24th Congress of the

European Sleep Research Society

Basel, Switzerland I 25 – 28 September 2018

www.esrs-congress.eu

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Final Programme

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Welcome to Basel

Dear colleagues, friends and ESRS participants

It is our pleasure and privilege to welcome you to the 24th Congress of the European Sleep Research Society in Basel. As the principal Congress devoted to sleep medicine and research in Europe, the meeting provides an ideal opportunity to discover the latest advances in the field and to network with colleagues from around Europe and beyond.

The European Sleep Research Society is an international non-profit organisation whose purpose is to promote research on sleep and related areas, to improve the care for patients with sleep disorders and to facilitate the dissemination of information regarding sleep research and sleep medicine.

The Swiss Society for Sleep Research, Sleep Medicine and Chronobiology (SSSSC) brings together basic science and clinical sleep researchers, chronobiologists and sleep clinicians to promote and stimulate collaboration. The Society was founded in 1991 and has more than 300 active members.

Nestling in the heart of Europe, in the three countries corner where Switzerland, Germany and France meet, Basel is a pocket-sized metropolis that combines proverbial Swiss quality with a multicultural population. This makes the city unmistakably open-minded and innovative. The city sparkles with all kinds of culture. Nearly 40 museums with their long-established collections and spectacular special exhibitions are the foundation of Basel's reputation as a city of art and museums.

Basel has a long-standing tradition in academia with the oldest University in Switzerland (established 1460) and is home to world leading pharmaceutical companies. In fact, the ESRS was founded 1974 in Basel by Prof Werner Koella and a banquet on a large river-boat helped very much to bring the "sleepers" from so many countries together. Thus, it is about time to bring sleep specialists and professionals back to the roots after 44 years.

Congress attendees will have the chance to benefit from scientific exchange during either the formal activities or the informal meetings with colleagues from different backgrounds. They will also have a chance to relax at the sunny banks of the Rhine, and the romantic streets of the excellently preserved Old Town.

We hope you will enjoy the meeting and we are looking forward to personally welcoming you here in this wonderful venue!

Walter McNicholas	Christian Cajochen	Raphael Heinzer
ESRS President	Congress Chair	Past President of the SSSSC

Programme Overview

Tuesday, 25 September 2018

	Lecture Hall San Francisco	Lecture Hall Darwin	Lecture Hall Boston 1	Lecture Hall Boston 2	Lecture Hall Boston 3
09.00 09.15 09.30 09.45 10.00 10.15		09.00 – 12.30 **Teaching Course 3** Without sleep but during sleep – the dilemma of cardio-respiratory polygraphy A practical scoring course p. 12	09.00 – 12.30 **Teaching Course 1** Year in review – Sleep mechanisms and functions p. 12	09.00 – 12.30 **Teaching Course 5** Techniques in sleep research and medicine p. 13	09.00 – 12.30 **NATUS** Clinical PSG/ PG scoring & interpretation workshop Part I p. 13
10.30 10.45	10.30 – 11.00 **Coffee Break**				
11.00 11.15 11.30 11.45 12.00 12.15		TC continuation p. 12	TC continuation p. 12	TC continuation p. 13	NATUS (continuation) p. 13
12.30 12.45	12.30 – 13.00 **Lunch Break**				
13.00 13.15 13.30 13.45 14.00 14.15		13.00 – 16.30 **Teaching Course 2** Year in review Clinical p. 14	13.00 – 16.30 **Teaching Course 4** Digital Sleep: Internet and Smartphone Application for Sleep p. 14	13.00 – 16.30 **Early Career Day** Media Training with Nelleke Koop and How to write a paper by Erna Sif Arnardottir p. 15	13.00 – 17.00 **NATUS** Clinical PSG/ PG scoring & interpretation workshop Part II p. 15
14.30 14.45	14.30 – 15.00 **Coffee Break**				
15.00 15.15 15.30 15.45 16.00 16.15		TC continuation p. 14	TC continuation p. 14	Early Career Day continuation p. 15	NATUS (continuation) p. 15
16.30 16.45					
17.00 17.15 17.30 17.45 18.00 18.15 18.30 18.45	17.00 – 19.05 **Opening Session & Young Scientists Symposium** p. 16				
19.00 19.15 19.30 20.00 20.15	19.00 – 20.30 **Networking Evening** p. 60				

Respiratory track · Neuropsychiatry track · Basic track · Translational track
Human sleep track · General track · Satellite symposium · Poster Session

Programme Overview

Wednesday, 26 September 2018

	Lecture Hall San Francisco	Lecture Hall Montreal	Lecture Hall Sydney	Lecture Hall Singapore	Lecture Hall Osaka	Lecture Hall Rio	Poster Exhibition
08.30 08.45 09.00 09.15 09.30 09.45 10.00 10.15	08.30 – 10.30 **Symposium** Unraveling the neurobiology of sleep in normal ageing and in neurodegeneration p. 17	08.30 – 10.30 **Symposium** The Big Sleep: unraveling insomnia using big data p. 17	08.30 – 10.30 **Symposium** Circadian modulation of EEG brain activity and cognition, and the impact of light on sleep p. 18	08.30 – 09.30 **Oral Session** Sleep and driving p. 19 09.30 – 10.30 **Oral Session** Sleep, -omics and novel cellular and molecular mechanics p. 21	08.30 – 10.30 **Oral Session** New methods in basic and clinical sleep research p. 20	08.30 – 10.30 **ESST Meeting** Session 1 The state of the art in sleep technology p. 21	
10.30 10.45	10.30 – 11.00 **Coffee Break**						
11.00 11.15 11.30 11.45	11.00 – 12.00 **Case Discussion** Parasomnias, movement disorders of sleep and paroxysmal disorders p. 22	11.00 – 12.00 **Round Table** Preclinical systematic reviews and meta-analysis in sleep research p. 22	11.00 – 12.00 **Oral Session** Lack of sleep: effects on periphery and the brain p. 23			11.00 – 13.30 **ESST Meeting** Session 2 Hot topics in sleep medicine p. 23	11.00 – 12.00 **Poster Session 1** Poster Viewing p. 58
12.00 12.15 12.30 12.45 13.00 13.15		12.15 – 13.15 **Round Table** Pulse wave analysis during sleep – a meaningful tool for improved phenotyping in sleep disorders? p. 24	12.15 – 13.15 **Satellite Symposium** Acoustical enhancement of slow wave sleep p. 65	12.00 – 13.30 **Lunch Break & Poster Viewing**			12.00 – 13.00 **Poster Session 1** Poster Walks p. 58 13.00 – 13.30 **Poster Session 1** Poster Viewing p. 58
13.30 13.45 14.00 14.15 14.30 14.45 15.00 15.15	13.30 – 15.30 **Joint Symposium** ESRS - EAN Disorder of Arousals (DOA): an update p. 25	13.30 – 15.30 **Symposium** Asymptomatic sleep disordered breathing: who should be treated? p. 25	13.30 – 15.30 **Symposium** Temporal constraints on sleep and cognition: importance for brain health during ageing p. 26	13.30 – 14.30 **Oral Session** Electrophysiology of sleep p. 26 14.30 – 15.30 **Case Discussion** p. 28	13.30 – 15.30 **Symposium** Sleep problems in early childhood – perspectives into epidemiology and treatment p. 27	13.30 – 15.30 **ESST Meeting** Session 3 Interactive workshops p. 27	
15.30 15.45	15.30 – 16.00 **Coffee Break**						
16.00 16.15 16.30 16.45	16.00 – 16.45 **Keynote Lecture** Emmanuel Mignot p. 28	16.00 – 16.45 **Keynote Lecture** Charalambos P. Kyriacou p. 28					
17.00 17.15 17.30 17.45 18.00 18.15	17.00 – 18.30 **European Network Session** New insights in the clinical picture of sleep apnea – findings from the European Sleep Apnea Database (ESADA) p. 29	17.00 – 18.30 **European Network Session** EURLSSG You p. 29	17.00 – 18.30 **European Insomnia Network Session** What's new? p. 30	17.00 – 18.30 **Oral Session** Sleep and cognition p. 30	17.00 – 18.30 **European Network Session** Narcolepsy p. 31	17.00 – 17.45 **ESST Meeting** Session 4 The future of sleep technology p. 31 17.45 – 18.45 **ESST Meeting** ESST AGM National delegates meeting p. 32	
18.30 18.45 19.00 19.15 19.30 19.45		18.40 – 19.40 **Satellite Symposium** New evidence for Continuous Open Airway Therapy (COAT) in OSA p. 65			18.40 – 19.40 **Satellite Symposium** Sleep and circadian rhythms from the viewpoint of light quality p. 65		
20.00 20.15	20.00 **Sportive Networking Event (Football Match)** p. 60						

Respiratory track · Neuropsychiatry track · Basic track · Translational track · Human sleep track · General track · Satellite symposium · Poster Session

Programme Overview

Thursday, 27 September 2018

	Lecture Hall San Francisco	Lecture Hall Montreal	Lecture Hall Sydney	Lecture Hall Singapore	Lecture Hall Osaka	Poster Exhibition
08.30 08.45 09.00 09.15 09.30 09.45 10.00 10.15	08.30 – 10.30 **Symposium** REM sleep fragmentation and emotional dysregulation: evidence for a new mechanism linking sleep and affect? p. 33	08.30 – 10.30 **Symposium** Information processing during sleep: recent developments and future perspectives p. 33	08.30 – 10.30 **Symposium** Recent advances in Fatigue Risk Management: from fatigue countermesure strategies to sleep science-based policy making p. 34	08.30 – 10.30 **Oral Session** Cardiovascular and other consequences and sleep apnea p. 34	08.30 – 10.30 **Joint ESRS – EBRS Symposium** p. 36	
10.30 10.45	10.30 – 11.00 **Coffee Break**					
11.00 11.15 11.30 11.45	11.00 – 12.00 **Oral Session** Restless legs syndrome and demetia p. 36	11.00 – 12.00 **Case Discussion** p. 37	11.00 – 13.00 **Symposium** Rhythms of (un) healthy sleep: understanding and modulation of multi-system oscillations p. 37	11.00 – 12.30 **ANSS Networking meeting** p. 38		11.00 – 12.00 **Poster Session 2** Poster Viewing p. 58
12.00 12.15 12.30 12.45	12.00 – 13.00 **Oral Session** Parasomnias p. 39	12.00 – 13.00 **Case Discussion** p. 39				12.00 – 13.00 **Poster Session 2** Poster Walks p. 58
13.00 13.15 13.30 13.45 14.00	13.00 – 14.15 **Lunch Break & Poster Viewing**	13.05 – 13.30 **ESRS Women's Forum** p. 40	13.05 – 14.05 **Satellite Symposium** Beyond the AHI p. 67	13.05 – 14.05 **Satellite Symposium** A potential new treatment for the management of excessive sleepiness in narcolepsy and obstructive sleep apnoea p. 67	13.00 – 14.15 **Lunch Break & Poster Viewing**	13.00 – 13.30 **Poster Session 2** Poster Viewing p. 58
14.15 14.30 14.45 15.00 15.15 15.30 15.45 16.00	14.15 – 16.15 **Joint Symposium** ESRS – ERS Interaction between sleep and obstructive airway disease: a cocktail party p. 40	14.15 – 16.15 **Symposium** The different enigmatic faces of REM sleep behavior disorder p. 41	14.15 – 15.15 **Oral Session** Insomina disorder p. 41 15.15 – 16.15 **Oral Session** Chronobiology p. 43	14.15 – 16.15 **Symposium** Local Network Sleep in vivo and in vitro p. 42	14.15 – 15.15 **Round Table** Should we bank our sleep and clocks? How and why creating large multimodal databases p. 42 15.15 – 16.15 **Oral Session** Sleep in real life p. 44	
16.15 16.30	16.15 – 16.45 **Coffee Break**					
16.45 17.00 17.15	16.45 – 17.30 **Keynote Lecture** Susan Redline p. 44	16.45 – 17.30 **Keynote Lecture** Wenbiao Gan p. 45				
17.30 17.45 18.00 18.15 18.30 18.45 19.00 19.15 19.30 19.45		17.45 – 19.45 **ESRS Business Meeting** p. 45				
20.00 20.15	20.00 **Networking Get-Together** p. 61					

Respiratory track · Neuropsychiatry track · Basic track · Translational track
Human sleep track · General track · Satellite symposium · Poster Session

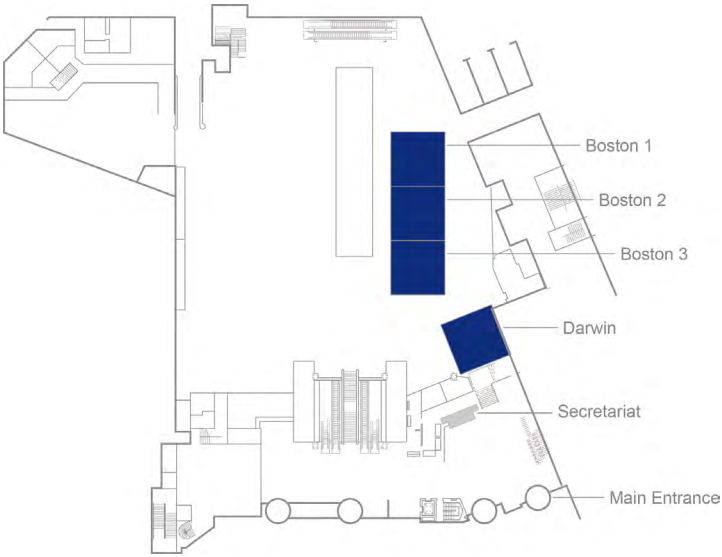
Friday, 28 September 2018

	Lecture Hall San Francisco	Lecture Hall Montreal	Lecture Hall Sydney	Lecture Hall Singapore	Lecture Hall Osaka	Poster Exhibition
08.30 08.45 09.00 09.15	08.30 – 10.30 **Symposium** Headache and sleep p. 46	08.30 – 10.30 **Symposium** Biomarkers for sleep disruption and sleep disorders p. 46	08.30 – 10.30 **Symposium** Pharmacological therapy of obstructive sleep apnea. Novel tools and principles. p. 47	08.30 – 09.30 **Oral Session** Hypersomnia p. 47	08.30 – 09.30 **Round Table** Acute or chronic caffeine consumption: what keeps you awake? p. 48	
09.30 09.45 10.00 10.15				09.30 – 10.30 **Oral Session** Sleep in psychiatric disorders p. 48	09.30 – 10.30 **Oral Session** Epidemiology of sleep p. 49	
10.30 10.45	10.30 – 11.00 **Coffee Break**					
11.00 11.15 11.30 11.45	11.00 – 13.00 **Symposium** Restless legs syndrome p. 50	11.00 – 12.00 **Round Table** Transcutaneous carbon dioxide during sleep in sleep-disordered breathing: the reverse side of the coin p. 50	11.00 – 12.00 **Round Table** ESRS-WSS Education and accreditations procedures for Sleep Medicine: meeting the needs p. 51	11.00 – 13.00 **Symposium** The relationship between brain oscillations during sleep, neuroplasticity and stroke p. 51		11.00 – 12.00 **Poster Session 3** Poster Viewing p. 59
12.00 12.15 12.30 12.45			12.00 – 13.00 **Case Discussion** p. 52			12.00 – 13.00 **Poster Session 3** Poster Walks p. 59
13.00 13.15	12.00 – 13.30 **Lunch Break & Poster Viewing**					13.00 – 13.30 **Poster Session 3** Poster Viewing p. 59
13.30 13.45 14.00 14.15	13.30 – 15.30 **Symposium** Narcolepsy p. 53	13.30 – 15.30 **Symposium** Molecular and cellular mechanism of sleep homeostasis p. 53	13.30 – 15.30 **Oral Session** Sleep in children and adolescents p. 54	13.30 – 15.30 **Oral Session** Sleep in ageing and dementia p. 55	13.30 – 15.30 **Joint Symposium** ESRS – SSSSC p. 56	
14.30 14.45 15.00 15.15						
15.30	15.30 – 15.45 **Coffee Break**					
15.45 16.00 16.15 16.30 16.45 17.00	15.45 – 17.15 **Hot Topic Symposium & Closing Session** p. 57					

