brazil)*

## K10 Treating sleep and circadian problems: A transdiagnostic approach

A. Harvey (United States)
**Keynote** 4:15pm - 5:00pm I Congress Hall

## S71 Sleep, clocks and neurodegeneration

5:30pm - 7:00pm I Meeting Hall IV

**Chairs:**
A. Videnovic (United States)

5:30pm - 5:35pm
**Introduction**
*A. Videnovic (United States)*

5:35pm - 5:55pm
**Sleep and circadian homeostasis – implications for brain health**
*P. Zee (United States)*

5:55pm - 6:15pm
**Sleep, circadian clocks and alzheimer's disease**
*E. Musiek (United States)*

6:15pm - 6:35pm
**Circadian and sleep dysregulation in Parkinson's disease**
*A. Videnovic (United States)*

6:35pm - 6:55pm
**Disruption of sleep and circadian timing in huntington's disease**
*J. Morton (United Kingdom)*

6:55pm - 7:00pm
**Question and answer**
*A. Videnovic (United States)*

## S72 The duality of sleep movement

5:30pm - 7:00pm I Meeting Hall V

**Chairs:**
J.J. Askenasy (Israel)

5:30pm - 5:32pm
**Introduction**
*J.J. Askenasy (Israel)*

5:32pm - 5:49pm
**The dual phenomenon**
*J.J. Askenasy (Israel)*

5:49pm - 6:06pm
**Motor control and dyscontrol in sleep**
*S. Chokroverty (United States)*

6:06pm - 6:23pm
**Sleep in Parkinson's disease: Updates from animal experiments**
*S. Nishino (United States)*

6:23pm - 6:40pm
**Sleep-related muscle contractions with pain**
*T. Mano (Japan)*

6:40pm - 6:57pm
**Arousal, excitation and inhibition in sleep, related to movements a new concept**
*R. Allen (United States)*

6:57pm - 7:00pm
**Question and answer**
*J.J. Askenasy (Israel)*

## S73 Practical aspect of pediatric sleep medicine

5:30pm - 7:00pm I North Hall

**Chairs:**
N. Simakajornboon (United States)

5:30pm - 5:32pm
**Introduction**
*N. Simakajornboon (United States)*

5:32pm - 5:49pm
**Sleep apnea and GH therapy in Prader Willi syndrome**
*A. Salvatoni (Italy)*

5:49pm - 6:06pm
**Obesity and OSA in children**
*H. Sawnani (United States)*

6:06pm - 6:23pm
**CPAP initiation and adherence in children with OSA**
*N. Simakajornboon (United States)*

6:23pm - 6:40pm
**The challenge of opening a pediatric sleep clinic in an Eastern European country**
*M. Oros (Romania)*

6:40pm - 6:57pm
**Headache related to sleep disordered breathing in children with neuromuscular disease (case report)**
*A. Lupusor (Republic of Moldova)*

6:57pm - 7:00pm
**Question and answer**
*N. Simakajornboon (United States)*

## S74 Extracting sleep breathing phenotypes from lab and home data

5:30pm - 7:00pm I Club A and B

**Chairs:**
R.J. Thomas (United States)

5:30pm - 5:35pm
**Introduction**
*R.J. Thomas (United States)*

5:35pm - 5:55pm
**More than airway closure: Pathophysiological, polysomnographic and clinical phenotypes of OSA**
*W. Randerath (Germany)*

5:55pm - 6:15pm
**Pharmacotherapeutic options in relation to various proposed phenotypes**
*J. Hedner (Sweden)*

6:15pm - 6:35pm
**Beyond the male obese sleepy patient: Clinical phenotypes and biomarkers in obstructive sleep apnoea**
*D. Pevernagie (Belgium)*

6:35pm - 6:55pm
**Success and failure biomarkers during home apnea therapy**
*R.J. Thomas (United States)*

6:55pm - 7:00pm
**Question and answer**
*R.J. Thomas (United States)*

## S75 Sleep and mental health in a changing society

5:30pm - 7:00pm I Meeting Hall 1A

**Chairs:**
N. Glozier (Australia)

5:30pm - 5:32pm
**Introduction**
*N. Glozier (Australia)*

5:32pm - 5:49pm
**Sleep disturbance and mental health in the community: Symptom patterns and trajectories**
*M. Müller (Switzerland)*

5:49pm - 6:06pm
**Working conditions and sleep - not all bad news**
*T. Lallukka (Finland)*

6:06pm - 6:23pm
**Neighborhood and sleep: How bad for you is noise?**
*S. Øverland (Norway)*

6:23pm - 6:40pm
**Where we live matters for our sleep: Neighborhood social environment and objective sleep measures**
*G. Simonelli (United States)*

6:40pm - 6:57pm
**How has technology affected our sleep over the past few decades?**
*N. Glozier (Australia)*

6:57pm - 7:00pm
**Question and answer**
*N. Glozier (Australia)*

## S76 Sleep, slow waves and brain temperature: Insights from hibernators

5:30pm - 7:00pm I Meeting Hall 1B

**Chairs:**
R. Amici (Italy)

5:30pm - 5:35pm
**Introduction**
*R. Amici (Italy)*

5:35pm - 5:55pm
**Hypothermic states and their relation to slow wave sleep**
*T. de Boer (The Netherlands)*

5:55pm - 6:15pm
**Slow wave morphology during sleep after daily torpor**
*V. Vyazovskiy (United Kingdom)*

6:15pm - 6:35pm
**Seasonal rhythm in adenosine A1 receptor signaling in hibernation**
*K. Drew (United States)*

6:35pm - 6:55pm
**Slow wave sleep and torpor; insights from a non-hibernator**
*M. Cerri (Italy)*

6:55pm - 7:00pm
**Question and answer**
*R. Amici (Italy)*

## S77 Young Investigator: Sleep research in respiratory sleep medicine

5:30pm - 7:00pm I Club D and E

5:30pm – 5:45pm
**WHY IS OBSTRUCTIVE SLEEP APNEA IN PEOPLE WITH RESISTANT HYPERTENSION MISSED SO OFTEN - A CLINICAL AND POLYSOMNOGRAPHIC CASE-CONTROLLED STUDY**
*A. Gupta (India)*

5:45pm – 6:00pm
**CARDIAC BIOMARKERS IN PATIENTS WITH OBSTRUCTIVE SLEEP APNEA SYNDROME AND HEART FAILURE WITH PRESERVED EJECTION FRACTION**
*I. Andreieva (Ukraine)*

6:00pm – 6:15pm
**HYPOCAPNIA HAS MINIMAL INFLUENCE ON GENIOGLOSSUS MUSCLE AFTER-DISCHARGE ELICITED BY AROUSAL FROM SLEEP IN HEALTHY INDIVIDUALS**
*J. Cori (Australia)*

6:15pm – 6:30pm
**IMPACT OF INTERMITTENT HYPOXIA ON CARDIOVASCULAR REMODELING IN A MURINE MODEL OF SLEEP APNEA: EFFECT OF AGE**
*A.L. Castro-Grattoni (Spain)*

6:30pm – 6:45pm
**DOES MATERNAL SLEEP APNOEA AFFECT CHILDHOOD HEALTH AND EDUCATIONAL OUTCOMES? A LONGITUDINAL STUDY USING POPULATION RECORD LINKAGE**
*Y.S. Bin (Australia)*

6:45pm – 7:00pm
**EFFECTS OF MORPHINE ON THE PHENOTYPIC CAUSES OF OBSTRUCTIVE SLEEP APNEA**
*R. Tomazini Martins (Australia)*

## O14 Aging and excessive daytime sleepiness oral abstract presentations

5:30pm – 7:00pm I Terrace 1

5:30pm – 5:45pm
**THE EFFECTS OF CANNABIS ON VIGILANCE AND SIMULATED DRIVING**
*S. Hartley (France)*

5:45pm – 6:00pm
**REVISED DIAGNOSTIC CRITERIA FOR IDIOPATHIC HYPERSOMNIA: A 32-HOUR BED-REST PROTOCOL**
*E. Evangelista (France)*

6:00pm – 6:15pm
**RAPID EYE MOVEMENTS IN REM SLEEP FEATURES AS BIOMARKER OF MATURITY IN HEALTHY INFANTS**
*M. Merino-Andreu (Spain)*

6:15pm – 6:30pm
**LESS SWS, REM SLEEP AND MORE WASO ARE ASSOCIATED WITH GREATER DEPRESSION AND POORER TIME-BASED PROSPECTIVE MEMORY IN COMMUNITY-DWELLING OLDER ADULTS**
*E. Hodgson (Australia)*

6:30pm – 6:45pm
**ASSOCIATION BETWEEN SLEEP SLOW WAVE ACTIVITY AND BRAIN STRUCTURE DURING ADOLESCENCE**
*A. Goldstone (United States)*

6:45pm – 7:00pm
**SLEEP DEPRIVATION MODIFIES THE USUAL BEHAVIOR OF ALPHA OSCILLATORY ACTIVITY DURING COGNITIVE TASKS**
*S. Montamat (Switzerland)*

## T06 The 3 C's: Credentialing, certification, CECs

5:30pm - 7:00pm I Club H

**Chairs:**
S. Keenan (United States), O. Ludka (Czech Republic)

**Speakers:**
*D. Lane (United States), D. Wolfe (United States)*

## RS1 Society Symposium ASRS and IASSA: Sleep medicine in Asia: Across the discipline

7:00pm - 9:00pm I Meeting Hall IV

**Chairs:**
H. Mallick (India), P.V. Krishnan (India)

7:00pm - 7:10pm
**Introduction**
*H. Mallick (India)*

7:10pm - 7:25pm
**Translational research in insomnia using Yoga Nidra: Therapeutic model and results**
*K. Datta (India)*

7:25pm - 7:40pm
**Alternative therapies in Insomnia: An Insight**
*M. Tripathi (India)*

7:40pm - 7:55pm
**Sleep medicine in Japanese health care insurance system**
*S. Chiba (Japan)*

7:55pm - 8:10pm
**Certification system in Japanese sleep medicine**
*H. Kadotani (Japan)*

8:10pm - 8:30pm
**Protocol and surgical guidelines formulated by IASSA for OSA patients in Indian scenario**
*P.V. Krishnan (India)*

8:30pm - 9:00pm
**Panel discussion**

## RS2 Society Symposium ASA: Biomarkers for sleep disordered breathing: Clinical, physiological, neurocognitive and genetic

7:00 - 9:00 I Terrace 1

**Chairs:**
M. Barnes (Australia)

7:00pm - 7:30pm
**Society Networking: Light food and drinks will be provided**

7:30pm - 7:35pm
**Introduction**
*M. Barnes (Australia)*

7:35pm - 7:55pm
**Clinical biomarkers for the assessment of alertness failure and driving performance in patients with OSA**
*A. Vakulin (Australia)*

7:55pm - 8:15pm
**Physiological biomarkers of OSA**
*D. Eckert (Australia)*

8:15pm - 8:35pm
**Neurocognitive biomarkers in OSA**
*R. Bucks (Australia)*

8:35pm - 8:55pm
**Genetic biomarkers in OSA**
*S. Mukherjee (Australia)*

8:55pm - 9:00pm
**Question and answer**

## RS3 Society Symposium ESRS and WSS: Sleepiness and accidents

7:00pm - 9:00pm I North Hall

**Chairs:**
C. Kushida (United States), L. Nobili (Italy)

7:00pm - 7:30pm
**Society Networking: Light food and drinks will be provided**

7:30pm - 7:35pm
**Introduction**
*C. Kushida (United States)*

7:35pm - 7:50pm
**Awareness of sleepiness on the road, in the air, and at sea: Links to physiology and behavior**
*T. Akerstedt (Sweden)*

7:50pm - 8:05pm
**Sleep apnea and sleepiness: Do mechanisms matter?**
*A. Malhotra (United States)*

8:05pm - 8:20pm
**More than just nodding off: The relationship between sleepiness and accidents**
*K. Honn (United States)*

8:20pm - 8:35pm
**OSA and driving risk: The role of regulation**
*W. McNicholas (Ireland)*

8:35pm - 8:50pm
**OSA in commercial drivers: An evolving story**
*A. Pack (United States)*

8:50pm - 9:00pm
**Question and answer**
*L. Nobili (Italy)*

## RS4 Society Symposium SRS: Circadian rhythm sleep-wake disorders: Looking to the future

7:00pm - 9:00pm I Meeting Hall V

**Chairs:**
S. Abbott (United States)

7:00pm - 7:30pm
**Society Networking: Light food and drinks will be provided**

7:30pm - 7:40pm
**Introduction**
*S. Abbott (United States)*

7:40pm - 8:00pm
**Delayed sleep-wake phase disorder: Functional consequences and management with melatonin**
*S. Rajaratnam (Australia)*

8:00pm - 8:20pm
**In search of novel circadian biomarkers**
*S. Abbott (United States)*

8:20pm - 8:40pm
**Sleep and circadian dysregulation in neurodegeneration**
*A. Videnovic (United States)*

8:40pm - 9:00pm
**Is it the time or the timing: The effect of sleep regularity/irregularity on mood, circadian phase and performance in college students**
*E. Klerman (United States)*

# World Sleep Society Membership

**Individual Membership** is open to public health officials, government representatives, health organization administrators, patient support group members, and the general public as affiliated non-voting members.

**Student Membership** and special dispensation for individuals from economically underprivileged countries are also available. The membership committee will establish membership categories and fees.

**Associate Society Membership** is open to Clinical and Scientific Societies with relevance to sleep. To learn more or become a member, go to www.worldsleepsociety.org/join.

## Current Associate Society Members of World Sleep Society

* Founding Member | Listed in alphabetical order

**Asian Sleep Research Society ***
www.asrsonline.org

**Australasian Sleep Association ***
www.sleep.org.au

**Australasian Sleep Technologist Association**
sleeptechnologists.org

**British Sleep Society**
www.sleepsociety.org.uk

**Bulgarian Association of Obstructive Sleep Apnea & Snoring**
www.sleepapnea.bg

**Canadian Sleep Society ***
www.css-scs.ca

**Czech Sleep Research and Sleep Medicine Society**
www.sleep-society.cz

**European Sleep Research Society ***
www.esrs.eu

**Federation of Latin American Sleep Societies ***

**Finnish Sleep Research Society**
www.sus.fi

**French Society for Sleep Research and Sleep Medicine**
www.sfrms.org

**German Sleep Society**
www.dgsm.de

**Indian Association of Surgeons for Sleep Apnoea**
www.iassa.in

**Indian Society for Sleep Research**
www.issr.in

**Integrated Sleep Medicine Society Japan**
www.ismsj.org

**International Restless Legs Syndrome Study Group**
www.irlssg.org

**Israel Sleep Society**

**Japanese Society of Sleep Research**
jssr.jp

**Peruvian Association of Sleep Medicine (Apemes)**
www.apemesperu.com

**Romanian Association for Pediatric Sleep Disorders**
www.somn-copii.ro

**Russian Society of Somnologists**
www.sleep.ru

**Serbian Sleep Society**
www.sss.rs

**Sleep and Wakefulness Medicine Moroccan Federation**
www.fmmsv.com

**Sleep Research Society ***
www.sleepresearchsociety.org

**Taiwan Society of Sleep Medicine**
www.tssm.org.tw

**Turkish Sleep Medicine Society**
www.tutd.org.tr

DGSM

# 25th Annual Meeting of the German Sleep Society

(Deutsche Gesellschaft für Schlafforschung und Schlafmedizin)

9–11 November 2017

# Münster

## Topics

Keynote and opening lectures
Scientific symposia
Oral presentations
Poster presentations
Training courses
Young scientists symposium
Industrial exhibition
Industrial symposia
Meetings of DGSM work groups

SLEEP MOVES!

Information
Registration
Abstract submission
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## K11 H1N1, seasonality and childhood narcolepsy

F. Han (China)
**Keynote** 8:00am - 9:00am I Congress Hall

## S78 Sleep at high altitude

9:00am - 10:30am I Meeting Hall IV

**Chairs:**
J. Ulfberg (Sweden)

9:00am - 9:05am
**Introduction**
*J. Ulfberg (Sweden)*

9:05am - 9:25am
**Sleep, high altitude and glucose metabolism**
*L. Pham (United States)*

9:25am - 9:45am
**Sleep and breathing in children resident at high altitude**
*C. Hill (United Kingdom)*

9:45am - 10:05am
**Restless legs syndrome and iron status at higher altitudes**
*R. Gupta (India)*

10:05am - 10:25am
**Chamber hypoxia effects on sleep and PLMS**
*B. Högl (Austria)*

10:25am - 10:30am
**Question and answer**
*J. Ulfberg (Sweden)*

## S79 Cerebral networks during sleep and after sleep deprivation

9:00am - 10:30am I Meeting Hall V

**Chairs:**
J.-M. Lina (Canada)

9:00am - 9:02am
**Introduction**
*J. Carrier (Canada)*

9:02am - 9:19am
**A brief review on functional connectivity metrics in sleep research**
*J.-M. Lina (Canada)*

9:19am - 9:36am
**Neuron-level functional and effective connectivity during NREM sleep: A highly heterogeneous picture of a global brain state**
*U. Olcese (The Netherlands)*

9:36am - 9:53am
**Human electrocorticography reveals cortical variability of spindle characteristics**
*G. Piantoni (United States)*

9:53am - 10:10am
**Thalamic functional connectivity during sleep in control subjects and patients with generalized epilepsy**
*A. Bagshaw (United Kingdom)*

10:10am- 10:27am
**Local and global connectivity changes during sleep loss in aging**
*G. Vandewalle (Belgium)*

10:27am - 10:30am
**Question and answer**
*J.-M. Lina (Canada)*

## S80 Sleep during early stage of life affects long-term outcomes

9:00am - 10:30am I North Hall

**Chairs:**
J. Kohyama (Japan)

9:00am - 9:05am
**Introduction**
*J. Kohyama (Japan)*

9:05am - 9:25am
**Overview of the symposium and introduction of several cohort studies focusing on sleep**
*J. Kohyama (Japan)*

9:25am - 9:45am
**Sleep and child development – findings from the UK MCS**
*Y. Kelly (United Kingdom)*

9:45am - 10:05am
**Sleep problems among Japanese children and their outcomes: Results from the Toyama study**
*M. Sekine (Japan)*

10:05am - 10:25am
**Relationship of sleep with social-emotional and developmental outcomes in young children**
*J.A. Mindell (United States)*

10:25am - 10:30am
**Question and answer**
*J. Kohyama (Japan)*

## S81 Sleep, brain-heart relationships and sudden death risk

9:00am - 10:30am I Club A and B

**Chairs:**
V. Somers (United States), E. St. Louis (United States)

9:00am - 9:05am
**Introduction**
*V. Somers (United States)*

9:05am - 9:25am
**From obstructed pharyngal airway to obstructed coronary artery – mechanisms and clinical consequences**
*V. Somers (United States)*

9:25am - 9:45am
**Sleep and sudden cardiac death risk**
*A. Chahal (United Kingdom)*

9:45am - 10:05am
**Sleep, sleep apnea and sudden unexpected death risk in epilepsy**
*E. St. Louis (United States)*

10:05am - 10:25am
**An update on infant apnea and SIDS**
*S. Kotagal (United States)*

10:25am - 10:30am
**Question and answer**
*E. St. Louis (United States)*

## S82 Animal models for restless legs syndrome: New developments and future challenges

9:00am - 10:30am I Club D and E

**Chairs:**
A. Salminen (Germany)

9:00am - 9:02am
**Introduction**
*A. Salminen (Germany)*

9:02am - 9:19am
**MEIS1: Mouse models based on the highest-confidence RLS gene**
*A. Salminen (Germany)*

9:19am - 9:36am
**BTBD9: Modeling RLS in mouse and fly**
*Y. Li (United States)*

9:36am - 9:53am
**PTPRD: Knocking out a cell adhesion molecule to model RLS in mouse**
*G. Uhl (United States)*

9:53am - 10:10am
**Forward genetics: BDX 40 as an RLS animal model**
*R. Allen (United States)*

10:10am - 10:27am
**Comparison of current animal models and future perspectives**
*M. Manconi (Switzerland)*

10:27am - 10:30am
**Question and answer**
*A. Salminen (Germany)*

## S94 Circadian rhythm sleep-wake disorders and insomnia: What are the consequences and how do we optimize treatment?

9:00am - 10:30am I Terrace 1

**Chairs:**
Y.K. Wing (Hong Kong)

9:00am - 9:02am
**Introduction**
*Y.K. Wing (Hong Kong)*

9:02am - 9:19am
**Independent or joint effects of eveningness and insomnia on mental health**
*S.X. Li (Hong Kong)*

9:19am - 9:36am
**Differential effects of circadian typology on sleep, fatigue, mood and quality of life**
*I.-Y. Yoon (Republic of Korea)*

9:36am - 9:53am
**Insomnia and cognitive function in shift-working police officers**
*S. Suh (Republic of Korea)*

9:53am - 10:10am
**Group cognitive-behavioral therapy for college students with insomnia: Effects on sleep and predisposing factors**
*T. Shochat (Israel)*

10:10am- 10:27am
**Optimization of prescription of prolonged-release melatonin based on sleep-wake schedules**
*S. Chung (Republic of Korea)*