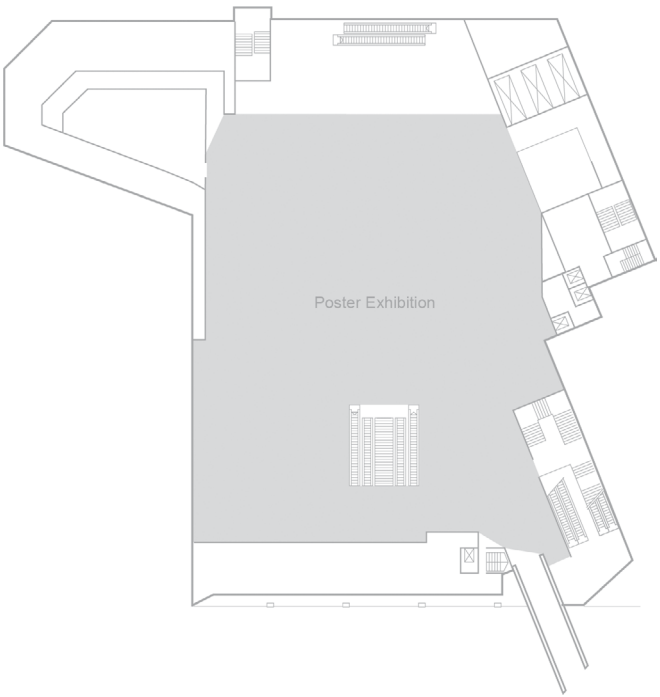
Respiratory track · Neuropsychiatry track · Basic track · Translational track
Human sleep track · General track · Satellite symposium · Poster Session

Venue Overview

Ground floor | Hall 4.0

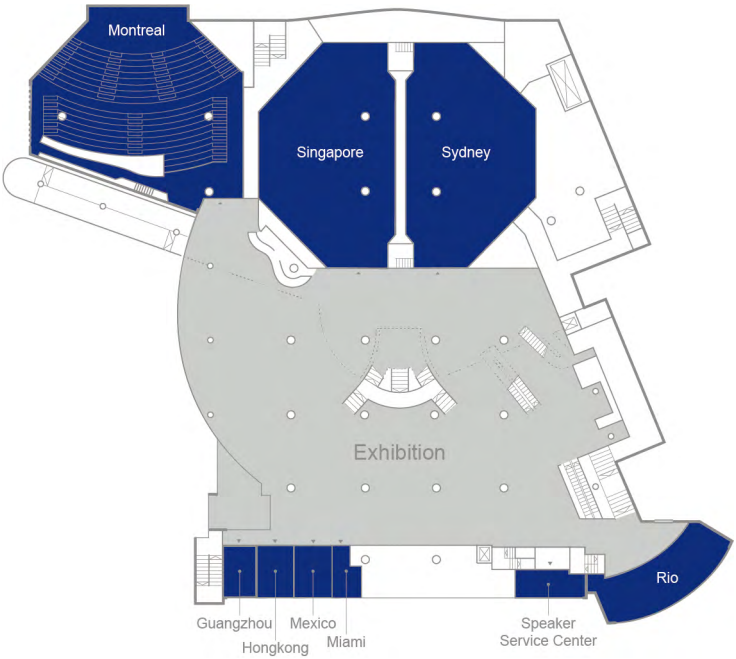


1st floor | Hall 4.1

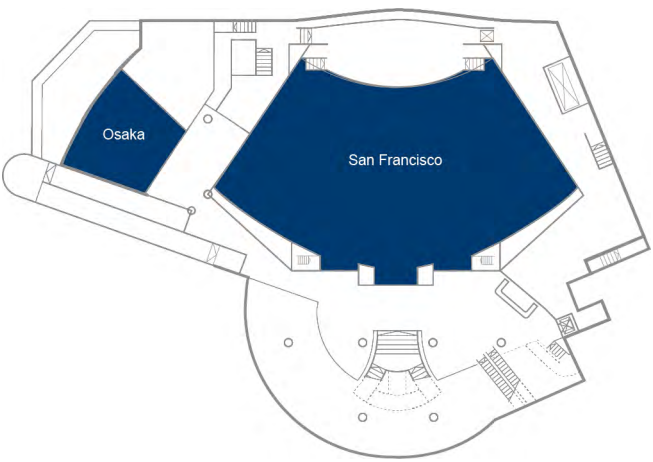


Venue Overview

2nd floor | Hall 4.2



3rd floor | Hall 4.3



09.00 – 12.30 Teaching Course 1

Boston 1

Basic Track

Year in review – Sleep mechanisms and functions

Chairs: T. DeBoer (Leiden, NL)
P. Peigneux (Bruxelles, BE)
P.-H. Luppi (Lyon, FR)

Circadian system
T. DeBoer (Leiden, NL)

Human sleep functions
P. Peigneux (Bruxelles, BE)

Coffee Break from 10.30 – 11.00

Human sleep functions (continued)
P. Peigneux (Bruxelles, BE)

Sleep mechanisms and functions
P.-H. Luppi (Lyon, FR)

09.00 – 12.30 Teaching Course 3

Darwin

General Track

Without sleep but during sleep – the dilemma of cardio-respiratory polygraphy A practical scoring course

Chairs: L. Grote (Gothenburg, SE)
H. Schneider (Baltimore, US)

Introduction: Scoring cardiorespiratory polygraphy: rules, obstacles and strategies
L. Grote (Gothenburg, SE)

Scoring of central sleep disordered breathing events
H. Schneider (Baltimore, US)

Arterial tonometry: a new approach to address diagnostic procedures with level 3 devices – Theory and practical examples
H. Schneider (Baltimore, US)
L. Grote (Gothenburg, SE)

Coffee Break from 10.30 – 11.00

Sleep medicine clinics – Practical scoring of patients cases studied with cardiorespiratory polygraphy – a guided, interactive scoring session
H. Schneider (Baltimore, US)
L. Grote (Gothenburg, SE)

09.00 – 12.30 Teaching Course 5

Boston 2

Techniques in sleep research and medicine

General Track

Chair: P. Jennum (Glostrup, DK)

Evaluation of sleep and daytime function: Questionnaire – Uses, application and limitations in sleep research and medicine
D. Riemann (Freiburg, DE)

Polysomnography/polygraphy. Indications, evaluation, uses of manual, semiquanted and quantitated evaluations. Pro and cons
P. Jennum (Glostrup, DK)

Measures for vigilance: Multiple Sleep Latency Test (MSLT), Maintenence Wakefulness Test (MWT), The Sustained Attention to Response Test (SART). Strength and limitations
M. Partinen (Helsinki, FI)

Coffee Break from 10.30 – 11.00

Circadian measures: actigraphy, temperature. Wearable devices for long term polygraphic recordings, smart phones in sleep research
T. Penzel (Berlin, DE)

Imaging techniques (visualization of brain structures including brain stem and midbrain, fMRI, PET, others)
D. Arnaldi (Genoa, IT)

Molecular methods in diagnosing sleep and sleep disorders (orexin, melatonin, cortisol, MCH, adenosine, histamine, GWA)
Y. Dauvilliers (Montpellier, FR)

09.00 – 12.30 Hands-on Course

Boston 3

Clinical PSG/PG scoring & interpretation workshop – Part I

Human Sleep Track

Organised by: Natus Neurology

Trainer: A. Obeidat (Middleton, US)

Recommended & Alternative sensors

AASM Guidelines for Scoring Sleep Stages & Arousals

Coffee Break from 10.30 – 11.00

Case discussion I – Scoring Sleep Stages & Arousals

12.30 – 13.00 Lunch Break

13.00 – 16.30 Teaching Course 2

Darwin

Year in review – Clinical

General Track

Chair: L. Nobili (Milan, IT)

Sleep related movement disorder
M. Manconi (Lugano, CH)

Narcolepsy and hypersomnia
Y. Dauvilliers (Montpellier, FR)

Coffee Break from 14.30 – 15.00

Narcolepsy and hypersomnia (continued)
Y. Dauvilliers (Montpellier, FR)

Sleep disordered breathing (SDB)
W. Randerath (Solingen, DE)

13.00 – 16.30 Teaching Course 4

Boston 1

Digital Sleep: Internet and Smartphone Application for Sleep

General Track

Chair: H.-P. Landolt (Zurich, CH)

Digitalization, miniaturization and networks: medicinal-technical innovation for sleep medicine
H. Malberg (Dresden, DE)

Mobile and wearable systems for monitoring sleep and sleep disorders
W. Karlen (Zurich, CH)

Coffee Break from 14.30 – 15.00

Mobile and wearable systems for monitoring sleep and sleep disorders (continued)
W. Karlen (Zurich, CH)

Can we use smartphone behavior to learn how sleep-wake disease impacts our day-to-day lives?
A. Ghosh (Leiden, NL)

13.00 – 16.30 Early Career Day

Boston 2

Selling your science

General Track

Chair: E. Sif Arnardottir (Reykjavik, IS)

Welcome and introduction
K. Porcheret (Oxford, UK)

Selling your science to the public
N. Koop (Amsterdam, NL);
W. Kuijpers (Amsterdam, NL)

Coffee break from 14.30 – 15.00

Selling your science to the public
N. Koop (Amsterdam, NL);
W. Kuijpers (Amsterdam, NL)

Selling your science to scientists
E. Sif Arnardottir (Reykjavik, IS)

Election for new committee members

Early Career research Network (ECRN) session is free of charge for all ESRS members who are students and researchers/clinicians up to 10 years post Ph.D. Online registration is mandatory.

13.00 – 17.00 Hands-on Course

Boston 3

Clinical PSG/PG scoring & interpretation workshop – Part II

Human Sleep Track

Organised by: Natus Neurology

Trainer: A. Obeidat (Middleton, US)

AASM Guidelines for scoring respiratory events

Case discussion II – Scoring Respiratory events

Coffee Break from 14.30 – 15.00

AASM Guidelines for scoring Limb Movements

Case Discussion III – Scoring Limb Movements

What are you missing from the interpretation of PG recording?

17.00 – 19.05 Opening Session & Young Scientists Symposium

San Francisco

General Track

Chairs: C. Cajochen (Basel, CH)
W. McNicolas (Dublin, IE)

Welcome words & entertainment

European Sleep Science Award

Young Scientists' Symposium

O001 **Preserved neuron reactivity dynamics during prolonged wakefulness is linked to cognitive fitness in aging, independently of tau and amyloid beta burden**
M. Van Egroo, J. Narbutas, G. Besson, V. Muto, D. Chylinski, P. Villar-Gonzalez, G. Gaggioni, P. Ghaemmaghami, X. Pepin, M. Cerasuolo, M. Blanpain, E. Tezel, C. Le Goff, E. Cavalier, E. Lambot, S. Laloux, C. Hagelstein, A. Luxen, C. Degueldre, M.A. Bahri, P. Maquet, E. Salmon, C. Schmidt, C. Phillips, C. Bastin, F. Collette, G. Vandewalle (Liège, BE; Caserta, IT)

O002 **Discovering the role of miR-709 in the sleep homeostatic process**
K. Kompotis, G. Mang, S. Jimenez, Y. Emmennegger, P. Franken (Lausanne, CH)

O003 **Symptom-based clinical subtypes of obstructive sleep apnoea show differences in spectral power and immediate post-arousal dynamics**
D. Mazzotti, B. Keenan, J. Kim, M. Younes, A. Pack (Philadelphia, US; Winnipeg, CA)

O004 **The impact of treating insomnia upon functional health, psychological wellbeing and sleep-related quality of life: a randomised controlled trial with mediation analysis**
A.I. Luik, R. Emsley, S.D. Kyle, C. Gordon, C.L. Drake, A. Marsden, C.A. Espie (London, Manchester, Oxford, UK; Sydney, AU; Detroit, US)

19.00 – 20.30 Networking Evening

Exhibition Area

All participants and exhibitors are kindly invited to the Networking Event, which will take place at the congress centre within the exhibition area. After a first exciting day of science and education at the congress, it is time to enjoy some delicious food in a relaxed atmosphere among your colleagues. An excellent way to end your first day at the congress.

Costs are included in the registration fee. Please make sure to wear your badge.