10:27am - 10:30am
**Question and answer**
*Y.K. Wing (Hong Kong)*

## T07 Group scoring discussion: PLMD

9:00am - 10:30am I Club H

**Chairs:**
T. Penzel (Germany)

9:00am - 9:40am
**AASM guidelines for scoring respiratory events in adults**
*A. Obeidat (United States)*

9:40am - 10:20am
**AASM guidelines for motor related events in adults**
*A. Obeidat (United States)*

10:20am - 10:30am
**Question and answer**
*A. Obeidat (United States)*

## K12 Parasomnias: A window into dream

*I. Arnulf (France)*
**Keynote** 9:45am - 10:30am I Congress Hall

## K13 Sleep restriction in adolescents: Cognitive effects and remedies'

*M. Chee (Singapore)*
**Keynote** 10:30am - 11:15am I Congress Hall

## S83 The relationship between sleep, pain and fatigue following traumatic brain injury: From bench to bedside

10:30am - 12:00pm I Meeting Hall IV

**Chairs:**
D. Zalai (Canada)

10:30am - 10:32am
**Introduction**
*D. Zalai (Canada)*

10:32am - 10:49am
**Traumatic brain injury and sleep: A back and forth relationship with therapeutic potential**
*D. Noain (Switzerland)*

10:49am - 11:06am
**The interaction between pain and sleep in mild traumatic brain injury**
*S. Khoury (Canada)*

11:06am - 11:23am
**The clinical implications of sleep disturbance following brain injury**
*C. Wiseman-Hakes (Canada)*

11:23am - 11:40am
**Fatigue and its treatment following traumatic brain injury**
*S. Rajaratnam (Australia)*

11:40am - 11:57am
**Post-concussion insomnia: Contributing factors and assessment strategies**
*D. Zalai (Canada)*

11:57am - 12:00pm
**Question and answer**
*D. Zalai (Canada)*

## S84 Cortical nNOS neurons: A nexus between homeostatic sleep drive and EEG slow wave activity?

10:30am - 12:00pm I Meeting Hall V

**Chairs:**
T. Kilduff (United States)

10:30am - 10:40am
**Introduction**
*T. Kilduff (United States)*

10:40am - 11:05am
**Coupling homeostatic sleep pressure to deep, consolidated sleep - a role for cortical nNOS/NK1 neurons**
*L. Dittrich (Germany)*

11:05am - 11:30am
**Neurotransmitter control of cortical nNOS neuron excitability**
*R. Williams (United States)*

11:30am - 11:55am
**Modulation of nitric oxide synthase expressing neurons of the amygdala by sleep**
*M. Capogna (Denmark)*

11:55am - 12:00pm
**Question and answer**
*T. Kilduff (United States)*

## S85 Suicide, sleep and circadian rhythms in adolescents

10:30am - 12:00pm I North Hall

**Chairs:**
C.M. Shapiro (Canada)

10:30am - 10:32am
**Introduction**
*C.M. Shapiro (Canada)*

10:32am - 10:49am
**The links between sleep and circadian rhythms with depression, suicidal thinking and behaviour**
*C.M. Shapiro (Canada)*

10:49am - 11:06am
**Insufficient Sleep And suicidality in Korean adolescents**
*Y.J. Lee (Republic of Korea)*

11:06am - 11:23am
**Effects of short sleep and school start time on mood in adolescents**
*J.J. Gooley (Singapore)*

11:23am - 11:40am
**Effects of Sleep on affective cognition in individuals with depression**
*E.Y.Y. Lau (Hong Kong)*

11:40am - 11:57am
**Depression, sleep difficulties and suicide risk in adolescents**
*A. Shahid (Canada)*

11:57am - 12:00pm
**Question and answer**
*C.M. Shapiro (Canada)*

## S86 Vitamin D and sleep

10:30am - 12:00pm I Club A and B

**Chairs:**
R. Silvestri (Italy)

10:30am - 10:35am
**Introduction**
*R. Silvestri (Italy)*

10:35am - 10:55am
**Vitamin D: Muscle-skeletal, cardio-vascular and immune role in health and disease (recent evidence for a modulating effect in sleep disorders)**
*A. Stefani (Austria)*

10:55am - 11:15am
**Vitamin D deficiency in central hypersomnias**
*Y. Dauvilliers (France)*

11:15am - 11:35am
**Vitamin D and OSA: New evidence of a possible role in EDS**
*F. Placidi (Italy)*

11:35am - 11:55am
**Vitamin D deficiency in RLS /WED and growing pains**
*R. Silvestri (Italy)*

11:55am - 12:00pm
**Question and answer**
*R. Silvestri (Italy)*

## O15 Chronobiology/circadian disorders oral abstract presentations

10:30am – 12:00pm I Club D and E

10:30am – 10:45am
**DISRUPTING DIURNAL CYCLING OF NAD+-DEPENDENT SIRTUIN 1 DEACETYLASE ACTIVITY WITH GENOTOXIC STRESS OR CHANGING LIGHT/DARK CYCLES INCREASES SUSCEPTIBILITY TO MAMMARY CARCINOGENESIS BY UNCOUPLING DNA DAMAGE RESPONSE AND REPAIR GENES FROM CIRCADIAN CONTROL**
*H. Zarbl (United States)*

10:45am – 11:00am
**NEUROBEHAVIORAL ALTERATIONS IN MOUSE MODEL OF SHIFT WORK DISORDER**

*S. Arora (India)*

11:00am – 11:15am
**EVENING LIGHT EXPOSURE FROM COMPUTER SCREENS DISRUPTS SLEEP, BIOLOGICAL RHYTHMS AND ATTENTION ABILITIES**
*A. Green (Israel)*

11:15am – 11:30am
**THE DIFFERENTIAL EFFECTS OF REGULAR SHIFT WORK AND OBSTRUCTIVE SLEEP APNEA ON SLEEPINESS, MOOD, VIGILANCE AND NEUROCOGNITIVE FUNCTION**
*J. Cori (Australia)*

11:30am – 11:45am
**MELATONIN SECRETION AND POOR SLEEP QUALITY IN PATIENTS WITH TETRAPLEGIA : A PILOT STUDY**
*R. Davillé-Blicq (France)*

11:45am – 12:00pm
**A NEURAL NETWORK MODEL TO PREDICT CIRCADIAN PHASE IN NORMAL LIVING CONDITIONS**
*J.E. Stone (Australia)*

## O16 Sleep breathing disorders oral abstract presentations

10:30am – 12:00pm I Terrace 1

10:30am – 10:45am
**INTERACTION BETWEEN SEVERITY OF OBSTRUCTIVE SLEEP APNEA AND GENDER ON THE LEVEL OF HEMOGLOBIN**
*T. Li (China)*

10:45am – 11:00am
**NEUROMUSCULAR INJURIES IN THE SOFT PALATE CORRELATES WITH PHARYNGEAL DYSFUNCTION IN SLEEP APNEA SUBJECTS**
*F. Shah (Sweden)*

11:00am – 11:15am
**RESPIRATORY SYMPTOMS ARE MORE COMMON AMONG SHORT SLEEPERS INDEPENDENT OF OBESITY**
*E. Björnsdóttir (Iceland)*

11:15am – 11:30am
**EFFECT OF SLEEP APNEA AND INSOMNIA ON THE ASSOCIATION OF DEPRESSION WITH QUANTITATIVE ELECTROENCEPHALOGRAM MEASURES (QEEG) IN ADULT MEN DURING SLEEP - THE MAILES STUDY**
*R. Adams (Australia)*

11:30am – 11:45am
**WHOLE GENOME SEQUENCE ASSOCIATION ANALYSIS OF SLEEP-DISORDERED BREATHING TRAITS IN TRANS-OMICS FOR PRECISION MEDICINE (TOPMED)**
*B. Cade (United States)*

11:45am – 12:00pm
**CORRECTION OF SLEEP DISORDERS BY THE SENSOMOTOR CONTROL METHOD OF RESPIRATION IN PATIENTS WITH HYPERVENTILATION SYNDROME**
*A. Barulin (Russian Federation)*

## O17 Sleep health and other issues oral abstract presentations

10:30am – 12:00pm I Club H

10:30am – 10:45am
**SCHOOL START TIME CHANGE, SLEEP DURATION AND CAR CRASHES IN HIGH SCHOOL STUDENTS**
*S. Bin-Hasan (Canada)*

10:45am – 11:00am
**ACTIGRAPHIC SLEEP PATTERNS AND HYPERTENSION IN THE HISPANIC COMMUNITY HEALTH STUDY/STUDY OF LATINOS**
*A. Ramos (United States)*

11:00am – 11:15am
**EVALUATION OF SLEEP AND FACTORS AFFECTING IT IN PATIENTS RECOVERING IN INTENSIVE CARE UNITS (ICU) AND STEP DOWN UNITS (SDU)**
*B. Prajapat (India)*

11:15am – 11:30am
**QUALITY OF LIFE AND MOOD IN CHILDREN AND ADOLESCENTS WITH CYSTIC FIBROSIS; ASSOCIATIONS WITH SLEEP QUALITY**
*M. Vandeleur (Australia)*

11:30am – 11:45am
**SLEEP DURATION AS AN INDEPENDENT FACTOR ASSOCIATED WITH VITAMIN D LEVELS**
*D.L. de Oliveira (Brazil)*

11:45am – 12:00pm
**SLEEP HABITS IN INFANTS: THE ROLE OF MATERNAL EDUCATION**
*R. Ferreira (Portugal)*

## K14 Circadian rhythm sleep disorders: Challenges in diagnosis and treatment

*D. Skene (Switzerland)*
**Keynote** 11:15am - 12:00pm I Congress Hall

## K15 Control of sleep-related breathing

*M. Morrell (United Kingdom)*
**Keynote** 12:30pm - 1:15pm I Congress Hall

## K16 Cardiovascular risk, OSA and CPAP (SAVE study)

*D. McEvoy (Australia)*
**Keynote** 1:15pm - 2:00pm I Congress Hall

## S87 Phenotyping and genotyping sleep apnea

2:00pm - 3:30pm I Congress Hall

**Chairs:**
T. Penzel (Germany)

2:00pm - 2:02pm
**Introduction**
*T. Penzel (Germany)*

2:02pm - 2:19pm
**Phenotyping sleep apnea and the pathway to genotyping**
*A. Pack (United States)*

2:19pm - 2:36pm
**Quantify craniofacial differences**
*R. Schwab (United States)*

2:36pm- 2:53pm
**Scoring of sleep recordings for sleep apnea and hypopnea**
*U. Magalang (United States)*

2:53pm - 3:10pm
**Analysis of physiological sleep signals for phenotyping**
*P. de Chazal (Australia)*

3:10pm- 3:27pm
**Is there an optimized questionnaire for assessing sleep disordered breathing?**
*T. Gislason (Iceland)*

3:27pm - 3:30pm
**Question and answer**
*T. Penzel (Germany)*

## S88 Novel biomarkers for sleep insufficiency and sleep disorders

2:00pm - 3:30pm I Meeting Hall IV

**Chairs:**
D.-J. Dijk (United Kingdom)

2:00pm - 2:05pm
**Introduction**
*D.-J. Dijk (United Kingdom)*

2:05pm - 2:25pm
**Human blood transcriptome based biomarkers for insufficient sleep and circadian abnormalities**
*D.-J. Dijk (United Kingdom)*

2:25pm - 2:45pm
**Biomarkers for cognitive vulnerability to sleep deprivation and sleep insufficieny**
*J.J. Gooley (Singapore)*

2:45pm - 3:05pm
**Metabolomics as a biomarker for sleep debt**
*T. Porkka-Heiskanen (Finland)*

3:05pm - 3:25pm
**Morbidity-related biomarkers in pediatric obstructive sleep apnea**
*L. Kheirandish-Gozal (United States)*

3:25pm - 3:30pm
**Question and answer**
*D.-J. Dijk (United Kingdom)*

## S89 Restless legs syndrome, augmentation and dopamine treatment - clinical data and emerging new models

2:00pm - 3:30pm I Meeting Hall V

**Chairs:**
S. Clemens (United States)

2:00pm - 2:05pm
**Introduction**
*S. Clemens (United States)*

2:05pm - 2:25pm
**Augmentation: Caused by D1, D3 or D5 receptors?**
*W. Paulus (Germany)*

2:25pm - 2:45pm
**The validity of EMG activity during sleep in rodents model**
*M. Manconi (Switzerland)*

2:45pm - 3:05pm
**Long-term exposure to inhibitory D3 receptor agonists modifies excitatory D1 receptor properties**
*S. Clemens (United States)*

3:05pm - 3:25pm
**Dopamine receptor heteromers in restless legs syndrome**
*S. Ferré (United States)*

3:25pm - 3:30pm
**Question and answer**
*S. Clemens (United States)*

## S90 Sleep across cultures in young children from around the world

2:00pm - 3:30pm I North Hall

**Chairs:**
D. Goh (Singapore)

2:00pm - 2:05pm
**Introduction**
*D. Goh (Singapore)*

2:05pm - 2:30pm
**Sleep outcomes in young children from around the world**
*J.A. Mindell United States)*

2:30pm - 2:55pm
**Sleep habits and practices across Asian and Caucasian young children**
*D. Goh (Singapore)*

2:55pm - 3:20pm
**Snoring and sleep-related breathing disorders across cultures**
*A. Li (Hong Kong)*

3:20pm - 3:30pm
**Question and answer**
*D. Goh (Singapore)*

## S91 Improving insomnia treatments: Less pain, more gain?

2:00pm - 3:30pm I Club D and E

**Chairs:**
C. Morin (Canada)

2:00pm - 2:05pm
**Introduction**
*C. Morin (Canada)*

2:05pm - 2:20pm
**Adverse effects of CBT for insomnia**
*S.D. Kyle (United Kingdom)*

2:20pm - 2:35pm
**A comparison between sleep compression and sleep restriction**
*S. Jernelöv (Sweden)*

2:35pm - 2:50pm
**Transdiagnostic approaches to treating sleep and circadian problems**
*A. Harvey (United States)*

2:50pm - 3:05pm
**An adaptive treatment strategy for Internet-CBT: Predicting and preventing failures**
*K. Blom (Sweden)*

3:05pm - 3:30pm
**Question and answer**
*C. Morin (Canada)*

## O18 Technology and technical oral abstract presentations

2:00pm – 3:30pm I Club A and B

2:00pm – 2:15pm
**PREDICTION OF LEVEL OF DROWSINESS USING AN ADAPTIVE GEOMETRIC BROWNIAN MOTION MODEL, WITH APPLICATION TO DROWSY DRIVING ACCIDENT PREVENTION**
*P. Ebrahimbabaie Varnosfaderani (Belgium)*

2:15pm – 2:30pm
**AUTOMATIC SLEEP CLASSIFICATION USING ADAPTIVE SEGMENTATION REVEALS INCREASED NUMBER OF SLEEP STAGE TRANSITIONS**
*J.A.E. Christensen (Denmark)*

2:30pm – 2:45pm
**ASSESSMENT OF SLEEP PARAMETERS FROM RAW ACCELEROMETRY DATA**
*V.T. van Hees (The Netherlands)*

2:45pm – 3:00pm
**ADVANCED ANALYSIS OF SLEEP SPINDLES: FROM HEALTHY TO DAMAGED BRAINS**
*A. Mensen (Switzerland)*

3:00pm – 3:15pm
**A MACHINE LEARNING APPROACH TO DETECTING SLEEP AND SLEEP DISORDERS IN ACCELERATION SENSOR DATA**
*R. Leenings (Germany)*

## O19 Sleep breathing disorders oral abstract presentations

2:00pm – 3:30pm I Terrace 1

2:00pm – 2:15pm
**THE ASSOCIATION BETWEEN OBSTRUCTIVE SLEEP APNEA AND ALZHEIMER'S DISEASE: A META-ANALYSIS PERSPECTIVE**
*H. Khazaie (Islamic Republic of Iran)*

2:15pm – 2:30pm
**WHETHER TONSILLECTOMY IS NECESSARY FOR PEDIATRIC OSA WITH SMALL TONSILS? DRUG INDUCED SLEEP ENDOSCOPY CAN TELL**
*S. He (China)*

2:30pm – 2:45pm
**SPONTANEOUS IMPROVEMENT IN BOTH OBSTRUCTIVE SLEEP APNEA AND COGNITIVE IMPAIRMENT AFTER STROKE**
*J. Slonkova (Czech Republic)*

2:45pm – 3:00pm
**THE PACE (PHARMACOTHERAPY OF APNEA BY CANNABIMIMETIC ENHANCEMENT) CLINICAL TRIAL: CHARACTERISTICS OF CLINICAL RESPONDERS TO DRONABINOL TREATMENT OF OBSTRUCTIVE SLEEP APNEA**
*D.W. Carley (United States)*

3:00pm – 3:15pm
**SAFETY AND EFFICACY OF 6-MONTH USE OF SHAM-CPAP IN OBSTRUCTIVE SLEEP APNEA PATIENTS**
*L. Mello-Fujita (Brazil)*

3:15pm – 3:30pm
**IMPROVING QUESTIONNAIRE SCREENING FOR OSA IN CHILDREN**
*G. Nixon (Australia)*

## T08 Oximetry interpretation

2:00pm - 3:30pm I Club H

**Chairs:**
S. Keenan (United States), O. Ludka (Czech Republic)

**Speakers:**
*C. Navin (United Kingdom)*

## S92 Creating a framework for analyses of movement patterns of challenging/disruptive sleep and wake behaviours

3:30pm - 5:00pm I Congress Hall

**Chairs:**
O. Ipsiroglu (Canada)

3:30pm - 3:33pm
**Introduction**
*O. Ipsiroglu (Canada)*

3:33pm - 3:45pm
**Spontaneous movement patterns in infants**
*A. Guzzetta (Italy)*

3:45pm - 3:57pm
**REM sleep behaviour disorders**
*I. Arnulf (France)*

3:57pm - 4:09pm
**nREM sleep behaviour disorders**
*F. Provini (Italy)*

4:09pm- 4:21pm
**Sleep-related rhythmic movement disorders and epileptic movement patterns**
*R. Silvestri (Italy)*

4:21pm - 4:33pm
**Assessment of vigilance**
*G. Kloesch (Austria)*

4:33pm - 4:45pm
**Hyperarousability-insomnia and hypermotor-restlessness (H-behaviours) in children with neurodevelopmental condtions**
*O. Ipsiroglu (Canada)*

4:45pm - 4:57pm
**State-of-the-art technologies to capture and analyze movement patterns**
*H. Garn (Austria)*

4:57pm - 5:00pm
**Question and answer**
*O. Ipsiroglu (Canada)*

## S93 Infra-slow (< 0.1 Hz) oscillations: From the cell to the clinic

3:30pm - 5:00pm I Meeting Hall IV

**Chairs:**
S. Fulda (Switzerland)

3:30pm - 3:35pm
**Introduction**
*S. Fulda (Switzerland)*

3:35pm - 3:55pm
**Infra-slow oscillations in the thalamus: Mechanisms and significance**
*S. Hughes (United Kingdom)*

3:55pm - 4:15pm
**Wake-up or sleep-through the noise: Infra-slow timing of arousal**
*A. Lüthi (Switzerland)*

4:15pm - 4:35pm
**Human sleep spindle activity — ultra-powerful at infra-slow timing?**
*F. Weber (Germany)*

4:35pm - 4:55pm
**Sleep infra-slow oscillations in full band EEG recordings**
*S. Fulda (Switzerland)*

4:55pm - 5:00pm
**Question and answer**
*S. Fulda (Switzerland)*

## S95 Hypertrophic cardiomyopathy and sleep disordered breathing: Implications for atrial arrhythmias and sudden cardiac death

3:30pm - 5:00pm I North Hall

**Chairs:**
V. Somers (United States)

3:30pm - 3:35pm
**Introduction**
*V. Somers (United States)*

3:35pm - 3:55pm
**Hypertrophic cardiomyopathy – one gene, many effects and difficult to manage**
*A. Chahal (United Kingdom)*

3:55pm - 4:15pm
**Sleep apnea: Pathophysiology and CV consequences – implications for HCM**
*V. Somers (United States)*

4:15pm - 4:35pm
**Atrial arrhythmias in hypertrophic cardiomyopathy – sleep apnea may be the missing link**
*T. Konecny (United States)*

4:35pm - 4:55pm
**Prevalence of sleep apnea in hypertrophic cardiomyopathy – what our preliminary data shows us**
*T. Kara (United States)*

4:55pm - 5:00pm
**Question and answer**
*V. Somers (United States)*

## S96 Autonomic disorders in sleep medicine

3:30pm - 5:00pm I Club A and B

**Chairs:**
M. Miglis (United States)

3:30pm - 3:33pm
**Introduction**
*M. Miglis (United States)*

3:33pm - 3:50pm
**Sleep and autonomic impairment: Why does it matter?**
*P. Cortelli (Italy)*

3:50pm - 4:07pm
**Sleep apnea and cardiovascular autonomic dysfunction**
*C. Lombardi (Italy)*

4:07pm - 4:24pm
**Fatal familial insomnia: A model of sleep and autonomic dysfunction**
*G. Calandra Buonaura (Italy)*