08.30 – 10.30 Symposium

San Francisco

Unraveling the neurobiology of sleep in normal ageing and in neurodegeneration

Neuropsychiatry Track

Chairs: R. Osorio (New York, US)
N. Gosselin (Montreal, CA)

5 **Sleep oscillations and the pathogenesis of Alzheimer's disease**
R.S. Osorio, A.W. Varga (New York, US)

6 **Orexin and Alzheimer's disease**
C. Liguori (Rome, IT)

7 **Isolated RBD, an early stage of α-synucleinopathy**
B. Högl (Innsbruck, AT)

8 **Is OSA associated with pathological aging? A neuro-psychological and neuroimaging perspective**
N. Gosselin (Montreal, CA)

08.30 – 10.30 Symposium

Montreal

The Big Sleep: unraveling insomnia using big data

Human Sleep Track

Chairs: E. Van Someren (Amsterdam, NL)
V. Tucci (Genoa, IT)

9 **Epidemiology, genetic models and epigenetics of insomnia**
T. Paunio (Helsinki, FI)

10 **Trait and life history profiles reveal stable insomnia subtypes**
T.F. Blanken, J.S. Benjamins, D. Borsboom, J.K. Vermunt, C. Paquola, J. Ramautar, K. Dekker, D. Stoffers, Y. Wei, E.J.W. Van Someren (Amsterdam, Tilburg, Utrecht, NL)

11 **Genome-wide analysis of insomnia in UK Biobank and 23andMe identifies novel loci and functional pathways**
P. Jansen, K. Watanabe, S. Stringer, N. Skene, J. Bryois, J. Benjamins, A. Munoz-Manchado, J. Tung, D. Hinds, V. Vacic, P. Sullivan, T. Polderman, A. Smit, J. Hjerling-Leffler, E. van Someren, D. Posthuma (Amsterdam, Utrecht, NL; Stockholm, SE; Mountain View, US)

12 **Modelling sleep disorders in mice**
V. Tucci (Genova, IT)

08.30 – 10.30 Symposium

Sydney

Translational Track

Circadian modulation of EEG brain activity and cognition, and the impact of light on sleep

Chairs: M. Münch (Berlin, DE)
S. Chellappa (Boston, US)

13 **The role of light in regulating alertness and performance in mice**
S. Peirson (Oxford, UK)

14 **Effects of the circadian system and circadian misalignment on cognition in non-shift workers and chronic shift workers**
S.L. Chellappa, C.J. Morris, F.A.J.L. Scheer (Boston, US)

15 **Relationship between daytime light exposure and EEG sleep architecture, slow-wave activity, and sleep quality in young healthy office workers**
M. Gordijn, M. Geerdink, E. Wams, T. Woelders, R. Hut (Groningen, NL)

16 **Impact of different light exposures in the evening on EEG slow-wave activity and REM sleep**
M. Münch, F. Bes, A. Papakonstantinou, C. Nowozin, J. Regente, A. Wahnschaffe, S. Hädel, G. Gruber, D. Kunz (Berlin, DE; Vienna, AT)

08.30 – 09.30 Oral Session

Singapore

Sleep and driving

Human Sleep Track

Chairs: J. Mathis (Berne, CH)
J.L. Pepin (Grenoble, FR)

O017 **Maintenance of Wakefulness Test, real and simulated driving in narcolepsy/hypersomnia patients**
P. Sagaspe, J.-A. Micoulaud-Franchi, O. Coste, D. Léger, S. Espié, D. Davenne, R. Lopez, Y. Dauvilliers, P. Philip (Bordeaux, Caen, Montpellier, Paris, FR)

O018 **To predict sleep related accidental risk of patients with obstructive sleep apnea syndrome: self reported sleepiness at the wheel versus Apnea Hypopnea Index**
P. Philip, S. Bailly, M. Benmerad, J.-A. Micoulaud Franchi, Y. Grillet, M. Sapene, R. Tamisier, J.-L. Pepin (Bordeaux, Grenoble, Valence, FR)

O019 **Diagnostic patterns of sleep- and vigilance tests in distinct causes of excessive daytime sleepiness**
J. Mathis, D. Andres, A. Mathis, W. Schmitt, C.L. Bassetti, D.R. Schreier (Bern, CH)

O020 **Moderate and severe OSA in males impair psychomotor reaction times assessed by CRD-series testing**
I. Pavlinac Dodig, R. Pecotic, M. Valic, L. Lusic, Z. Dogas (Split, HR)

O021 **A pre-drive ocular assessment predicts subsequent driving impairment: a naturalistic driving study in shift workers**
M.D. Mulhall, J. Cori, J. Kuo, M. Magee, A. Collins, C. Anderson, T. Sletten, M.G. Lenné, S.M.W. Rajaratnam, M.E. Howard (Braddon, Melbourne, AU)

08.30 – 10.30 Oral Session

Osaka

General Track

New methods in basic and clinical sleep research

Chair: L. Tarokh (Berne, CH)

O022 **Environmental influence on the behaviorally defined sleep (rest) in a wild nocturnal primate Nycticebus javanicus**
K. Reinhardt, V. Vyazovskiy, K.A.I. Nekaris (Oxford, UK)

O023 **Two million nights to characterize sleep heterogeneity: what objective and self report big data tell us**
A. Volkov, H.M. Rus, S. Danoff-Burg, J. Kim, D. Albrecht, Z. Bennett, R.J.E.M. Raymann (Carlsbad, US)

O024 **Studying the Temporal Dynamics of Human Sleep in Real Life and Large Numbers**
E. Winnebeck, D. Fischer, T. Leise, T. Roenneberg (Munich, DE; Amherst, Boston, US)

O025 **Scoring sleep with artificial intelligence enables quantification of sleep stage ambiguity**
P. Anderer, M. Ross, A. Cerny, A. Moreau (Vienna, AT)

O026 **New spectral analysis method to identify trait-like features in NREM sleep power spectra**
G. Hammad, V. Muto, G. Gaggioni, M. Jaspar, C. Meyer, P. Maquet, C. Schmidt, C. Phillips, D. Coppieters 't Wallant (Liège, BE)

O027 **Cognitive functioning following sleep deprivation is moderated by time-of-day: results from the Karolinska WakeApp**
B.C. Holding, T. Sundelin, J. Axelsson (Stockholm, SE)

O028 **A computer algorithm to quantify REM sleep without atonia**
A. Papakonstantinou, J. Klemming, F. Bes, D. Kunz (Berlin, DE)

O029 **Evaluation of night-to-night variability of sleep apnea in home polysomnography**
L.C. Rohling, R. Tijdens, K.W. van Kralingen (Zwolle, NL)

O030 **Accuracy of detecting sleep apnea using machine-held submental ultrasonography**
P.-L. Lee, C.-C. Shu, E.C.H. Liu, Y.-C. Tsai, C.-W. Hsu, H.-C. Wang, A. Chen, C.-N. Chen (Taipei, TW)

O031 **Cerebral free-water imaging with obstructive sleep apnea severity**
A.-A. Baril, K. Gagnon, M. Descoteaux, S. Chami, J. Montplaisir, E. Sanchez, L. De Beaumont, R. Osorio, J. Carrier, N. Gosselin (Montreal, Sherbrooke, CA; New York, US)

08.30 – 10.30 ESST Meeting

Rio

General Track

ESST Meeting – Session 1
The state of the art in sleep technology

Chair: L. Hill (Edinburgh, UK)

Sign in and welcome
L. Hill (Edinburgh, UK)

Recent advances in sleep treatments
R. Tijdens (NL)

Beyond the AHI
E.S. Arnardottir (Reykjavik, IS)

Tracheal sounds during sleep
L. Launois (Paris, FR)

09.30 – 10.30 Oral Session

Singapore

Basic Track

Sleep, – omics and novel cellular and molecular mechanics

Chairs: M. Tafti (Lausanne, CH)
S. Brown (Zurich, CH)

O032 **Predicted gene expression in the brain is associated with sleep macrostructure in healthy young individuals**
P. Ghaemmaghami, V. Muto, M. Jaspar, C. Meyer, M. Elansary, M. Van Egroo, C. Berthomier, E. Lambot, J. Devillers, M. Brandewinder, A. Luxen, C. Degueldre, E. Salmon, F. Collette, S.N. Archer, C. Phillips, D.-J. Dijk, M. Georges, P. Maquet, G. Vandewalle (Liege, BE; Paris, FR; Guildford, UK)

O033 **The cortical synaptic transcriptome is organized by clocks, but its proteome is driven by sleep**
S. Noya (Zurich, CH)

O034 **mGluR5-dependent nuclear speckle assembly drives sleep-wake transcriptomics**
A. Spinnler, K. Seignette, D. Colameo, M. Znidaric, G. Bosshard, T. Gschwind, M. Zaichuk, W. Elgrawani, F. Brüning, M. Tafti, S. Nakagawa, T. Hirose, M.S. Robles, J.-M. Fritschy, S.K. Tyagarajan, S.A. Brown (Lausanne, Zurich, CH; Martinsried, Munich, DE; Sapporo, JP)

O035 **RNA-Seq analysis of the impact of sleep deprivation in medial prefrontal cortex of young and old mice**
X. Guo, B.T. Keenan, D. Sarantopoulou, G.R. Grant, A.I. Pack (Philadelphia, US)

O036 **The effects of insufficient sleep on microglial morphology and functional state**
H.-K. Wigren, S. Steffens, S. Piirainen, L. Tian, T. Porkka-Heiskanen (Helsinki, FI)

10.30 – 11.00 Coffee Break

11.00 – 12.00 Case Discussion

San Francisco

Neuropsychiatry Track

Parasomnias, movement disorders of sleep and paroxysmal disorders

Chair: B. Högl (Innsbruck, AT)

Standing up and walking during the night: not always a disorder of arousal
F. Provini (Bologna, IT)

RBD or something else?
J. Santamaria (Barcelona, ES)

PLMS without RLS: video and case discussion
M. Manconi (Lugano, CH)

11.00 – 12.00 Round Table Discussion

Montreal

Basic Track

Preclinical systematic reviews and meta-analysis in sleep research

Chair: M. Andersen (São Paulo, BR)

37 **Introduction to systematic review and meta-analysis of preclinical animal studies**
R. de Vries (Nijmegen, NL)

38 **Meta-analysis on the relationship between sleep deprivation and anxiety in rodents**
G.N. Pires, A.G. Bezerra, S. Tufik, M.L. Andersen (São Paulo, BR)

39 **Adenosine and sleep: a systematic review and meta-analyses of the preclinical literature**
C.H.C. Leenaars, S.A. Savelyev, S. Van der Mierden, R.B.M. De Vries (Nijmegen, NL; St. Petersburg, RU; Hannover, DE)

40 **Systematic review on the relationship between monoamines and sleep**
J.M.L. Menon, R.B.M. de Vries, W.H.I.M. Drinkenburg, C.H.C. Leenaars (Nijmegen, NL; Beerse, BE)

Discussion

11.00 – 12.00 Oral Session

Sydney

Basic Track

Lack of sleep: effects on periphery and the brain

Chairs: A. Lazar (Norwich, Norfolk, UK)
M. Short (Adelaide, AU)

O041 **Effects of sleep restriction on glucose tolerance in adolescents**
J. Gooley, D. Twan, S. Karamchedu, J. Lo, M. Chee (Singapore, SG)

O042 **The relationship between adolescents' sleep spindles and cognitive performance following experimental sleep restriction**
C.M. Reynolds, M. Gradisar, M.A. Short (Adelaide, AU)

O043 **Association between individual impairments in glucose metabolism and cognitive performance in response to sleep restriction**
E.-M. Elmenhorst, D. Elmenhorst, E. Hennecke, D. Lange, J. Fronczek, A. Bauer, D. Aeschbach (Cologne, Jülich, DE)

O044 **Investigation of the neural substrates underlying the homeostatic sleep response in the basal forebrain**
H. Bouaouda, C. Shukla, J. McKenna, J. McNally, S. Winston, A. Kalinchuk, S. Thankachan, R. Strecker, K. Deisseroth, R. Brown, R. Basheer (Stanford, West Roxbury, US)

O045 **'Waking at a lower cost': running wheel access reduces sleep propensity**
L. Milinski, S.P. Fisher, G. Ang, D.M. Bannerman, V.V. Vyazovskiy (Oxford, UK)

11.00 – 13.30 ESST Meeting

Rio

General Track

ESST Meeting – Session 2
Hot topics in sleep medicine

Chair: C. Teixeira (Porto, PT)

Keynote: Healthy sleep, healthy brain: sleep, circadian rhythms and mechanismus of cognitive decline in the human brain
A. Lim (Toronto, CA)

Talk: Sleep apnoea in women
A. Ryckx-Gheeraert (Basel, CH)

Lunch break

Compumedics lunchtime talk (sponsored)
D. Vermeiren (Brussels, BE)

11.00 – 13.30 Poster Session 1

Poster Area

Please refer to page 58 for details.

Poster walks take place from 12.00 – 13.00

Cellular, molecular biology & genetics	P001-P016
Dreaming	P017-P029
Sleep physiology 1	P030-P047
Chronobiology 1	P048-P066
Behavior 1	P067-P084
Learning, memory & cognition 1	P085-P098
Methodology & computation 1	P099-P117
Breathing disorders 1	P118-P136
Breathing disorders 2	P137-P155
Insomnia 1	P156-P173
Insomnia 2	P174-P191
Hypersomnia 1	P192-P205
Neurological disorders 1	P206-P222
Psychiatric & behavioural disorders 1	P223-P238
Sleep & aging 1	P239-P251
Healthcare services & education	P252-P267

12.15 – 13.15 Round Table Discussion

Montreal

Respiratory Track

Pulse wave analysis during sleep – a meaningful tool for improved phenotyping in sleep disorders?
Chair: E.S. Arnardottir (Reykjavik, IS)

46 **Pulse wave analysis during sleep – physiology and methodology**
T. Penzel (Berlin, DE)

Pulse wave analysis during sleep in respiratory disease
H. Schneider (Baltimore, US)

Pulse wave analysis during sleep in cardiovascular disease
D. Zou (Gothenburg, SE)

47 **Pulse wave analysis during sleep in insomnia**
N. Laharnar (Berlin, DE)

Discussion

12.15 – 13.15 Satellite Symposium

Sydney

Acoustical enhancement of slow wave sleep

For further details please refer to page 65.

12.00 – 13.30 Lunch Break & Poster Viewing

13.30 – 15.30 Joint Symposium ESRS – EAN

San Francisco

Disorder of Arousals (DOA): an update

Neuropsychiatry Track

Chairs: L. Nobili (Milan, IT)
C. Bassetti (Berne, CH)

An animal model of DOA: is it possible?
P.-H. Luppi (Lyon, FR)

48 **Local aspect of sleep and wakefulness: implications for DOA**
F. Siclari (Lausanne, CH)

Diagnostic criteria for DOA: a video-polysomnographic assessment
R. Lopez (Montpellier, FR)

49 **Clinical and PSG features distinguishing DOA from Sleep Related Hypermotor Epilepsy-SHE**
P. Proserpio, L. Nobili (Milan, IT)

50 **Parasomnia overlap disorders**
P. Bargiotas (Berne, CH)

13.30 – 15.30 Symposium

Montreal

Asymptomatic sleep disordered breathing: who should be treated?