4:24pm - 4:41pm
**Sleep disordered breathing in familial dysautonomia: Implications for sudden death during sleep**
*J.A. Palma (United States)*

4:41pm - 4:58pm
**Autonomic impairment in REM sleep behavior disorder**
*M. Miglis (United States)*

4:58pm - 5:00pm
**Question and answer**
*M. Miglis (United States)*

## S33 Sleep and the kidney

3:30pm - 5:00pm I Club H

**Chairs:**
P. Hanly (Canada)

3:30pm - 3:35pm
**Introduction**
*P. Hanly (Canada)*

3:35pm - 3:55pm
**Impact of intermittent hypoxia on kidney histology: Evidence from animal models**
*N. Ayas (Canada)*

3:55pm - 4:15pm
**Effect of sleep apnea on kidney function: Evidence from human studies**
*P. Hanly (Canada)*

4:15pm - 4:35pm
**Sleep-disordered breathing in End-Stage Renal Disease (ESRD)**
*O. Lyons (Canada)*

4:35pm - 4:55pm
**Non-respiratory sleep disorders in End-Stage Renal Disease (ESRD)**
*M. Novak (Canada)*

4:55pm - 5:00pm
**Question and answer**
*P. Hanly (Canada)*

## O20 Basic research oral abstract presentations

3:30pm – 5:00pm I Club D and E

3:30pm – 3:45pm
**URINARY PROTEINS AS POTENTIAL BIOMARKERS FOR ADULT PATIENTS WITH OBSTRUCTIVE SLEEP APNEA**
*M. Kohli (India)*

3:45pm – 4:00pm
**HEARTBEAT-RELATED ACTIVITY OF CORTICAL NEURONS IN THE SLEEP-WAKE CYCLE IN CATS**
*V. Lavrova (Russian Federation)*

4:00pm – 4:15pm
**ULTRADIAN RHYTHMICITY IN SLEEP-WAKEFULNESS IS COLOUR-RELATED IN NESTLING BARN OWLS**
*M.F. Scriba (Switzerland)*

4:15pm – 4:30pm
**HYPOCRETIN (OREXIN) SIGNALING IN DISTINCT NEURONAL GROUPS DIFFERENTIALLY REGULATES OSCILLATORY COMPONENTS OF WAKEFULNESS AND SLOW-WAVE-SLEEP**
*A. Vassalli (Switzerland)*

4:30pm – 4:45pm
**MULTITASKING NETWORKS IN THE LATERAL HYPOTHALAMUS: THE ROLE INHIBITORY NEURONS IN SLEEP AND METABOLISM**
*C. Gutierrez Herrera (Switzerland)*

4:45pm – 5:00pm
**SLOW-WAVE ENERGY ENHANCEMENT ASSOCIATED WITH REDUCED SYNUCLEINOPATHY IN MURINE MODEL OF PARKINSON'S DISEASE**
*M.M. Morawska (Switzerland)*

## O21 Insomnia oral abstract presentations

3:30pm – 5:00pm I Meeting Hall V

3:30pm – 3:45pm
**TREATMENT OF INSOMNIA WITH MELATONIN IN PATIENTS AGED 45-60 YEARS OLD: A RANDOMIZED DOUBLE BLIND PLACEBO-CONTROLLED STUDY**
*Y. Qian (China)*

3:45pm – 4:00pm
**MARKERS FOR HYPNOTIC ABUSE LIABILITY: CORTISOL IN INSOMNIA**
*T. Roehrs (United States)*

4:00pm – 4:15pm
**IS THE INSOMNIA SEVERITY INDEX CUTOFF FOR REMISSION CORROBORATED BY SLEEP DIARY DATA AND PATIENT'S PERCEPTION?**
*S. Beaulieu-Bonneau (Canada)*

4:15pm – 4:30pm
**FALSE FEEDBACK ABOUT SLEEP DELIVERED VIA ACTIGRAPHY BIASES DAYTIME SYMPTOM REPORTS: IMPLICATIONS FOR INSOMNIA DISORDER AND WEARABLE DEVICES**
*D. Gavriloff (United Kingdom)*

4:30pm – 4:45pm
**A POTENTIAL PHARMACOLOGICAL TARGET OF INSOMNIA: THE MOLECULES INVOLVED IN THE CA2+-DEPENDENT HYPERPOLARIZATION PATHWAYS PLAY A PIVOTAL ROLE IN THE REGULATION OF SLEEP HOMEOSTASIS**
*S. Shi (Japan)*

4:45pm – 5:00pm
**DATA-DRIVEN TOPIC ANALYSIS OF HIGH DENSITY EEG REVEALS CONCOMITANT SUPERFICIAL SLEEP DURING DEEP SLEEP IN INSOMNIA**
*J.A.E. Christensen (Denmark)*

## O22 Restless legs syndrome (RLS/WED) and movement disorders oral abstract presentations

3:30pm – 5:00pm I Terrace 1

3:30pm – 3:45pm
**EXECUTIVE AND VISUOSPATIAL DYSFUNCTION IN PRIMARY RESTLESS LEGS SYNDROME IN SOUTHERN CHINESE**
*J. Ma (China)*

3:45pm – 4:00pm
**PHYSIOLOGICAL CHARACTERISTICS OF RHYTHMIC MASTICATORY MUSCLE ACTIVITY DURING SLEEP IN JAPANESE CHILDREN**
*S.-Y. Lu (Japan)*

4:00pm – 4:15pm
**OXYGEN AND CARBON DIOXIDE SHIFTS IN RELATION TO SLEEP BRUXISM - RHYTHMIC MASTICATORY MUSCLE ACTIVITY (RMMA): AN EXPLORATORY CASE SERIES**
*Y. Suzuki (Japan)*

4:15pm – 4:30pm
**CIRCADIAN AND SLEEP HOMEOSTATIC MODULATION OF NEURONAL ACTIVITY IN DOPAMINERGIC AND STRIATAL STRUCTURES**
*K. Fifel (The Netherlands)*

4:30pm – 4:45pm
**SLEEP AND RESTLESS LEGS SYNDROME IN ADOLESCENTS WITH IDIOPATHIC MUSCULOSKELETAL PAIN**
*G.A. Moreira (Brazil)*

4:45pm – 5:00pm
**BRIEF AROUSALS FROM SLEEP WHEN ASSOCIATED WITH LEG MOVEMENTS PRODUCE SIGNIFICANT HEART RATE INCREASES WHILE AROUSALS WITHOUT LEG MOVEMENTS PRODUCE MOSTLY MARGINAL HEART RATE INCREASES**
*A. Wang (United States)*

## S97 Sleep and sexual dysfunction

5:30pm - 7:00pm I Meeting Hall V

**Chairs:**
H.-W. Shin (Republic of Korea)

5:30pm - 5:35pm
**Introduction**
*H.-W. Shin (Republic of Korea)*

5:35pm - 5:55pm
**Epidemiology of sexual function and OSA**
*K. Melehan (Australia)*

5:55pm - 6:15pm
**Sleep and Sexual function: Evidences from animal models**
*M. L. Andersen (Brazil)*

6:15pm - 6:35pm
**Effect of Sleep disturbance and OSA on sexual and reproductive function evidence from humans**
*C. Hoyos (Australia)*

6:35pm - 6:55pm
**Does OSA treatment improve sexual function?**
*H.-W. Shin (Republic of Korea)*

6:55pm - 7:00pm
**Question and answer**
*H.-W. Shin (Republic of Korea)*

## S98 Sleep and interventions in children and young people

5:30pm - 7:00pm I North Hall

**Chairs:**
L. McLay (New Zealand)

5:30pm - 5:35pm
**Introduction**
*L. McLay (New Zealand)*

5:35pm - 5:55pm
**Exploring the role of arousal in predicting sleep problems in youth and young adults with ASD**
*A. Richdale (Australia)*

5:55pm - 6:15pm
**Through the lens of a contingency: Designing individualized, functionbased and consumer-friendly interventions for sleep problems of children diagnosed with autism spectrum disorder**
*S. Jin (United States)*

6:15pm - 6:35pm
**Using functional behavioral assessment to inform treatments for unwanted co-sleeping in children with autism**
*L. McLay (New Zealand)*

6:35pm - 6:55pm
**FBA for sleep with clinically complex children with autism: Lessons from experienced and new clinicians**
*K. France (New Zealand)*

6:55pm - 7:00pm
**Question and answer**

## S99 Young Investigator: Oral presentation

5:30pm - 7:00pm I Club D and E

5:30pm – 5:45pm
**SEEKING A NEW STANDARD: A NOVEL CHARACTERIZATION OF SLEEP SPINDLES THROUGH TIME-FREQUENCY PEAK ANALYSIS**
*M. Prerau (United States)*

5:45pm – 6:00pm
**ULTRA-SLOW (0.0002 HZ) FLUCTUATIONS IN HUMAN INTRACRANIAL RECORDINGS CORRELATE WITH SLEEP CYCLES**
*G. Piantoni (United States)*

6:00pm – 6:15pm
**THE EVOLUTIONARY CONSERVED MICRORNA MIR-137 REGULATES GENE EXPRESSION AND DIURNAL RHYTHM OF THE WAKE-PROMOTING HYPOCRETIN NEUROPEPTIDES**
*A. Holm (Denmark)*

6:15pm – 6:30pm
**EXPERIENCING FEAR IN DREAMS RELATES TO BRAIN RESPONSES TO AVERSIVE STIMULI DURING WAKEFULNESS**
*L. Perogamvros (Switzerland)*

6:30pm – 6:45pm
**TRAJECTORIES OF USE OF OVER-THE-COUNTER AND NATURAL PRODUCTS FOR SLEEP: A FIVE YEAR FOLLOW-UP**
*J.M.Y. Cheung (Canada)*

6:45pm – 7:00pm
**EXPLORATION OF CARDIAC AUTONOMIC FUNCTION BY MYOCARDIAL 123-I-MIBG SCINTIGRAPHY IN NARCOLEPSY TYPE 1**
*L. Barateau (France)*

## S100 The characteristics of type 2 narcolepsy in Asian patients

5:30pm - 7:00pm I Congress Hall

**Chairs:**
S.-C. Hong (Republic of Korea)

5:30pm - 5:32pm
**Introduction**
*S.-C. Hong (Republic of Korea)*

5:32pm - 5:49pm
**Long-term follow up of MSLT variables in type 2 narcolepsy patients in Korea**
*S.-C. Hong (Republic of Korea)*

5:49pm - 6:06pm
**Characteristics of MSLT and PSG variables in type 2 narcolepsy patients**
*Y. Inoue (Japan)*

6:06pm - 6:23pm
**PET studies and lab finding in type 2 narcolepsy patients**
*Y.-s. Huang (Taiwan)*