Respiratory Track

Chairs: R. Heinzer (Lausanne, CH)
M. Sánchez-de-la-Torre (Lleida, ES)

51 **Predictors and biomarkers of negative outcomes in obstructive sleep apnea**
R. Heinzer (Lausanne, CH)

52 **Plasma miRNAs as predictor of CPAP response in resistant hypertension**
M. Sánchez-de-la-Torre (Lleida, ES)

53 **Breath analysis in OSA patients, new biomarkers?**
M. Kohler (Zurich, CH)

Health consequences of untreated central sleep apnea
W. Randerath (Solingen, DE)

13.30 – 15.30 Symposium

Sydney

Temporal constraints on sleep and cognition: importance for brain health during ageing

Translational Track

Chairs: C. Schmidt (Liège, BE)
K. Wulff (Oxford, UK)

54 **The translational potential of sleep and circadian rhythm disturbances as a biomarker of Alzheimer's disease**
B.A. Kent, M.M. Michalik, M. Shafiee, M.S. Mirian, H.H. Feldman, J. Valerio, M.J. McKeown, R.E. Mistlberger, H.B. Nygaard (Burnaby, Vancouver, CA; La Jolla, US)

55 **Brain molecular, histopathological and structural measures linking sleep, circadian rhythms, and dementia in community-dwelling older adults**
A. Lim (Toronto, CA)

56 **Age-related changes in circadian sleep-wake regulation: impact on cognitive performance and cerebral correlates**
C. Schmidt, C. Reichert, M. Maire, G. Gaggioni, M. Deantoni, M. Reyt, G. Vandewalle, F. Collette, V. Muto, G. Hammad, C. Cajochen (Liège, BE; Basel, Berne, CH)

57 **Dynamic LED lighting: Finding the right light at the right time for severely demented residents**
K. Wulff (Oxford, UK)

13.30 – 14.30 Oral Session

Singapore

Electrophysiology of sleep

Basic Track

Chairs: T. DeBoer (Leiden, NL)
G. Zoccoli (Bologna, IT)

O058 **Sharpening the paradox of REM sleep: cortical oscillations, synchronization and topographical aspects during phasic and tonic REM microstates**
P. Simor, G. van der Wijk, F. Gombos, I. Kovács (Budapest, HU)

O059 **Bidirectional interactions between slow waves and synaptic plasticity**
M.C. Kahn, A. Langfelder, P. Antonoudiou, Y. Huang, M. Lohse, L. Upton, V. Vyazovskiy, E. Mann (Oxford, UK)

O060 **Orexin-independent decreases in sleep propensity mark the onset of spontaneous torpor bouts in calorically-restricted mice**
G. Zoccoli, S. Alvente, R. Amici, S. Bastianini, C. Berteotti, M. Cerri, V. Lo Martire, A. Silvani, S. Swoap, A. Valli (Bologna, IT; Williamstown, US)

O061 **Electrophysiological correlates of sleep and wakefulness in Aplysia californica**
A. Vorster, N. Niethardt, H. Chiel, J. Born (Tübingen, DE; Cleveland, US)

O062 **Intranasal leptin treats sleep disordered breathing in obese mice**
V.Y. Polotsky, S. Berger, H. Pho, T. Fleury Curado, A. Schwartz (Baltimore, US)

13.30 – 15.30 Symposium

Osaka

Sleep problems in early childhood – perspectives into epidemiology and treatment

Human Sleep Track

Chairs: T. Paunio (Helsinki, FI)
B. Sivertsen (Bergen, NO)

63 **Disturbed sleep during early infancy: findings from the CHILD-SLEEP cohort**
E.J. Paavonen, I. Morales-Munoz, A. Kylliäinen, P. Pölkki, T. Porkka-Heiskanen, T. Paunio, O. Saarenpää-Heikkilä (Helsinki, Kuopio, Tampere, FI)

64 **Developmental trajectories of sleep problems in toddlers and later emotional and behavioral problems**
B. Sivertsen, A.G. Harvey, T. Reichborn-Kjennerud, E. Ystrom, M. Hysing (Bergen, Oslo, NO; Berkeley, US)

65 **Clinically oriented subtyping of chronic insomnia of childhood**
O. Bruni, S. Sette, M. Angriman, E. Baumgartner, L. Selvaggini, C. Belli, R. Ferri (Bolzano, Rome, Troina, IT)

66 **What have we learnt in the last 5 years of pharmacological treatments for children with sleep problem?**
P. Gringras (London, UK)

13.30 – 15.30 ESST Meeting

Rio

ESST Meeting – Session 3 Interactive workshops

General Track

Chair: M. Verspaandonk (Tilburg, NL)

13.30 **Workshop: Interactive PSG case studies**
M. van der Mierden (NL)
H. Steinebach (NL)

14.30 **Workshop: Actigraphy**
R. Sharman (Oxford, UK)

14.30 – 15.30 Case Discussion

Singapore

Neuropsychiatry Track

Managing sleep problems in psychiatry and psychotherapy

Chair: C. Nissen (Berne, CH)

Always twitchy and tired: differential diagnosis and treatment
L. Frase (Freiburg, DE)

Rhythm and mood
C. Nissen (Berne, CH)

Still wide awake after cognitive behavioral therapy for insomnia (CBT-I): what next?
E. Hertenstein (Berne, CH)

15.30 – 16.00 Coffee Break

16.00 – 16.45 Keynote Lecture

San Francisco

Translational Track

Chair: L. Nobili (Milan, IT)

Sleep analytics and biomarkers
E. Mignot (Palo Alto, US)

16.00 – 16.45 Keynote Lecture

Montreal

Basic Track

Chair: C. Cajochen (Basel,CH)

67 **Molecular analysis of biological clocks: beyond circadian rhythms**
C. Kyriacou (Leicester, UK)

17.00 – 18.30 European Network Session

San Francisco

Respiratory Track

New insights in the clinical picture of sleep apnea – findings from the European Sleep Apnea Database (ESADA)

Chair: W. McNicholas (Dublin, IE)

Introduction: The 10th Anniversary of the ESADA database – lessons learned and visions for the future.
J. Hedner (Gothenberg, SE)

Clinical Phenotypes of obstructive sleep apnea – a cluster analysis using 'Big data'
S. Bailly (Grenoble, FR)

Mild sleep apnea – the European perspective
I. Bouloukaki (Heraklion, GR)

Metabolic consequences of sleep apnea and the impact of treatment
C. Gunduz (Izmir, TR)

17.00 – 18.30 European Network Session – EURLSSG – You

Montreal

General Track

Welcome and opening

L. Rijsman (The Hague, NL)
B. Högl (Innsbruck, AT)

17.10 **PLMS Scoring demystified: a practical guide to the new scoring rules**
S. Fulda (Lugano, CH)

17.40 **Q&A**
S. Fulda (Lugano, CH)

17.55 **Discussion**
B. Högl (Innsbruck, AT)
L. Rijsman (The Hague, NL)

17.00 – 18.30 European Insomnia Network Session

Sydney

What's new?

General Track

Chairs: D. Riemann (Freiburg, DE)
E. Van Someren (Amsterdam, NL)

An introduction to the European guideline for the diagnosis and treatment of insomnia
K. Spiegelhalder (Freiburg, DE)

The European Academy for CBT-I – an interim report
C. Baglioni (Freiburg, DE)

Ongoing work on insomnia at the SCNI in Oxford
S. Kyle (Oxford, UK)

Ongoing work on insomnia in Amsterdam
E. Van Someren (Amsterdam, NL)

Theoretical considerations on the relationships between epigenetics, early trauma, insomnia and depression
L. Palagini (Pisa, IT)

17.00 – 18.30 Oral Session

Singapore

Sleep and cognition

Basic Track

Chairs: P. Peigneux (Bruxelles, BE)
S. Schwartz (Geneva, CH)

O068 **Selective tracking of relevant speech during human sleep**
T. Andrillon, L. Guillaume, M. Koroma, S. Kouider (Melbourne, AU; Paris, FR)

O069 **Maintaining vigilance with limited sleep opportunity: is it better to consolidate or split sleep?**
J. Lo, X.K. Lee, E. van Rijn, J.L. Ong, J. Gooley, M. Chee (Outram, SG)

O070 **Effect of total sleep deprivation on the recall of active avoidance response in rats**
T. Oniani, T. Shetekauri, M. Tsaava, N. Khmiadashvili, T. Charekishvili, N. Oniani (Tbilisi, GE)

O071 **The sleeping brain not only monitors the environment, but also detects relevant information**
M. Wislowska, C. Blume, A. Michalak, N. Weisz, M. Schabus (Salzburg, AT)

O072 **Neural correlates of human cognitive abilities during sleep: an EEG-fMRI study**
Z. Fang, L. Ray, A.M. Owen, S. Fogel (London, Ottawa, CA)

O073 **Effect of interictal epileptic spikes on sleep spindles in medial temporal regions during NREM sleep: are there consequences on memory long-term consolidation? A SEEG study**
I. Lambert, E. Tramoni-Negre, N. Roehri, S. Lagarde, B. Giusiano, O. Felician, C. Benar, F. Bartolomei (Marseille, FR)

O074 **Bad sleepers' night sleep quality improves after pre-sleep cognitive training**
M. Cerasuolo, F. Conte, F. Borriello, I. Di Iorio, G. Fusco, S. Malloggi, F. Giganti, G. Ficca (Caserta, Florence, IT)

17.00 – 18.30 European Network Session

Osaka

Narcolepsy

General Track

Chairs: C. Bassetti (Berne, CH)
G. Mayer (Schwalmstadt-Treysa, DE)

EU-NN Data base: Update
R. Khatami (Barmelweid, CH)

Etiology of human narcolepsy: what is new?
B. Kornum (Copenhagen, DK)

Treatment of narcolepsy: what is new?
G. Plazzi (Bologna, IT)

Genetics of familial narcolepsy
M. Tafti (Lausanne, CH)

Narcolepsy and opiates
R. Fronczek (Leiden, NL)

EU-NN-EAN-ESRS Narcolepsy guidelines and EU-NN centers of excellence: update
C. Bassetti (Berne, CH)

17.00 – 17.45 ESST Meeting

Rio

ESST Meeting – Session 4
The future of sleep technology

General Track

Chair: L. Hill (Edinburgh, UK)

Future of polysomnography: have we reached a tipping point?
C. Teixeira (Porto, PT)

The future of the ESST & closing remarks
L. Hill (Edinburgh, UK)

17.45 – 18.45 ESST Meeting Rio

ESST AGM / National delegates meeting General Track

18.40 – 19.40 Satellite Symposium Montreal

New evidence for Continuous Open Airway Therapy (COAT) in OSA

For further details please refer to page 65.

18.40 – 19.40 Satellite Symposium Osaka

Sleep and circadian rhythms from the viewpoint of light quality

For further details please refer to page 65.

08.30 – 10.30 Symposium

San Francisco

Neuropsychiatry Track

REM sleep fragmentation and emotional dysregulation: evidence for a new mechanism linking sleep and affect?

Chairs: M. Gradisar (Adelaide, AU)
A.-K. Pesonen (Helsinki, FI)

75 **Restless REM sleep impedes overnight emotional resolution in insomnia**
R. Wassing, O. Kamal, J. Ramautar, D. Stoffers, J.S. Benjamins, K. Spiegelhalder, B. Feige, D. Riemann, S. Van Der Sluis, L.M. Talamini, M.P. Walker, F. Schalkwijk, E.J.W. Van Someren (Amsterdam, Utrecht, NL; Freiburg, DE; Berkeley, US)

76 **Awakening thresholds and (REM) sleep perception in insomnia patients and good sleeper controls**
B. Feige, C. Baglioni, D. Riemann (Freiburg, DE)

77 **REM sleep fragmentation and depressive symptoms in late adolescence: evidence from a community cohort**
A.-K. Pesonen, M. Gradisar, L. Kuula, I. Merikanto, S. Tuominen, R. Tark, K. Räikkönen, J. Lahti (Helsinki, FI; Adelaide, AU)

78 **Does school-aged children's anxiety reduce after sleep restriction therapy via REM sleep consolidation?**
M. Gradisar, E. Hunt, C. Reynolds, N. Cain, M. Heath, K. Bartel, C. Richardson, M. Short (Adelaide, AU)

08.30 – 10.30 Symposium

Montreal

Basic Track

Information processing during sleep: recent developments and future perspectives

Chairs: P. Peigneux (Bruxelles, BE)
A. Arzi (Cambridge, UK)

79 **Associative learning during human sleep: an interplay between behavior, sleep stages and brain activity**
A. Arzi (Cambridge, UK)

Neural markers of perceptual processing and learning during sleep
S. Kouider (Paris, FR)

80 **The MemoSleep-Hypothesis: how does cognition influence sleep?**
B. Rasch (Fribourg, CH)

81 **What can be learned during sleep? Neurophysiological evidence for limitations and boundary conditions**
P. Peigneux (Bruxelles, BE)

08.30 – 10.30 Symposium

Sydney

Recent advances in Fatigue Risk Management: from fatigue countermeasure strategies to sleep science-based policy making

Translational Track

Chairs: H. Van Dongen (Spokane, US)
V. Riethmeister (Groningen, NL)

82 **Basic and clinical sleep and circadian science as a foundation for fatigue risk management in occupational settings**
H. Van Dongen (Spokane, US)

83 **Fatigue risk management for the offshore oil and gas industry**
V. Riethmeister, S. Brouwer, M. de Boer, U. Bültmann (Amsterdam, Groningen, NL)

84 **Alertness management strategies among long-haul truck drivers and airline pilots**
M. Sallinen (Helsinki, FI)

85 **Fatigue proofing: the next generation of fatigue risk management**
D. Dawson (Wayville, AU)

08.30 – 10.30 Oral Session

Singapore

Cardiovascular and other consequences and sleep apnea

Respiratory Track

Chairs: L. Grote (Gothenburg, SE)
M. Hatzinger (Solothurn, CH)

O086 **Risk factors for increased daytime sleepiness in sleep apnea – results from the National Swedish Sleep Apnea Registry**
J. Hedner, L. Grote, D. Zou, C. Wartenberg, S. Franzen (Gothenburg, SE)

O087 **Differences in arousal probability and duration after apnea and hypopnea events in adult obstructive sleep apnea patients**
T. Leppänen, A. Kulkas, A. Oksenberg, B. Duce, E. Mervaala, J. Töyräs (Kuopio, FI; Raanana, IL; Brisbane, AU)