6:23pm - 6:40pm
**Overview of type 2 narcolepsy cases in Korea**
*Y.H. Um (Republic of Korea)*

6:40pm - 6:57pm
**Type 2 narcolepsy in children and adolescents**
*F. Han (China)*

6:57pm - 7:00pm
**Question and answer**
*S.-C. Hong (Republic of Korea)*

## O23 Sleep breathing disorders and research oral abstract presentations

5:30pm – 7:00pm I Terrace 1

5:30pm – 5:45pm
**ASSOCIATION BETWEEN DESATURATION INDICES AND COMORBIDITIES IN PATIENTS WITH OSA- A CROSS SECTIONAL STUDY**
*A. Choudhury (India)*

5:45pm – 6:00pm
**EVOLUTION OF SLEEP ARCHITECTURE AND LEVEL OF ALERTNESS MEASURED BY MWT IN APNEIC PATIENTS TREATED BY GENIOGLOSSUS STIMULATION (INSPIRE ® THERAPY)**
*P. Philip (France)*

6:00pm – 6:15pm
**TREATMENT OF SLEEP APNEA SYNDROME BY ELECTRICAL AURICLE STIMULATION USING MINIATURIZED SYSTEM OF SECOND GENERATION**
*V. Donic (Slovakia)*

6:15pm – 6:30pm
**MICROSTRUCTURE OF RESPIRATORY AROUSALS IN PATIENTS WITH SLEEP-DISORDERED BREATHING**
*H. Gouveris (Germany)*

6:30pm – 6:45pm
**INVESTIGATION OF NON-PAINFUL TACTILE STIMULI VIA BISPECTRAL INDEX SYSTEM DURING SLEEP**
*M. Ozgoren (Turkey)*

6:45pm - 7:00pm
**ROLE OF HYPO PHARYNGEAL COLLAPSE IN OBSTRUCTIVE SLEEP APNEA - HOW TO ADDRESS IT**
*R. Anand (India)*

## T09 Experiences in sleep medicine around the world

5:30pm - 7:00pm I Club H

**Chairs:**
S. Keenan (United States), O. Ludka (Czech Republic)

5:30pm - 5:40pm
**Clinical practice in Canada**
*M. Eden (Canada)*

5:40pm - 5:50pm
**Clinical practice in Japan**
*N. Tachibana (Japan), H. Muraki (Japan),*

5:50pm - 6:00pm
**Clinical practice in Hong Kong**
*D.K.-K. Ng (Hong Kong)*

6:00pm - 6:10pm
**Clinical practice in the United States**
*A. Robinson (United States)*

6:10pm - 6:20pm
**Clinical practice in the Czech Republic**
*M. Pretl (Czech Republic)*

6:20pm - 6:30pm
**Clinical practice in Thailand**
*M. Veeravigrom (Thailand)*

## Closing Ceremony

7:00 - 7:30 I Congress Hall

**Chairs:**
C. Morin (Canada)

7:00 - 7:30
**Closing remarks**
*C. Samuels (Canada), R. Gruber (Canada), C. Bastien (Canada)*

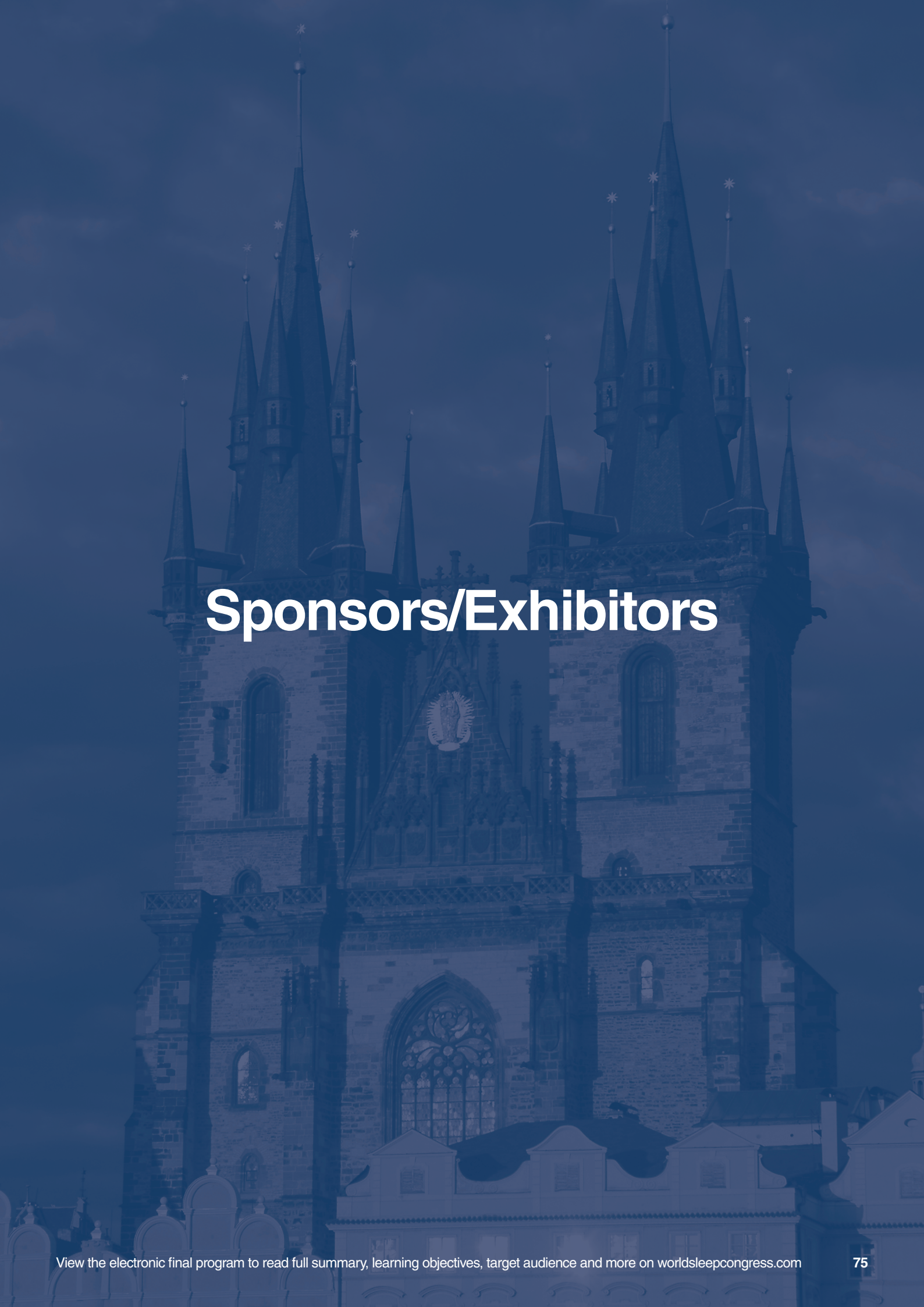
# CATAPLEXY: FROM FUNDAMENTALS TO THE CLINIC

## INVITATION

TUESDAY 10TH OCTOBER 2017, 12:30-2:00 PM
CONGRESS HALL

Satellite Symposium of the World Sleep Congress

bioprojet



# Sponsors/Exhibitors

# World Sleep 2017 Partners

World Sleep 2017 is pleased to announce this program was made possible, in part, by an Independent Medical Education Grant from Jazz Pharmaceuticals, Inc., as well as sponsorships from Bioprojet, Merck, Natus, Philps and Teva. We appreciate their support of our mission to provide the best in sleep medicine.

**Booth 265** **aamsinfo.org**

The Academy of Applied Myofunctional Sciences (AAMS) is a non-profit (501c3 USA based) scientific society engaged in advancing research, scientific standards, education, and public health related to myofunctional therapy (MFT) around the world. The AAMS has helped start 11 regional non-profit scientific societies in the area of MFT around the world (Brazil, Japan, Scandinavia et al) and currently is helping in the formation of 14 new societies (Hong Kong/Taiwan/China, Australia, United Kingdom, et al). Join us as we help advance this important emerging field.

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**Booth 265** **aomtinfo.org**

The Academy of Orofacial Myofunctional Therapy (AOMT) is the leading post-graduate institution for allied health professional training in the area of orofacial myofunctional therapy. Additionally the AOMT helps facilitate research, curriculum development, and public health initiatives and has relationships with more than 40 universities and hospital groups around the world.

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**Booth 310** **advancedbrainmonitoring.com**

Advanced Brain Monitoring, Inc. is an industry leader in the development of novel diagnostic and treatment technologies for the sleep medicine field. The Sleep Profiler is clinically-validated system for sleep and sleep-disordered-breathing in the home or ICU. Night Shift and Apnea Guard deliver therapy to those suffering from Sleep Apnea.

**Booth 610** **ardeninnovations.com**

Arden Innovations is the sole worldwide distributor for the CPAP Hose Lift and the BedSide CPAP Table – both innovative products that are essential elements to any and every successful CPAP ~ Sleep Apnea treatment System. Both products were designed for dual purpose use – at Home, and during Travel.

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**Booth 450** **bioprojet.fr/bioprojet-pharma.html**

Bioprojet Created in 1982 by Dr Jeanne-Marie Lecomte and Pr Jean-Charles Schwartz, Bioprojet is a medium size, independent Research and Development pharmaceutical company. Bioprojet's purpose is to design, select and develop innovative drugs, mostly in the CNS field, acting on novel biological targets discovered in collaboration with basic science institutes like French INSERM.

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**Booth 620** **brpt.org**

Board of Registered Polysomnographic Technologists (BRPT) The mission of The Board of Registered Polysomnographic Technologists is to build upon its history as the global leader in sleep technologist credentialing and certification; provide high quality sleep technology products and services that inspire professional excellence, recognition, and lifelong learning; and create long-term value for credential and certificate holders.

**Booth 605** **camntech.com**
CamNtech Ltd has over 20 years of experience with wearable technology for sleep monitoring. The MotionWatch is one of the smallest, lightest Actigraphy devices currently available with recording for up to 120 days. Manufactured to the highest standards in our ISO13485 facility, our products are CE marked, FDA cleared medical devices.

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**Booth 470** **cerevast.com**
Cerevast Medical, Inc. is a neuroscience company specializing in treatment of neurological disorders. Neuros™ Sleep utilizes pulsed Transdermal Electrical Stimulation (pTES) to modulate nerves in the face and neck which form pathways to regions of the brain involved in regulation of sleep and mood. Cerevast is also developing transcranial ultrasound (TUS) to enhance thrombolytic effect after ischemic stroke and improve clinical outcomes during post-stroke rehabilitation.