O088 **Analysing morphine-induced respiratory depression in obstructive sleep apnoea patients using new technologies: a randomised double-blind placebo-controlled study**
D. Wang, J. Wu, L. Rowsell, K. Wong, R. Thomas, B. Yee, R. Grunstein (Glebe, AU; Boston, US)

O089 **Long-term mortality depending on severity of sleep apnea in patients after acute myocardial infarction**
O. Ludka, R. Stepanova, T. Kara, J. Spinar (Brno, CZ; Rochester, US)

O090 **Nonfatal and fatal cardiovascular events in continuous positive airway pressure adherent obstructive sleep apnoea syndrome patients – a retrospective observational study**
M. Myllylä, A. Hammais, M. Stepanov, U. Anttalainen, T. Saaresranta, T. Laitinen (Turku, FI)

O091 **Arrhythmias and sleep related breathing disorders: data from the European Sleep Apnoea Database (ESADA)**
C. Lombardi, A. Faini, P. Castiglioni, T. Penzel, P. Steiropoulos, L. Grote, J. Hedner, O. Marrone, O. Basoglu, P. Śliwiński, G. Trakada, J. Verbraecken, Z. Dogas, T. Saaresranta, S. Schiza, O. Ludka, G. Parati (Milan, Palermo, IT; Berlin, DE; Alexandroupolis, Athens, Heraklion, GR; Gothenburg, SE; Izmir, TR; Warsaw, PL; Antwerp, BE; Split, HR; Turku, FI; Brno, CZ)

O092 **Associations of heart rate variability and sleep apnea with hypertension**
R. Adams, S. Appleton, M. Baumert, S. Immanuel, P. Catcheside, A. Vakulin, D. McEvoy, S. Martin, G. Wittert (Adelaide, Bedford Park, Daw Park, Woodville, AU)

O093 **The predictive value of loop gain measurements in determining continuous positive airway pressure efficacy in patients with obstructive sleep apnea**
Y. Li, X. Ding, F. Gao, Q. Yang, X. Wang, W. Xu, D. Han (Beijing, CN)

O094 **Psychological distress and depression preceding sleep apnea**
P. Salo, H. Tuimala, V. Aalto, M. Kivimäki, T. Oksanen (Turku, FI; London, UK)

O095 **Relationship between risk factors for obstructive sleep apnea and cognitive function in middle-aged and older adults: cross-sectional analysis of the Canadian Longitudinal Study on Aging**
C. Thompson, J. Carrier, G. Moullec, N. Cross, T.T. Dang-Vu, R. Postuma, J. Paquet, N. Gosselin (Montreal, CA)

08.30 – 10.30 Joint ESRS – EBRS Symposium

Osaka

General Track

Chairs: W. McNicholas (Dublin, IE)
D. Skene (Guildford Surrey, UK)

96 **Gene expression changes associated with chronic sleep/wake disorders: insights from Drosophila**
L. Seugnet (Lyon Cedex, FR)

Sleep-activity cycles drive global dynamics of protein and phosphorylation in synapses
C. Robles (Munich, DE)

Human sleep and circadian metabolomics studies
D. Skene (Guildford Surry, UK)

A search for glymphatic like mechanisms in healthy human sleep
S. Holst (Copenhagen, DK)

10.30 – 11.00 Coffee Break

11.00 – 12.00 Oral Session

San Francisco

Restless legs syndrome and dementia

Neuropsychiatry Track

Chairs: B. Högl (Innsbruck, AT)
F. Provini (Bologna, IT)

O097 **Non-dipping pattern in restless legs syndrome**
S. Chenini, A.L. Rassu, L. Guiraud, E. Evangelista, L. Barateau, R. Lopez, B. Carlander, I. Jaussent, Y. Dauvilliers (Montpellier, FR)

O098 **Stroke-related restless legs syndrome: an anatomo-clinical entity with clues to pathophysiology**
E. Ruppert, A. Hacquard, L. Tatu, I.J. Namer, U. Kilic-Huck, H. Comtet, O. Lagha-Boukbiza, V. Wolff, M. Bataillard, P. Bourgin (Besançon, Strasbourg, FR)

O099 **Sleep-wake fragmentation is linked to amyloid beta brain deposition in healthy ageing**
J. Narbutas, M. Van Egroo, D. Chylinski, P. Villar González, G. Borraita-Amador, V. Muto, G. Hammad, G. Besson, E. Lambot, S. Laloux, C. Hagelstein, P. Ghaemmaghami, C. Degueldre, C. Schmidt, P. Maquet, E. Salmon, C. Phillips, M.A. Bahri, C. Bastin, F. Collette, G. Vandewalle (Liège, BE)

O100 **EEG functional connectivity during REM sleep: a marker of cognitive status?**
A. Lafrenière, P. Brayet, J.-M. Lina, D. Petit, J.-F. Gagnon, J. Montplaisir, N. Gosselin, J. Carrier (Montréal, CA)

O101 **Serotine melatonin timing secretion in real life conditions in Alzheimer patients of mild to moderate severity**
R. Manni, R. Cremascoli, C. Perretti, M. Terzaghi, S. Cerri, R. De Icco, M. Picascia, E. Sinforiani (Pavia, IT)

11.00 – 12.00 Case Discussion

Montreal

Central hypersomnia – circadian disorders

Human Sleep Track

Chair: L. Nobili (Milan, IT)

Central hypersomnias: A pediatric KLS case after 2009 H1N1 vaccine
M. Lecendreux (Paris, FR)

Gait Disturbance as first sign of early onset narcolepsy
F. Pizza (Bologna, IT)

A case of paroxysmal nocturnal events associated with choking
L. Nobili (Milan, IT)

11.00 – 13.00 Symposium

Sydney

Rhythms of (un)healthy sleep: understanding and modulation of multi-system oscillations

Translational Track

Chairs: P. Achermann (Zurich, CH)
G. Lavigne (Montreal, CA)

102 **EEG correlates of multi-system oscillations: from visual identification to the analysis of complexity**
R. Ferri (Troina, IT)

103 **Autonomic background of multi-system oscillations: from humans to model organisms**
A. Silvani (Bologna, IT)

The interplay between periodic leg movements, arousals and breathing events
M. Manconi (Lugano, CH)

104 **The interplay between sleep bruxism, arousals and breathing or period movement related events**
G. Lavigne (Montreal, CA)

11.00 – 12.30 ANSS Networking Meeting

Singapore

Basic Track

The European situation and the main difficulties among the different national sleep societies
L. Parrino (Parma, IT)

A brief story of the ANSS activities in the last 4 years
J. Verbraecken (Edegem, Antwerp, BE)

The Beyond AHI Task Force: an update
E.S. Arnardottir (Reykjavik, IS)

Open challenges and future perspectives for the ANSS
B. Strazisar (Ljubljana, SL)

Panel Discussion
L. Parrino (Parma, IT)
J. Verbraecken (Edegem, Antwerp, BE)
E.S. Arnardottir (Reykjavik, IS)
B. Strazisar (Ljubljana, SL)
O.C. Deleanu (Bucurest, RO)
S. Khachatryan (Yerevan, AM)
L. Korostovtseva (St Petersburg, RU)
Y. van der Werf (Amsterdam, NL)

11.00 – 13.30 Poster Session 2

Poster Area

Please refer to page 58 for details.

Poster walks take place from 12.00 – 13.00

Sleep & aging 2	P268-P280
Biochemistry & neurobiology 1	P281-P293
Sleep physiology 2	P294-P309
Chronobiology 2	P310-P328
Behavior 2	P329-P346
Learning, memory & cognition 2	P347-P358
Sleep deprivation 1	P359-P373
Methodology & computation 2	P374-P390
Breathing disorders 3	P391-P409
Breathing disorders 4	P410-P428
Insomnia 3	P429-P446
Hypersomnia 2	P447-P460
Neurological disorders 2	P461-P477
Medical disorders 1	P478-P493
Psychiatric & behavioral disorders 2	P494-P509
Paediatrics 1	P510-P526

12.00 – 13.00 Oral session

San Francisco

Parasomnias

Neuropsychiatry Track

Chairs: Y. Dauvilliers (Montpellier, FR)
F. Siclari (Lausanne, CH)

O105 **Negative stress coping is associated with structural integrity of posterior cingulate cortex in sleep walking**
M. Ramm, A. Urbanek, P. Young, C. Scherfler, A. Heidbreder (Münster, DE; Innsbruck, AT)

O106 **Topographical spectral power changes associated with NREM parasomnia episodes – a high-density EEG study**
J. Cataldi, S. Lecci, G. Bernardi, F. Siclari (Lausanne, CH; Lucca, IT)

O107 **Regional patterns of neuronal activity in REM sleep behavior disorder using high-density EEG**
A. Valomon, B.A. Riedner, S.G. Jones, R.L. Goodpaster, G. Tononi, D.T. Plante, R.M. Benca, M. Boly (Irvine, Madison, US)

O108 **Actigraphic differences in the rapid eye movement sleep behavior disorder patients**
D. Kemlink, P. Perinova, P. Dusek, E. Ruzicka, K. Sonka (Praha, CZ)

O109 **Efficacy of prolonged release melatonin for REM sleep behaviour disorder in Parkinson's disease: a double blind, randomised, placebo-controlled trial**
M. Gilat, N. Marshall, D. Hammond, A. Coeytaux Jackson, A. Mullins, J. Hall, R. Grunstein, S. Lewis (Camperdown, Sydney, AU; Geneva, CH)

12.00 – 13.00 Case Discussion

Montreal

Central hypersomnia-circadian disorders

Human Sleep Track

Chair: P. Jennum (Glostrup, DK)

Narcolepsy versus idiopathic hypersomnia
Y. Dauvilliers (Montpellier, FR)

Secondary narcolepsy
G. Plazzi (Bologna, IT)

Comorbid narcolepsy – psychiatric implications
P. Jennum (Glostrup, DK)

13.00 – 14.15 Lunch Break & Poster Viewing

13.05 – 13.30 ESRS Women's Forum

Montreal

General Track

Chair: R. Winsky-Sommerer (Surrey, UK)

Clearing career hurdles
R. Winsky-Sommerer (Surrey, UK)

Mid-career academia: opportunities and challenges
L. Tarokh (Berne, CH)

13.05 – 14.05 Satellite Symposium

Sydney

Beyond the AHI

For further details please refer to page 67.

13.05 – 14.05 Satellite Symposium

Singapore

A potential new treatment for the management of excessive sleepiness in narcolepsy and obstructive sleep apnoea

For further details please refer to page 67.

14.15 – 16.15 Joint Symposium ESRS-ERS

San Francisco

Respiratory Track

Interaction between sleep and obstructive airway disease: a cocktail party
Chair: W. McNicholas (Dublin, IE)

110 **Sleep disorders in COPD: etiology and consequences**
W. McNicholas (Dublin, IE)

Asthma control and disturbed sleep
O. Marrone (Palermo, IT)

Management of sleep disorders in COPD and asthma
L. Grote (Gothenburg, SE)

NIV in patients with (hypercapnic) COPD
P. Wijkstra (Groningen, NL)

14.15 – 16.15 Symposium

Montreal

The different enigmatic faces of REM sleep behavior disorder

Neuropsychiatry Track

Chairs: A. Stefani (Innsbruck, AT)
A. Heidbreder (Münster, DE)

111 **Does isolated REM sleep behavior disorder exist? Lesson learned from the longstanding non-convertors**
A. Stefani (Innsbruck, AT)

112 **How to design a neuroprotective trial for idiopathic rem sleep behavior disorder**
J. Santamaria (Barcelona, ES)

113 **Why do not all patients with Parkinson disease have RBD?**
F. Provini, L. Baldelli, G. Calandra-Buonaura, L. Sambati, A. Cecere, F. Mignani, P. Cortelli (Bologna, IT)

114 **The universal presence of RBD in autoimmune/ neurodegenerative disorders: the anti-IgLON5 disease**
A. Heidbreder (Münster, DE)

14.15 – 15.15 Oral Session

Sydney

Insomnia disorder

Neuropsychiatry Track

Chairs: C. Baglioni (Freiburg, DE)
D. Riemann (Freiburg, DE)

O115 **Feeling awake while asleep: a high-density EEG assessment of sleep perception**
S. Lecci, J. Cataldi, G. Bernardi, J. Haba-Rubio, R. Heinzer, G. Tononi, F. Siclari (Lausanne, CH; Lucca, IT; Madison, US)

O116 **Insomnia with objective short sleep duration is associated with cardiometabolic, cardiovascular and cerebrovascular disease risk**
J. Fernandez-Mendoza, F. He, S. Calhoun, D. Liao, E. Bixler, A. Vgontzas (Hershey, US)

O117 **Bedtime social media use and insomnia in adults**
S. Hyvämäki, P. Salo (Turku, FI)

O118 **Treatment response of insomnia disorder phenotypes and subtypes to standardised digital cognitive behavioural therapy**
C. Gordon, C. Miller, N. Lovato, M. Comas, N. Marshall, D. Bartlett, R. Grunstein (Adelaide, Sydney, AU; London, UK)

O119 **How best to sequence cognitive behavioural therapy and medication when treating chronic insomnia with and without psychiatric comorbidity?**
C. Morin, J. Edinger, A. Krystal, H. Ivers, S. Bonneau-Beaulieu, B. Guay, A. Cartwright, A. Solanoa (Quebec, CA; Denver, San Francisco, US)

14.15 – 16.15 Symposium

Singapore

Local Network Sleep in vivo and in vitro

Basic Track

Chairs: J. Krueger (Spokane, US)
M. Tafti (Lausanne, CH)

120 **The slow oscillation *in vitro:* a model for sleep regulation**
M. Tafti, S. Saberi-Moghadam (Lausanne, CH)

121 **Neuronal network dynamics of sleep and wakefulness in C. elegans**
M. Zimmer (Vienna, AT)

122 **Local origin of slow EEG waves during sleep**
I. Timofeev (Québec, CA)

123 **Gene-dependent state oscillations *in vivo* and *in vitro***
J. Krueger, J. Nguyen, P. Taishi, K. Jewett, M. Xue, S. Roy (Pullman, Spokane, US)

14.15 – 15.15 Round Table

Osaka

Should we bank our sleep and clocks? How and why creating large multimodal databases

Translational Track

Chair: G. Vandewalle (Liege, BE)

124 **Regulations and ethics in biobanking**
G. Vandewalle (Liege, BE)

125 **The Canadian Sleep Research Biobank**
S. Warby (Montreal, CA)

Knowledgebased, data integration and analysis: from diabetes to sleep
I. Xenarios (Lausanne, CH)

Discussion

15.15 – 16.15 Oral Session

Sydney

Chronobiology

Basic Track

Chairs: C. Schmidt (Liège, BE)
M. Gordijn (Groningen, NL)

O127 **Objective sleepiness is reduced by daytime polychromatic white light exposures depending on melanopic lux**
J. de Zeeuw, A. Papakonstantinou, C. Nowozin, S. Wisniewski, M. Zaleska, T. Fox, S. Hädel, F. Bes, D. Kunz, M. Münch (Berlin, DE)

O128 **Influence of habitual caffeine intake and its withdrawal on circadian phase and nap sleep in the evening**
J. Weibel, Y.-S. Lin, H.-P. Landolt, C. Garbazza, M. Meyer, H. Slawik, S. Borgwardt, C. Cajochen, C. Reichert (Basel, Zurich, CH)

O129 **Entrainment of circadian system and sleep to extremely long photoperiods in modern life and nature**
J.R. Guzzetti, T. Sundelin, B.C. Holding, P. Solsjö, A. Jemstedt, K. te Paske, Y. Altuzarra, D. Skene, K.P. Wright Jr., J. Axelsson (Stockholm, SE; Boulder, New York, US; Guildford, UK)

O130 **Greater sleep inertia in young adults in early biological morning**
K.-M. Zitting, M.Y. Münch, S.W. Cain, W. Wang, C.A. Czeisler, J.F. Duffy (Boston, US)

O131 **Subjective sleepiness and waketime are related to light perception**
R. Lasauskaite, C. Cajochen (Basel, CH)

15.15 – 16.15 Oral Session

Osaka

Sleep in real life

Neuropsychiatry Track

Chairs: T. Paunio (Helsinki, FI)
D.-J. Dijk (Surrey, UK)

O132 **Sleep, fatigue and cognitive performance on different types of fishing vessels**
A. á Høvdanum, P. Weihe, W. van Leeuwen, F. Debes (Tórshavn, FO; Stockholm, SE)

O133 **Do rats avoid a radiofrequency exposed environment to sleep?**
F. Del Vecchio, A. Bosquillon de Jenlis, C. Person, R. de Seze, S. Delanaud, V. Bach, A. Pelletier (AMIENS, Brest, Verneuil-en-Halatte, FR)

O134 **Exercise effects on the circadian rhythm of adolescents with extreme evening-type circadian preference: a novel treatment to improve sleep health**
C. Lang, C. Richardson, M. Short, M. Gradisar (Basel, CH; Adelaide, AU)

O135 **Chronotype, social jetlag and work performance in a sample of Japanese workers**
Y. Komada, I. Okajima, S. Kitamura, Y. Inoue (Tokyo, JP)

O136 **Dreaming of Mars: inter-individual differences in sleep, sleepiness and performance during a year-long stay in Antarctica**
O. Mairesse, D. Neu, E. Macdonald-Nethercott, N. Pattyn (Brussels, BE; Essex, UK)

16.15 – 16.45 Coffee Break

16.45 – 17.30 Keynote Lecture

San Francisco

Chair: W. McNicholas (Dublin, IE)

Respiratory Track

137 **Sex and gender differences in sleep apnea: a window into understanding disease susceptibility**
S. Redline (Boston, US)

16.45 – 17.30 Keynote Lecture

Montreal

Chair: P.-H. Luppi (Lyon, FR)

Basic Track

138 **Learning and sleep-dependent dendritic spine plasticity and maintenance**
W. Gan (New York, US)

17.45 – 19.45 ESRS Business Meeting

Montreal

General Track

08.30 – 10.30 Symposium

San Francisco

Headache and sleep

Neuropsychiatry Track

Chairs: R. Fronczek (Leiden, NL)
P. Jennum (Glostrup, DK)

139 **Headache and sleep**
P. Jennum (Glostrup, DK)

140 **Cluster headache & the clock**
R. Fronczek (Leiden, NL)

141 **Hypnic headache – the undesired alarmer**
C. Schankin (Berne, CH)

142 **Hypothalamic pathways in headache & sleep**
P. Holland (London, UK)

08.30 – 10.30 Symposium

Montreal

Biomarkers for sleep disruption and sleep disorders

Basic Track

Chairs: S. Archer (Guildford, UK)
A. Lahtinen (Helsinki, FI)

143 **Computational approaches to identify and validate blood transcriptome biomarkers for sleep and circadian health**
E. Laing, C. Moller-Levet, N. Santhi, S. Archer, D.-J. Dijk (Guildford, UK)

144 **Systems genetics of sleep loss in the mouse**
M. Jan, S. Diessler, Y. Emmenegger, N. Guex, B. Middleton, D.J. Skene, M. Pagni, M. Ibberson, F. Burdet, L. Götz, M. Sankar, R. Liechti, C.N. Hor, I. Xenarios, P. Franken (Lausanne, CH; Guildford, UK)

Transcriptomic biomarkers of sleep disturbances and other symptoms induced by chronic stress in mice
M. Nollet (London, UK)

145 **DNA methylation in blood leukocytes as putative biomarkers for insufficient sleep**
A. Lahtinen, S. Puttonen, T. Paunio (Helsinki, FI)

08.30 – 10.30 Symposium

Sydney

Pharmacological therapy of obstructive sleep apnea. Novel tools and principles.

Respiratory Track

Chairs: J. Hedner (Gothenburg, SE)
D.J. Eckert (Sydney, AU)

146 **The challenge of designing trials in OSA**
J. Verbraecken (Antwerp, BE)

147 **Pathophysiological phenotyping as a rational for drug development**
D.J. Eckert (Randwick, Sydney, AU)

148 **Cannabinoid receptor modulation in sleep apnea**
D. Carley (Chicago, US)

149 **Carbonic anhydrase activity modulation in sleep apnea**
E. Hoff, Z. Ding, G. Ludger, K. Stenlöf, J. Hedner (Gothenburg, SE)

08.30 – 09.30 Oral Session

Singapore

Hypersomnia

Neuropsychiatry Track

Chairs: C. Baumann (Zurich, CH)
Y. Dauvilliers (Montpellier, FR)

O150 **Kleine-Levin syndrome is associated with LMOD3 variants**
A. BaHammam, S. Alshareef, S. Basit, S. Li, C. Pfister, S. Pradervand, M. Lecendreux, G. Mayer, Y. Dauvilliers, V. Salpietro, H. Houlden, M. Tafti (AlMadinah, Riyadh, SA; Lausanne, CH; Montpellier, Paris, FR; Marburg, DE; London, UK)

O151 **ADHD symptoms in H1N1-vaccinated youths with narcolepsy type 1**
B.H. Hansen, S. Knudsen (Oslo, NO)

O152 **Repeated measures of hypocretin-1 level in individuals with narcolepsy type 1 and clinical controls**
E.W. Torstensen, B.R. Kornum, B. Wanscher, P.J. Jennum (Copenhagen, Glostrup, DK)

O153 **Sustained attention to response task (SART) shows impaired vigilance versatility in narcolepsy type 1: a simultaneous EEG-fMRI study**
J.K. Gool, R. Fronczek, G.J. Lammers, Y.D. van der Werf (Amsterdam, Heemstede, NL)

O154 **Alternative MSLT cutoffs for diagnosis of pediatric narcolepsy type 1**
F. Pizza, L. Barateau, S. Vandi, E. Mignot, I. Jaussent, R. Lopez, E. Antelmi, G. Plazzi, Y. Dauvilliers (Bologna, IT; Montpellier, FR; Palo Alto, US)

08.30 – 09.30 Round Table

Osaka

Acute or chronic caffeine consumption: what keeps you awake?

Translational Track

Chair: T. DeBoer (Leiden, NL)

155 **Mechanisms of caffeine's effect on sleep**
T. Stenberg (Helsinki, FI)

156 **Deeper sleep during chronic caffeine consumption in mice**
T. DeBoer (Leiden, NL)

157 **Acute and chronic caffeine intake and human sleep**
H.-P. Landolt (Zurich, CH)

158 **Effects of chronic caffeine consumption and caffeine withdrawal on human waking performance, sleep and brain structure**
C.F. Reichert, J. Weibel, Y.-S. Lin, C. Garbazza, M. Meyer, H. Slawik, H.-P. Landolt, S. Borgwardt, C. Cajochen (Basel, Zurich, CH)

Discussion

09.30 – 10.30 Oral Session

Singapore

Sleep in psychiatric disorders

Neuropsychiatry Track

Chairs: C. Nissen (Berne, CH)
A. Wirz-Justice (Basel, CH)

O159 **The role of sleep spindles in procedural memory consolidation in depression**
L. Bovy, M. Dresler, F.D. Weber, A. Steiger (HB Nijmegen, NL; Munich, DE)

O160 **Poor sleep and its relation to impulsivity in forensic psychiatric patients with antisocial or borderline personality disorders**
M. Van Veen, J. Karsten, M. Lancel (Assen, NL)

O161 **The influence of genetic variants on sleep and health improvement in adolescents with an eveningness chronotype**
M. Dolsen, A. Harvey (Berkeley, US)

O162 **Synaptic mechanisms of therapeutic sleep deprivation in major depression**
C. Nissen, M. Kuhn, B. Feige, S. Maiwald, M. Michel, J.G. Maier, S. Klöppel, D. Riemann (Berne, CH; Freiburg, DE)

O163 **Let there be (blue-depleted) light in psychiatry**
D. Vethe, K. Langsrud, J. Scott, M. Engstrøm, A. Olsen, Ø. Salvesen, B. Mathusiak, T. Sand, G. Morken, H. Kallestad (Trondheim, NO; Newcastle, UK)

09.30 – 10.30 Oral Session

Osaka

Epidemiology of sleep

General Track

Chairs: T. Åkerstedt (Stockholm, SE)
L. Grote (Gothenburg, SE)

O164 **Sleep duration and mortality-does weekend sleep matter?**
T. Åkerstedt, F. Ghilotti, A. Grotta, H. Zhao, H.-O. Adami, Y. Trolle-Lagerros, R. Bellocco (Milan, Stockholm, SE; College Station, US)

O165 **Sleep fragmentation in sleep disordered breathing based on a large database (ESADA)**
T. Penzel, M. Wächter, M.R. Bonsignore, I. Bouloukaki, P. Escourrou, I. Fietze, J.W. Kantelhardt, C. Lombardi, O. Marrone, I. Paranicova, A. Pataka, S. Ryan, S. Schiza, P. Sliwinski, P. Steiropoulos, J. Verbraecken, L. Grote (Berlin, Halle, DE; Milan, Palermo, IT; Alexandroupolis, Heraklion, Thessaloniki, GR; Paris, FR; Kosice, SK; Dublin, IE; Warzawa, PL; Antwerp, BE; Gothenborg, SE)

O166 **Sleep disturbances associated with increased risk of mortality: UK Biobank Study**
M. von Schantz, J. Ong, K. Knutson (Guildford, UK; Chicago, US)

O167 **Sleep in major psychiatric disorders: results from nationwide SUPER Finland study**
E. Cederlöf, M. Torniainen-Holm, T. Paunio, J. Suvisaari, A. Palotie (Helsinki, FI)

O168 **Seasonal differences in obstructive sleep apnea severity. Results from the European Sleep Apnea Database (ESADA)**
R. Staats, L. Grote, T. Saaresranta, C. Gunduz, A. Pataka, R. Riha, O. Marrone, S. Ryan, S.E. Schiza, M. Bonsignore, J. Verbraecken, J. Hedner (Lisbon, PT; Gothenburg, SE; Turku, FI; Izmir, TR; Crete, Thessaloniki, GR; Edinburgh, UK; Palermo, IT; Dublin, IE; Antwerp, BE)

10.30 – 11.00 Coffee Break

11.00 – 13.00 Symposium

San Francisco

Restless legs syndrome

Neuropsychiatry Track

Chair: D. Garcia-Borreguero (Madrid, ES)

169 **Brain iron metabolism and its effects on brain neurocircuitry in RLS**
R. Allen (Baltimore, US)

170 **Balance-shift of spinal dopamine receptors during long-term treatment. A possible mechanism for augmentation**
S. Clemens, M.-L. Dinkins, P. Lallemand (Greenville, US)

171 **Hypoadenosinergic state as a driving force leading to hyperdopaminergic and hyperglutamatergic states in RLS**
S. Ferre (Baltimore, US)

172 **The search for new therapeutic targets**
D. Garcia-Borreguero (Madrid, ES)

11.00 – 12.00 Round Table

Montreal

Transcutaneous carbon dioxide during sleep in sleep-disordered breathing: the reverse side of the coin

Respiratory Track

Chair: O. Polo (Tampere, FI)

Principles and practice of transcutaneous pCO2 measurement during sleep
O. Polo (Tampere, FI)

Transcutaneous pCO2 for titration and follow-up of non invasive ventilation
R. Staats (Lisbon, PT)

173 **Transcutaneous carbon dioxide during sleep-disordered breathing**
V. Rimpilä (Tampere, FI)

Discussion

11.00 – 12.00 Round Table ESRS-WSS

Sydney

Education and accreditations procedures for Sleep Medicine: meeting the needs

Basic Track

Chairs: W. McNicholas (Dublin, IE)
C.M. Morin (Quebec, CA)

Accreditation of sleep centres in Europe – current status
D. Pevernagie (Gent, BE)

ESRS Examination in Sleep medicine: the scope, content and vision
T. Paunio (Helsinki, FI)

Sleep medicine examination by WSS worldwide
T. Penzel (Berlin, DE)

Sleep medicine examination: past present and future
M. Schmidt (Berne, CH)

11.00 – 13.00 Symposium

Singapore

The relationship between brain oscillations during sleep, neuroplasticity and stroke

Translational Track

Chairs: C. Bassetti (Berne, CH)
R. Huber (Zurich, CH)

Sleep and neuroplasticity during stroke recovery
C. Bassetti (Berne, CH)

A role for sleep-like bistability in stroke perilesional cortex?
M. Massimini (Milan, IT)

What can we learn from sleep EEG changes during development for stroke recovery processes
R. Huber (Zurich, CH)

174 **Perilesional induction of sleep slow waves improves motor recovery after ischemic stroke**
L. Facchin, C. Schöne, M. Bandarabadi, K. Schindler, A. Adamantidis, C. Bassetti (Berne, CH)

11.00 – 13.30 Poster Session 3

Poster Area

Please refer to page 59 for details.