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**Booth 615** **cidelec.net**
CIDELEC is a French company manufacturing diagnostic devices for sleep breathing disorders. Our polygraph and polysomnograph use our unique PneaVoX technology based on tracheal sound analysis. CIDELEC systems offer a complete range of portable ambulatory devices and sleep laboratory system.

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**Booth 345** **compumedics.com.au**
Compumedics Ltd, founded in 1987, is a global leader in innovative medical technology solutions for sleep diagnostics, neuro-diagnostics and brain research. Compumedics offers a comprehensive range of innovative solutions for in-lab, ambulatory, home and research applications. Compumedics has produced many world's-first such as the High-Definition GraelHD system and the Bluetooth-enabled, PSG-Anywhere SomtePSG. Compumedics leads the sleep software market with their ProFusion Sleep Suite and neXus Lab management products.

**Booth 435** **condorinst.com.br/en**
Condor Instruments offers high quality wrist actimeters (actigraphs) for medical and research applications, specially tailored for sleep and circadian disorders monitoring.

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**Booth 315** **dymedix.com**
Dymedix Diagnostics, Inc., (DDI) is a United States based medical device company that manufacturers and globally markets innovative sleep diagnostic (PVDF) reusable and disposable airflow, snoring, and respiratory effort sensors in adult and pediatric versions. DDI is committed to developing technology to advance the science of sleep diagnostics medicine.

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**Booth 500** **emfit.com**
Team Emfit consists of 20 highly motivated, skilled and experienced professionals. Together the team has over 150 years of experience at Emfit. Many of the members are owners at the company, living in Finland, Germany, USA, Canada and China. The whole team has a complementary set of skills including science, engineering, sales experience and entrepreneurship.

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**Booth 630** **earls.eu**
European Alliance for Restless Legs Syndrome (EARLS) aims to increase awareness of restless legs syndrome. EARLS is an umbrella organization of national patient advocacy groups. At World Sleep 2017, EARLS will present the results of a major study on the cost of mis- and late diagnoses and treatment of RLS, done in collaboration with the European Brain Council and the London School of Economics.

**Booth 475** **esrs.eu**

European Sleep and Research Society (ESRS) is an international scientific non-profit organization and promotes all aspects of sleep research and sleep medicine. This includes the publication of the Journal of Sleep Research(JSR), the organization of scientific meetings, and the promotion of training and education, the dissemination of information, and the establishment of fellowships and awards.

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**elsevier.com**

Elsevier is a world-leading provider of information solutions that enhance the performance of science, health, and technology professionals, empowering them to make better decisions, and deliver better care. Visit our booth to find out about our Sleep Medicine journals, how to publish (open access), and how to enrich your journal article with exciting innovation.

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**Booth 465** **hypersomniafoundation.org**

Hypersomnia Foundation is a US public 501(c)3 nonprofit with a mission to improve the lives of people with idiopathic hypersomnia and related disorders by advocating on their behalf, providing support, educating the public and healthcare professionals, raising awareness, and funding research into effective treatments, better diagnostic tools, and, ultimately, a cure for these debilitating conditions.

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**Booth 300** **ihypnus.com**

Hypnus is a new series of high performance CPAPs in OSA therapy devices, several technologies are ahead of the international leading level. Through accurate detection and following of advanced respiratory events, it can adaptively adjust the treatment pressure and flow, with super low noise, providing user a quiet, natural and comfortable sleeping environment, and significantly improving treatment compliance.

**Booth 625** **ifa3d.com**

IFA3D Medical Solutions GmbH was founded 2016, as an outsourcing of the Institute of Anaplastology Velten & Hering. We have experience in individual Breathing Masks over 20 years. Now we use the 3D Technology, to produce light and best fit Individual Masks for Patients with Sleep Disorders

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**Booth 525** **inspiresleep.com**

Inspire Medical Systems, Inc. is the leading developer of innovative, implantable neurostimulation systems to treat Obstructive Sleep Apnea. Utilizing technologies from the fields of cardiac pacing and neurostimulation, Inspire has developed an Upper Airway Stimulation therapy, designed to improve sleep and enrich the lives of people suffering from sleep apnea.

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**Booth 245** **iopimedical.com**

IOPI Medical LLC manufactures the Iowa Oral Performance Instruments (IOPI), products that objectively measures tongue and lip strength and can be used for biofeedback for oral motor exercises. It is typically used by speech pathologists and otolaryngologists with patients that have a variety of diseases, such as stroke, head and neck cancer, traumatic brain injury, Parkinson's disease, Bell's palsy and ALS.

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**Booth 303** **loewensteinmedical.de/en**

Löwenstein Medical GmbH + Co. KG has been a company in the Löwenstein Group since 2013. The development, production and marketing of diagnostic and therapeutic solutions for sleep medicine and homecare ventilation are among the core competencies of the firm. The success of products "Made in Germany" is based on good ideas, years of experience, foresight and innovations.


View the electronic final program to read full summary, learning objectives, target audience and more on worldsleepcongress.com

luminette®

**Booth 545** **myluminette.com**

Lucimed is a Belgian company specialized in the conception and manufacturing of wearable light therapy solutions to treat depressives disorders and sleep disorders.

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MC TECHNOLOGY
MEDICAL COMPLIANCE MONITORING

**Booth 420** **sprachwahl.thera-mon.com**

MC Technology GmbH is focussing on smart technical solutions by means of implementing state of the art technology and sophisticated but easy to use software approaches. TheraMon® is a dedicated Micro chip system for reporting objective patient compliance of dental appliances like orthodontic braces or MRA´s for patients suffering from sleep apnea. Knowing objective patient compliance is essential for effective and fast treatment considerations.

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MERCK

**merck.com**

Merck is a global health care leader working to help the world be well. Merck is known as MSD outside the United States and Canada. Through our prescription medicines, vaccines, biologic therapies, and animal health products, we work with customers and operate in more than 140 countries to deliver innovative health solutions.

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natus®
neurology

**Booth 330** **natus.com**

Natus is a leading provider of healthcare products used for the diagnosis and monitoring of neurological disorders, such as epilepsy, sleep disorders, stroke, neuropathies, neuromuscular diseases, myopathies and neurosurgical procedures. Product offerings include computerized neurodiagnostic systems for neurology, polysomnography, software systems and a complete range of supplies and accessories

nox medical

**Booth 485** **noxmedical.com**

Nox Medical builds medical devices for sleep diagnostics. Our mission is to advance sleep diagnostics through simplification, increased efficiency and comfort in all patient groups. Nox Medical's products include a full range of sleep diagnostic solutions, such as the Nox T3, Nox A1 PSG System, and the Noxturnal Software.

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OrthoApnea

**Booth 455** **orthoapnea.com**

OrthoApnea Investigation and innovation are the main cornerstones of OrthoApnea, providing revolutionary solutions for Mandibular Advancement Devices (MAD). The implementation of the newest technologies, untiring clinical research and scientific collaboration with top Sleep Experts and major Hospitals and Universities turned OrthoApnea into a leading global company into the Dental Sleep Medicine.

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OVENTUS™

**Booth 445** **oventus.com.au**

Oventus Medical is an Australian medical device company commercializing a revolutionary treatment platform for snoring and obstructive sleep apnoea (OSA) via a suite of oral appliances. Our O2VentTM customized oral devices incorporate Oventus Airway Technology – a unique airway built into its patented design, allowing for breathing through the device to bypass nasal resistance and velopharyngeal obstruction.

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phasya

**Booth 425** **phasya.com**

Phasya offers solutions for measuring drowsiness levels and ocular movements (i.e. blinks, saccades, pupil dilation) from eye images. Our product "Drowsimeter R100" enables researchers to do easily these measurements. Phasya also develops solutions for detecting other physiological and cognitive states such as stress, cognitive load, consciousness, and mind wandering.

PHILIPS

**Booth 405** **philips.com**
Philips seeks to transform how healthcare is delivered. As a global leader with 40 + years of leadership in sleep apnea management, oxygen therapy, noninvasive ventilation and respiratory drug delivery, we are committed to developing novel solutions to help people sleep and breathe better.

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Quant{Actions}

**Booth 635** **quantactions.com**
QuantActions technology transforms behavioural patterns from smartphone taps into actionable insights, while preserving user privacy. Benefits include improved patient compliance, simplified clinical trial management and access to rich data sets for research into multiple disorders.

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ResMed

**Booth 410** **resmed.com**
ResMed (NYSE: RMD) changes lives with award-winning medical devices and cutting-edge cloud-based software applications that better diagnose, treat and manage sleep apnea, chronic obstructive pulmonary disease (COPD) and other chronic diseases. ResMed is a global leader in connected care, with more than 3 million patients remotely monitored every day.

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Sefam

**Booth 335** **sefam-medical.com**
Since it was founded in 1982, the Nancy-based French company SEFAM has been designing, manufacturing, and commercializing diagnostic and therapy devices for Sleep disordered breathing.

seven dreamers

**Booth 305** **nastent.sevendreamers.com**
Seven Dreamers Laboratories, Inc. is a company where a group of technologists create and develop things that the world has never seen. We created laundroid, a fully automatic laundry folding robot, as well as nastent, a device to reduce snoring in sleep apnea. Moreover, we develop carbon golf shafts which are fully made-to-order with high quality and design.

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**Booth 350** **sleepmultimedia.com**
Sleep Multimedia Inc. SleepMultiMedia v. 10.0 is a computerized textbook of sleep medicine with text, sound, graphics, animation, & video. Updated annually with 140 CME credits, the program covers clinical sleep medicine, dental sleep medicine, sleep physiology, polysomnography, sleep research and sleep practice management. NEW: Online real-time access to references through Medline. Available on a USB Flash Drive.

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SOMNICS
Sleep well. Wherever you are.

**Booth 520** **somnics.com**
Somnics Inc. is a research-based and needs-driven medical device company engaging in the development of innovative treatment for sleep-disordered breathing. iNAP® Sleep Therapy System is designed to provide OSA patients a treatment which is more comfortable, travel-friendly and easier to use, and allow patients with OSA to breath naturally wherever they are.

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SOMNO medics

**Booth 360** **somnomedics.eu**
SOMNOmedics designs, manufactures, markets, distributes and services products dedicated to sleep diagnostics. Our products are utilized for a variety of sleep related tests and comply with the AASM standards. SOMNOmedics devices are small, lightweight and worn by the patient. We are compatible with in lab diagnostics as well as home sleep testing. SOMNOmedics wireless solution allows patients video, audio and data to be observed from any environment.


View the electronic final program to read full summary, learning objectives, target audience and more on worldsleepcongress.com

**Booth 480** **ternimed.de**

TerniMed UG specializes in high-quality medical accessories and consumable materials for neurological and sleep medical diagnostic. Based on many years of professional experience in the field, we have an elevated level of technical competency in dealing with issues relating to neurology and sleep medicine. Sound consultation and excellent support are key points of our activities to meet customer needs.