Poster walks take place form 12.00 – 13.00

Medical disorders 2	P527-P542
Psychiatric & behavioral disorders 3	P543-P558
Paediatrics 2	P559-P574
Sleep and gender	P578-P589
Biochemistry & neurobiology 2	P590-P603
Chronobiology & circadian rhythms 3	P604-P620
Learning, memory and cognition 3	P621-P632
Sleep deprivation 2	P633-P648
Methodology & computation 3	P649-P667
Breathing disorders 5	P668-P685
Breathing disorders 6	P686-P701
Insomnia 4	P702-P719
Parasomnias	P720-P738
Movement disorders	P739-P757

12.00 – 13.00 Case Discussion

Sydney

Chair: J. Verbraecken (Antwerp, BE)

Respiratory Track

Obese, but only mild OSA?
J. Verbraecken (Antwerp, BE)

Sleep disordered breathing in kyphoscoliosis
D. Pevernagie (Gent, BE)

Young, slim...and yet sleepy!
W. Randerath (Solingen, DE)

12.00 – 13.30 Lunch Break & Poster viewing

13.30 – 15.30 Symposium

San Francisco

Narcolepsy

Neuropsychiatry Track

Chairs: L. Nobili (Milan, IT)
C. Peyron (Lyon, FR)

175 **Is cataplexy a dissociated state of paradoxical (REM) sleep? Role of glutamatergic neurons of the sublaterodorsal nucleus in a mouse model of narcolepsy type 1**
A. Roman, M. Villalba, P.-A. Libourel, C. Peyron (Lyon, FR)

Narcolepsy and H1N1 influenza and vaccinations. Fakes and News.
E. Mignot (Palo Alto, US)

The 24-hour motor disorder of the childhood phenotype
G. Plazzi (Bologna, IT)

Narcolepsy and autoaantibodies. Lesson from the paraneoplastic forms
Y. Dauvilliers (Montpellier, FR)

13.30 – 15.30 Symposium

Montreal

Molecular and cellular mechanisms of sleep homeostasis

Basic Track

Chairs: H. Ueda (Tokyo, JP)
P. Franken (Lausanne, CH)

176 **Ca2+-dependent hyperpolarization pathway in sleep homeostasis**
S. Shi, K. Yoshida, H.R. Ueda (Tokyo, JP)

[tentative] Comprehensive RNAi screening in mammal revealed new sleep-related genes
S. Brown (Zurich, CH)

177 **Long- and short-term molecular consequences of sleep loss in mice**
C.N. Hor, J. Yeung, M. Jan, Y. Emmenegger, J. Hubbard, F. Naef, P. Franken (Lausanne, CH)

178 **The gating of sleep by motivated behavior**
M. Lazarus (Tsukuba, JP)

13.30 – 15.30 Oral Session

Sydney

Sleep in children and adolescents

Human Sleep Track

Chairs: R. Huber (Zurich, CH)
K. Hoedlmoser (Salzburg, AT)

O179 **Sleep mediates the association between school pressure, physical activity, screen-time and psychological distress in adolescents**
K. Dhondt, A. Vandendriessche, A. Ghekiere, J. Van Cauwenberg, B. De Clercq, A. Desmet, M. Verlogne, D. Benedicte (Ghent, BE)

O180 **Tracking infant development: links between sleep-wake behavior and gut bacteria beta-diversity**
S.F. Schoch, J.L. Castro-Mejía, B. Leng, W. Kot, &. Krych, D.S. Nielsen, S. Kurth (Zurich, CH; Copenhagen, Roskilde, DK)

O181 **Sleep in infancy and its relation to the symptoms of attention-deficit and hyperactivity disorder at age 5 years: a longitudinal study**
H. Huhdanpää, I. Morales Muñoz, A. Kylliäinen, O. Saarenpää-Heikkilä, E. Aronen, E.J. Paavonen (Helsinki, Tampere, FI)

O182 **Later school start times alleviate sleep deprivation and social jetlag in adolescent high school students**
A.M. Biller, C. Molenda, M. Vuori, T. Roenneberg, E. Winnebeck (Munich, DE)

O183 **Sleep-dependent memory consolidation in children with high-functioning autism spectrum disorder**
K. Zinke, E.-M. Kurz, A. Conzelmann, G.M. Barth, L. Ebbeler, D.K. Schenk, T.J. Renner, J. Born (Tübingen, DE)

O185 **Sleep-dependent memory consolidation enhancement from childhood to adolescence is related to developmental changes in sleep spindles and slow oscillations**
M. Hahn, A.-K. Joechner, D. Heib, G. Gruber, M. Schabus, K. Hoedlmoser (Salzburg, Vienna, AT)

O186 **During day and night: childhood psychotic-like experiences and nightmares**
M.E. Koopman-Verhoeff, K. Bolhuis, C.A.M. Cecil, D. Kocevska, F.C. Verhulst, M.P.C.M. Luijk, H. Tiemeier (Rotterdam, NL)

O187 **Slow wave activity topography predicts development of brain myelin in children**
M. Le Bourgeois, S. Deoni, D. Dean, S. Kurth (Boulder, Providence, Wisconsin, US; Zurich, CH)

O188 **Beneficial effects of a lifestyle intervention program on C-reactive protein: impact of cardiorespiratory fitness in obese adolescents with sleep-related disorders**
J. Roche, L. Isacco, F. Perret, G. Dumoulin, V. Gillet, F. Mougin (Besançon, Franois, Salins Les Bains, FR)

O188a **The impact of the teacher-led, classroom-based, sleep education programme on adolescent sleep in UK schools: the Teensleep study**
R. Sharman, G. Illingworth, R. Foster, C. Espie, C.-J. Harvey (Sleep and Circadian Neuroscience Institute, Nuffield Department of Clinical Neurosciences, University of Oxford, Oxford, UK)

13.30 – 15.30 Oral Session

Singapore

Sleep in aging and dementia

Human Sleep Track

Chairs: G. Vandewalle (Liege, BE)
N. Gosselin (Montreal, CA)

O189 **Association of circadian sleep-wake regulation and brain structure in older adults: a multi-modal approach**
M. Deantoni, G. Hammad, M. Maire, M. Ali Bahri, C. Berthomier, C. Cajochen, C. Reichert, C. Schmidt (Liège, BE; Basel, CH; Paris, FR)

O190 **Impact of intraocular cataract lens replacement on circadian rhythms and sleep in older adults**
S. Chellappa, V. Bromundt, S. Frey, A. Steinemann, C. Schmidt, T. Schlote, D. Goldblum, C. Cajochen (Boston, US; Basel, Berne, CH; Liege, BE)

O191 **Pain, depression, dementia and their association with sleep in nursing home patients – a cross-sectional study**
K.M. Blytt, E. Flo, A. Erdal, B. Bjorvatn, B. Husebo (Bergen, NO)

O192 **Sleep, orexin and β-amyloid metabolism in obstructive sleep apnea syndrome and Alzheimer's disease**
C. Liguori, N.B. Mercuri, F. Izzi, M. Nuccetelli, A. Cordella, S. Bernardini, F. Placidi (Rome, IT)

O193 **Arousals during sleep are associated with brain tau and amyloid-β burden in healthy older adults**
D. Chylinski, F. Rudzik, D. Coppieters 't Wallant, M. Van Egroo, V. Muto, J. Narbutas, P. Villar González, G. Besson, E. Lambot, S. Laloux, C. Hagelstein, P. Ghaemmaghami, C. Degueldre, C. Berthomier, P. Berthomier, M. Brandewinder, C. Schmidt, P. Maquet, E. Salmon, C. Philips, M.A. Bahri, C. Bastin, F. Collette, G. Vandewalle (Liège, BE; Basel, CH; Paris, FR)

O194 **Sleep efficiency and electroencephalographic patterns in midlife are associated with cognitive change over the adult life course**
M. Waser, M.J. Lauritzen, B. Fagerlund, M. Osler, E.L. Mortensen, H.B.D. Sørensen, P. Jennum (Copenhagen, Frederiksberg, Glostrup, Kgs. Lyngby, DK)

O195 **A polysomnographic sleep and resting state fMRI connectivity study in the general population**
T.S. Lysen, H.I. Zonneveld, R.L. Muetzel, M.A. Ikram, M.W. Vernooij, H. Tiemeier (Rotterdam, NL)

O196 **Changes in slow waves density: a matter of aging and sex or an inaccurate detection?**
T. Rosinvil, J. Bouvier, J. Dubé, M. Bouchard, P.-O. Gaudreault, M. El Gewely, J. Carrier, J.-M. Lina (Montréal, CA)

O197 **Change in sleep duration at retirement: a longitudinal study using objective assessments**
J. Garefelt, S. Gershagen, L. Platts, H. Westerlund, G. Kecklund (Stockholm, SE)

O198 **Objectively measured sleep disturbances are associated with reduced microstructural integrity of white matter. A prospective cohort study in middle-aged and older persons**
D. Kocevska, H. Tiemeier, T.S. Lysen, M.W. Vernooij, A.I. Luik (Rotterdam, NL; Oxford, UK)

13.30 – 15.30 Joint Symposium ESRS – SSSSC

Osaka

General Track

Chairs: W. McNicholas (Dublin, IE)
M. Hatzinger (Solothurn, CH)

Neuroimaging of sleep regulation circuits
K. Spiegelhalder (Freiburg, DE)

199 **Dreaming and consciousness**
F. Siclari (Lausanne, CH)

Towards a neuroscience of insomnia
E. Van Someren (Amsterdam, NL)

200 **Sleep biomarkers in insomnia and depression**
T. Mikoteit, M. Hatzinger, A. Steiger, M. Pawlowski (Solothurn, CH; Munich, DE)

15.30 – 15.45 Coffee Break

15.45 – 17.15 Hot Topic Symposium & Closing Session

San Francisco

General Track

Chairs: C. Cajochen (Basel, CH)
W. McNicolas (Dublin, IE)

Hot Topic Syposium

Sleep duration and mortality – Does weekend sleep matter?
T. Åkerstedt (Stockholm, SE)

Quantitative phosphoproteomic analysis of the molecular substrates of sleep need
Q. Liu (Dallas, US)

ER lipid defects in neuropeptidergic neurons impair sleep patterns in Parkinson's Disease
J.S. Valadas (Leuven, BE)

Closing session including Best poster award

Posters

Posters are displayed and presented in three different sessions at the following times. Meeting point for the Poster walks is always the first poster of the given walk.

Poster Session 1
Wednesday, 26 September 2018

Poster viewing: 11.00 – 12.00 & 13.00 – 13.30
Poster walks: 12.00 – 13.00

Cellular, molecular biology & genetics *(Chair: G. Zoccoli)*	P001-P016
Dreaming *(Chair: F. Siclari)*	P017-P029
Sleep physiology 1 *(Chair: A. Adamantidis)*	P030-P047
Chronobiology 1 *(Chair: K. Porcheret)*	P048-P066
Behavior 1 *(Chair: C. Reis)*	P067-P084
Learning, memory & cognition 1 *(Chair: G. Ficca)*	P085-P098
Methodology & computation 1 *(Chair: P. Achermann)*	P099-P117
Breathing disorders 1 *(Chair: R. Khatami)*	P118-P136
Breathing disorders 2 *(Chair: J. Haba-Rubio)*	P137-P155
Insomnia 1 *(Chair: K. Spiegelhalder)*	P156-P173
Insomnia 2 *(Chair: L. Palagini)*	P174-P191
Hypersomnia 1 *(Chair: L. Nobili)*	P192-P205
Neurological disorders 1 *(Chair: C. Nissen)*	P206-P222
Psychiatric & behavioural disorders 1 *(Chair: M. Hatzinger)*	P223-P238
Sleep & aging 1 *(Chair: R. Winsky-Sommerer)*	P239-P251
Healthcare services & education *(Chair: D. Pevernagie)*	P252-P267

Poster Session 2
Thursday, 27 September 2018

Poster viewing: 11.00 – 12.00 & 13.00 – 13.30
Poster walks: 12.00 – 13.00

Sleep & aging 2 *(Chair: L. Korostovtseva)*	P268-P280
Biochemistry & neurobiology 1 *(Chair: P.-H. Luppi)*	P281-P293
Sleep physiology 2 *(Chair: G. Zoccoli)*	P294-P309
Chronobiology 2 *(Chair: G. Vandewalle)*	P310-P328
Behavior 2 *(Chair: T. DeBoer)*	P329-P346
Learning, memory & cognition 2 *(Chair: K. Porcheret)*	P347-P358
Sleep deprivation 1 *(Chair: R. Huber)*	P359-P373
Methodology & computation 2 *(Chair: P. Achermann)*	P374-P390
Breathing disorders 3 *(Chair: O. Polo)*	P391-P409
Breathing disorders 4 *(Chair: P. Jennum)*	P410-P428
Insomnia 3 *(Chair: M. Manconi)*	P429-P446
Hypersomnia 2 *(Chair: M. Schmidt)*	P447-P460
Neurological disorders 2 *(Chair: C. Baumann)*	P461-P477
Medical disorders 1 *(Chair: R. Heinzer)*	P478-P493
Psychiatric & behavioral disorders 2 *(Chair: C. Nissen)*	P494-P509
Paediatrics 1 *(Chair: A. Datta)*	P510-P526

Poster Session 3
Friday, 28 September 2018

Poster viewing: 11.00 – 12.00 & 13.00 – 13.30
Poster walks: 12.00 – 13.00

Medical disorders 2 *(Chair: R. Heinzer)*	P527-P542
Psychiatric & behavioral disorders 3 *(Chair: C. Nissen)*	P543-P558
Paediatrics 2 *(Chair: S. Kurth)*	P559-P574
Sleep and gender *(Chair: R. Winsky-Sommerer)*	P578-P589
Biochemistry & neurobiology 2 *(Chair: M. Tafti)*	P590-P603
Chronobiology & circadian rhythms 3 *(Chair: G. Vandewalle)*	P604-P620
Learning, memory and cognition 3 *(Chair: G. Ficca)*	P621-P632
Sleep deprivation 2 *(Chair: T. DeBoer)*	P633-P648
Methodology & computation 3 *(Chair: A. Adamantidis)*	P649-P667
Breathing disorders 5 *(Chair: L. Grote)*	P668-P685
Breathing disorders 6 *(Chair: P. Jennum)*	P686-P701
Insomnia 4 *(Chair: D. Riemann)*	P702-P719
Parasomnias *(Chair: L. Nobili)*	P720-P738
Movement disorders *(Chair: B. Högl)*	P739-P757

Meeting point for the Poster walks is always the first poster of the given walk.