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**tevapharm.com**

TEVA specialty medicines business is focused on delivering innovative solutions to patients and providers via medicines, devices and services, based on the core therapeutic areas of the central nervous system including pain, migraine, movement and neurodegenerative disorders and respiratory illnesses. We rank among the leading pharmaceutical companies in the world and are active in 80 countries.

**starwoodhotels.com/westin**

Westin Hotels & Resorts, a leader in wellness and hospitality for more than a decade, empowers guests and associates to embrace well-being and be their best selves through the brand's six pillars of Well-Being: Sleep Well, Eat Well, Move Well, Feel Well, Work Well, and Play Well. At more than 200 hotels and resorts in nearly 40 countries and territories, guests can experience offerings that include the iconic Heavenly Bed, RunWESTIN and Westin Gear Lending with New Balance, delicious and nutritious SuperFoodsRx™ and more.

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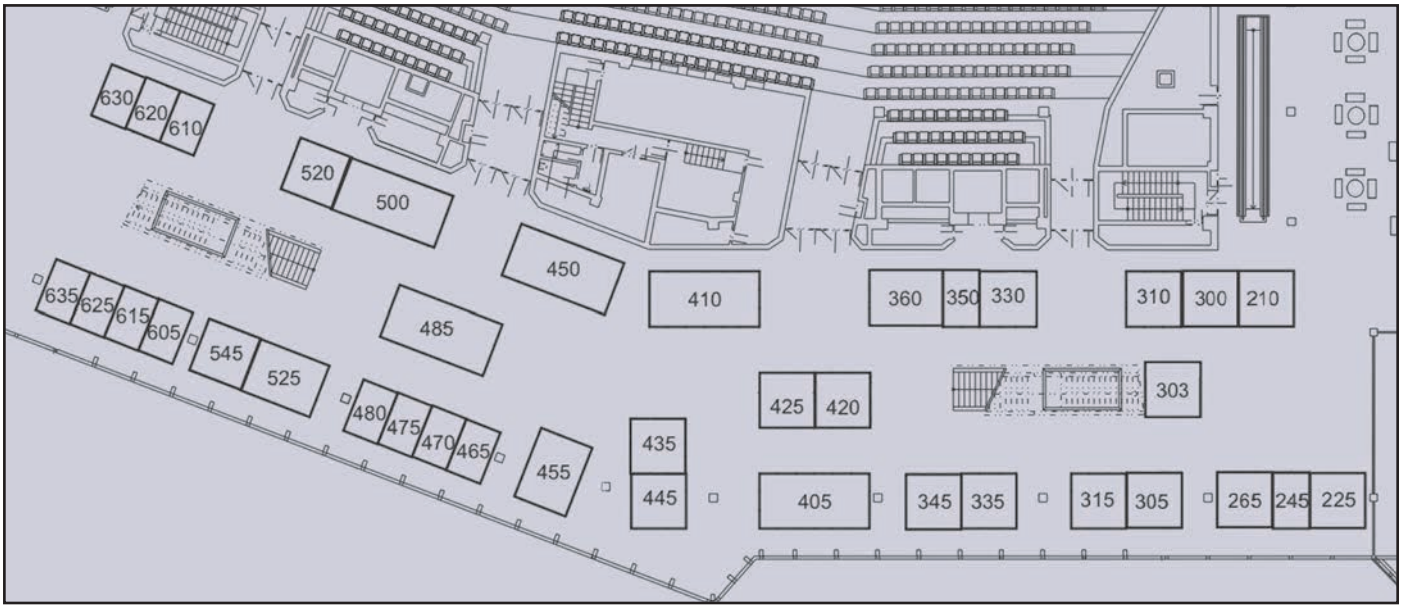
**Booth 225** **wisepress.com**

Wisepress.com, Europe's leading conference bookseller, attend around 200 conferences every year. We have an extensive range of books and journals relevant to the themes of this conference available at our booth. We also have a comprehensive range of STM titles available on our online bookshop. Follow us on Twitter @WisepressBooks.

# Save the date
# for the next World Sleep Day®
# on March 16, 2018.




# Exhibitor Floor Plan

225 – Wisepress Ltd.
245 – IOPI Medical
265 – Academy of Applied Myofunctional Sciences & Academy of Orofcial Myofunctional Therapy
300 – Guangzhou Hypnus Healthcare
303 – Lowenstein
305 – Seven Dreamers
310 – Advanced Brain Monitoring
315 – DyMedix Diagnostics
330 – Natus
335 – SEFAM Health Tech
345 – Compumedics
350 – Sleep Multimedia
360 – Somnomedics
405 – Philips
420 – MC Technology GmbH
425 – Phasya
410 – ResMed
435 – Condor
445 – Oventus Medical
450 – Bioproject
455 – Ortho Apnea
465 – Hypersomnia Foundation
470 – Cerevast Medical
475 – ESRS
480 – TerniMed UG
485 – Nox Medical
500 – Emfit Ltd
520 – Somnics
525 – Inspire
545 – Lucimed
605 – CamNtech Limited
610 – Arden Innovations
615 – Cidelec
620 – Board of Registered Polysomnographic Technologists (BRPT)
625 – Institut für Anaplastologie Berlin
630 – European Alliance for RLS
635 – QuantActions


View the electronic final program to read full summary, learning objectives, target audience and more on worldsleepcongress.com

# Sleep Medicine Research Foundation
# KICK-OFF PARTY
## During WORLD SLEEP 2017
***DRESS: CASUAL***

## Tuesday October 10, 2017 | 20:00-22:30
## Prague, Czech Republic

**THE GREAT HALL- NEW TOWN HALL PRAGUE**
**Karlovo namesti 1/23 I Charles Square,**
**Prague 120 00, Czech Republic**

SMRF
SLEEP MEDICINE
RESEARCH FOUNDATION

Join the Sleep Medicine and Research Foundation for our Inaugural Reception and help support the work & collaborations of Dr. Christian Guilleminault and advance the state of sleep health worldwide.

The Sleep Medicine and Research Foundation invites you to a Kick-Off Party on Tuesday October 10th, 2017 during World Sleep 2017, in celebration of the 40th Anniversary of Dr. Christian Guilleminault's first description of pediatric sleep apnea and the 45th Anniversary of his first description of central sleep apnea and insomnia syndrome. Please join us for hors d'oeuvres, and unlimited wine, beer and drinks from 20:00 - 22:30++ ***- Program starts at 21:00***

## Speakers in Tribute

**Jed Black, Oliviero Bruni, David Gozal, Meir Kryger, Atul Malhotra, Marie Marklund, Joy Lea Moeller, Pierre Jean Monteyrol, Daniel Ng, Judy Owens, Paola Pirelli**

## Online RSVP address:

www.sleepmedicineresearchfoundation.org/register

## Supporting Institutions & Societies

UCSF
UOP
Sapienza, University of Rome
Institut Portman, Bordeaux
Stanford Sleep Epidemiology Research Center
Stanford Sleep Epidemiology Journal
Academy of Applied Myofunctional Sciences
International Pediatric Sleep Association
Academy of Orofacial Myofunctional Therapy
University of Rome, Tor Vergata

A JOINT CONGRESS OF
WORLD ASSOCIATION OF SLEEP MEDICINE
& WORLD SLEEP FEDERATION

www.worldsleepcongress.com

World Sleep 2017
7 – 10 October 2017 • Prague, Czech Republic

MSD

# New Approaches to Personalizing Treatment of Insomnia: Why? and How?

## Monday, 9 October 2017
12:30 – 14:00

Satellite Symposium
Sponsored by MSD

Conference Center
Meeting Hall IV
Prague, Czech Republic

**Chair:** Charles Morin

## CHAIR


### Charles Morin, PhD
Full Professor, Department of Psychology
Laval University
Director, Centre d'étude des troubles du sommeil
Canada Research Chair in Sleeping Disorders
Quebec City, Canada


## FACULTY


### Andrew Krystal, MD
Professor of Psychiatry
UCSF Department of Psychiatry
Executive Vice Chair for the Langley Porter Psychiatric Institute (LPPI)
San Francisco, California, USA

### Thomas Roth, PhD
Chief, Division Head
Sleep Disorders and Research Center
Henry Ford Hospital
Detroit, Michigan, USA


## AGENDA

| | | |
|---|---|---|
| 12:30 – 12:40 | Welcome and Introduction | Charles Morin |
| 12:40 – 13:00 | Health Consequences of Insomnia: Cognition, Mood, and Medical Impact | Charles Morin |
| 13:00 – 13:20 | Personalization of Insomnia Therapy: Matching Treatment Mechanisms With Patient Needs | Andrew Krystal |
| 13:20 – 13:40 | Orexin Receptor Antagonists in the Management of Insomnia – Mechanisms and Clinical Implications | Thomas Roth |
| 13:40 – 14:00 | Closing Remarks and Q&A | Charles Morin |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BEL-195774-IN

**TEVA Growth Markets Symposium at the World Sleep Congress 2017**
Prague | Czech Republic

# Challenges of Recognizing and Treating Excessive Sleepiness

Excessive sleepiness is a serious, debilitating, condition with consequences not only for the individual, but also for public health and safety.

It is time to listen experts to discuss the challenges of recognizing and treatment of excessive sleepiness.

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**Monday, October 9th, 2017** | 12.30 – 14.00 pm
Prague Congress Centre – Congress Hall Auditorium

## Schedule:

12:30 -12:45 pm
**Opening Remarks** - R. Rosenberg, PhD,USA

12:45 -13:15 pm
**Excessive sleepiness (ES) in OSA** - R. Grunstein, MD, Australia

13:15-13:45 pm
**Therapeutic Approaches to ES** - R. Rosenberg, PhD,USA

13:45 -14:00 pm
**Panel Discussion** - R. Rosenberg, PhD,USA and R. Grunstein, MD, Australia

nox medical

# ADVANCING SLEEP DIAGNOSTICS

## Satellite Symposium

**Evolution of Sleep Medicine – Challenging the Status Quo**
Tuesday, October 10th 2017
12:30 – 13:15, Prague Convention Centre – North Hall

**Speakers**

**Allan I. Pack, M.B.Ch.B., Ph.D., FRCP**
John Miclot Professor of Medicine
Director, Center for Sleep and Circadian Neurobiology
Perelman School of Medicine at the University of Pennsylvania

**Erna Sif Arnardóttir, PhD**
Director of Sleep Measurements
Landspitali – The National University Hospital of Iceland
Postdoctoral Researcher and Adjunct Professor, University of Iceland

**Chair**

**Prof. Liborio Parrino**
Associate Professor of Neurology
Director School of Specialization in Neurology
Director, Sleep Disorders Center
University of Parma, Italy

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