Session	Date of Poster Session	Poster Mounting Time	Poster Removal Time
1	**Wednesday,** 26 September	08.00 – 09.00	18.30 – 19.00
2	**Thursday,** 27 September	08.00 – 09.00	17.30 – 18.00
3	**Friday,** 28 September	08.00 – 09.00	15.30 – 16.00

Presenters are kindly requested to stand by their poster during the Poster viewing. The mounting and removal times are to be strictly adhered to. If the poster has not been removed by the end of the allocated removal time, it will be disposed by congress staff (Posters can be collected only during the congress).

Material to mount the posters will be available at the poster desk in the poster area.

Networking Evening

Tuesday, 25 September 2018, 19.00 – 20.30

All participants and exhibitors are kindly invited to the Networking Evening, which will take place at the congress centre. After a first exciting day of science and education at the congress, it is time to enjoy a relaxed atmosphere to network with your colleagues and friends.

Costs are included in the registration fee. Please make sure to wear your badge.

Sportive Networking Event

Wednesday, 26 September 2018, 20.00 – 21.30

As a tradition of the ESRS congresses, the football match will take place in Basel, on Wednesday, 26 September 2018, starting at 20.00.

As a team, you will drive together to the football field, located in the beautiful suburb Riehen. By train it's just a 15' minutes' drive.

Let's continue the World Cup in Basel and help your time to bring the ESRS soccer trophy 2018 home. You decide if you play for the "North" or the "South", depending on whether you associate with the North or the South of Europe (… or of the World). Just enter your name on the team list available in the registration area.

You do not want to play actively but would like to support your team? No problem, supporters are highly welcome.

Meeting point will be 19.30 in the main entrance hall, in front of the registration. The match will not take place in the event of rain.

Networking Get-Together

Thursday, 27 September 2018, 20.00 – 01.00

Let's spend a great evening together at the "Alte Markthalle" in Basel. The Markthalle was built in 1929 and used for many years as a traditional market. Based on this earlier concept the hall was reopened a few years ago. Nowadays it is a prestigious location, where people meet, sit together and enjoy delicious food from all over the world.

© Markthalle Basel

Enjoy a great evening in this historical building, wander through the hall and enjoy the pleasant and vibrant atmosphere. A wide variety of food from Argentina, Afghanistan, Thailand, India, Caribbean, Greece and Local food, to name just a few options, are served here. You cannot decide on one food? No problem, try as many as you like. Spend the evening by meeting interesting people and even hitting the dancefloor in the lounge.

© Markthalle Basel

Costs: CHF 65.- (including food and two free drinks)

Abstract Publication
All accepted abstracts are published as an electronic supplement to Journal of Sleep Research (JSR), the official journal of the ESRS.

Awards
The European Science Award will be announced during the Opening ceremony on Tuesday, 25 September 2018, 17.00.
The Best Poster Award will be announced during the Closing ceremony on Friday, 28 September 2018, 16.45.

Badges
Access to all scientific and networking events will only be possible with your personal badge, which you will receive at the badge printing stations if your registration is fully paid. All participants are requested to wear their name badge throughout the congress.
If you forget your badge, we can reprint it for a deposit of CHF 30.00. The deposit will be returned once you show that you still have both badges, of which we will keep one. If you have lost your badge or do not show both badges, CHF 30.00 will be charged.

Scanning of badges: Participants are not obliged to allow exhibitors to scan their badge in the exhibition area or when entering an industry symposia. Participants must show their badge for proof of access rights, but do not need to allow a company to scan it. With allowing a company to scan, you acknowledge that your registration details will be forwarded to the exhibitor.

Certificates
Certificates of attendance indicating the CME credits are available as from Thursday, 27 September 2018, 13:00, at the self print stations.

Cloakroom
A cloakroom is available in the congress centre next to the Secretariat during the registration opening hours.

CME Accreditation
The 24th Congress of the European Sleep Research Society, Basel, Switzerland, 25/09/2018–28/09/2018 has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 28 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.
Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 CreditsTM. Information on the process to convert EACCME® credit to AMA credit can be found at www.ama-assn.org/education/earn-credit-participation-international-activities.

Live educational activities, occurring outside of Canada, recognised by the UEMS-EACCME® for ECMEC®s are deemed to be Accredited Group Learning Activities (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada.

The CME accreditation is valid for the main congress programme and the teaching courses only and does not cover the company-sponsored satellite symposia.

Coffee Breaks
Morning and afternoon coffee breaks are included in the registration fee and are served in the exhibition area. Please refer to the "Programme Overview" for the timings.

ESRS
Throughout the meeting, ESRS staff will be available at the ESRS booth to answer any questions you may have or to deal with any matters concerning the ESRS Society.

The ESRS Business meeting takes place on Thursday, 27 September 2018, 17.45 – 19.45 in lecture hall Montreal.

Evaluation
After the congress, you will receive an email with a request to fill in an online survey. Please take a moment to complete the questionnaire. Your answers will be used to evaluate the scientific content of the programme in order to continuously improve it for future meetings.

Exhibition Opening Hours

Tuesday,	25 September 2018	19.00 – 20.30
Wednesday,	26 September 2018	10.00 – 17.00
Thursday,	27 September 2016	10.00 – 17.00
Friday,	28 September 2016	10.00 – 17.00

Insurance
The congress organisers cannot accept liability for personal injuries sustained, or for loss or damage of property belonging to conference participants, either during, or as a result of the meeting. Please check the validity of your own insurance.

Language
The official language of the congress is English. No simultaneous translation will be provided. The national language of Switzerland are German/French/Italian.

Lunch
Tickets for lunch boxes were available to purchase prior to the conference for CHF 16.- per day. Participants who have ordered lunch will be scanned with their badge at the lunch catering station in order to receive their lunch box. No lunch tickets can be bought onsite. Lunch will be served in the exhibition area. Please refer to the "Programme Overview" for the times.

Registration / Secretariat Opening Hours

Tuesday,	25 September 2018	08.00 – 19.30
Wednesday,	26 September 2018	08.00 – 19.00
Thursday,	27 September 2018	08.00 – 18.30
Friday,	28 September 2018	08.00 – 17.00

Responsibility
The participant acknowledges that she / he has no right to lodge damage claims against the organisers should the holding of the congress be hindered or prevented by unexpected political or economical events or generally by „force majeure", or should the non-appearance of speakers or other reasons necessitate programme changes. With her / his registration, the participant accepts this provison.

By accepting the general terms and conditions, the participant declares that she / he agrees to its personal and company data being processed by Congrex Switzerland, may be forwarded to the sponsors and exhibitors of the congress and that this data may be used for information purposes on congresses and events in related fields organised by Congrex Switzerland. In the opposing case, the participant notifies Congrex Switzerland in written within 5 working days after the registration.

Speakers' Service Centre (SSC)
The Speakers' Service Centre (SSC) is connected to all lecture halls and is located on the 2nd floor (hall 4.2) in room Nairobi. All speakers are asked to **hand in their PowerPoint presentations at the SSC *at least 2 hours before*** the start of their lecture.

Venue
Congress Center Basel
Messeplatz 21
4058 Basel / Switzerland
http://www.congress.ch

Wi-Fi
Free Wi-Fi is available throughout the congress centre during the congress.

SSID: congress_center_basel
User ID: 2480245422
Password: 9982

Satellite Symposia / Wednesday, 26 September 2018

12.15 – 13.15 Satellite Symposium — Sydney

sponsored by Philips

Acoustical enhancement of slow wave sleep

Enhancing slow wave sleep
P.C. Zee (Chicago, US)

18.40 – 19.40 Satellite Symposium — Montreal

sponsored by SomnoMed AG

New evidence for Continuous Open Airway Therapy (COAT) in OSA

Speaker Information:
Jagdeep Bijwadia MD MBA
Assistant professor University of MN
Division of Pulmonary Critical Care and Sleep
Chair of Advisory Board SomnoMed

18.40 – 19.40 Satellite Symposium — Osaka

sponsored by Toshiba
(including networking)

Sleep and circadian rhythms from the viewpoint of light quality

Effects of light on human sleep, alertness and mental effort
C. Cajochen (Basel, CH)

Specctrum ad a factor to describe the quality of light
O. Stefani (Basel, CH)

The potential of circadian lighting in elderly homes
M. Münch (Berlin, DE)

TRI-R LED Spectrum technology designed for circadian rhythm
K. Kobayashi (Yokohama, JP)

Q & A

Acknowledgements

The ESRS Board expresses its thanks and appreciation to all those who are generously contributing to the success of the ESRS 2018 congress.

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Satellite Symposia / Thursday, 27 September 2018

13.05 – 14.05 Satellite Symposium Sydney

sponsored by Nox Medical

Beyond the AHI
Chair: W. McNicholas (Dublin, IE)

13.05 – 14.05 Satellite Symposium Singapore

sponsored by Jazz Pharmaceuticals
A potential new treatment for the management of excessive sleepiness in narcolepsy and obstructive sleep apnoea

Chair: G.J. Lammers (Heemstede, NL)

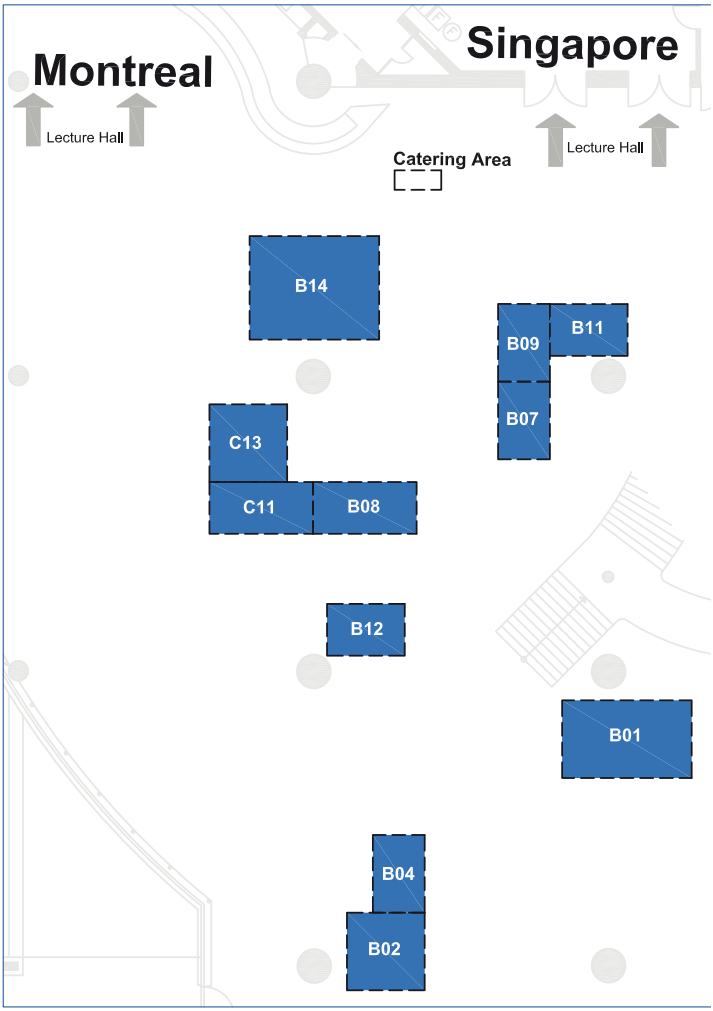
A potential new wake-promoting agent: what do we know?
M. Tafti (Lausanne, CH)

Efficacy of solriamfetol on excessive sleepiness in narcolepsy and in obstructive sleep apnoea
Y. Dauvilliers (Montpellier, FR)

Maintenance of efficacy and safety of solriamfetol on excessive sleepiness in narcolepsy and in obstructive sleep apnoea
G. Mayer (Marburg, DE)

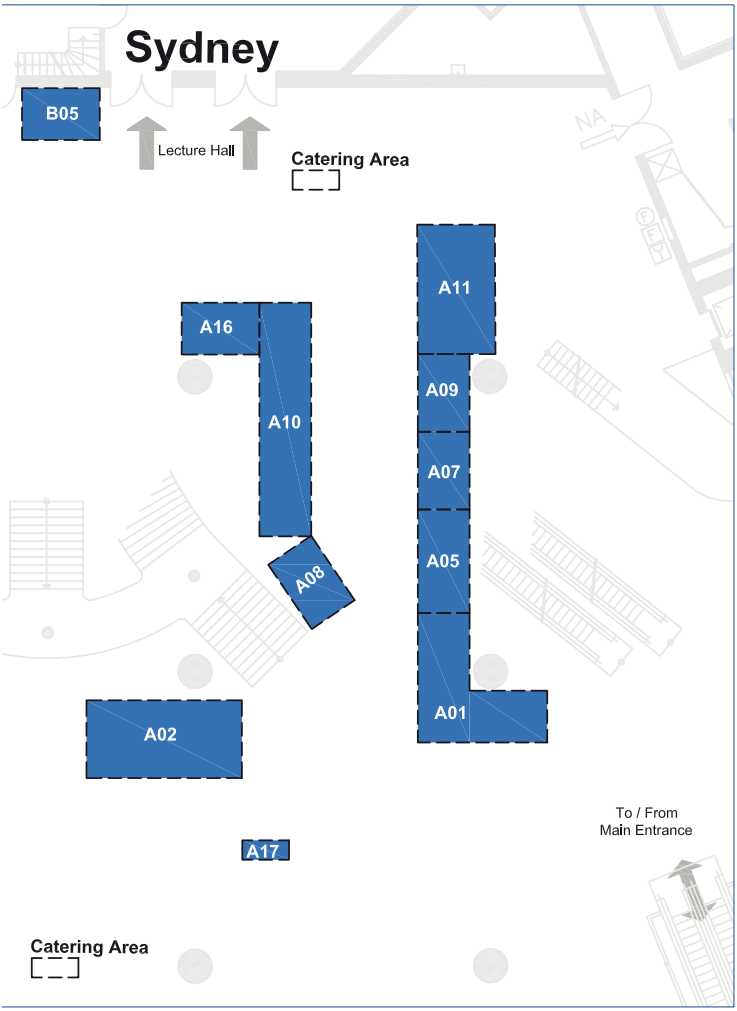
Conclusion
G.J. Lammers (Heemstede, NL)

Exhibition Floor Plan



List of Exhibitors

Stand No	Company name
A10	Bioprojet Pharma
C11	Brain Products
B09	CamNtech
B02	Cidelec
A05	Compumedics Europe
B05	Ectosense
A17	Hypnodyne
B11	Karger
C13	Kinpo Electronics Inc.
B12	Lucimed
B04	natus neuro
A02	Nox Medical
A08	Phasya
B14	Phillips



B08	Physip
A11	ResMed
A09	Sleep multimedia
B07	SomnoMed
A01	SOMNOmedics GmbH
A07	Toshiba Materials
A16	Viewpoint
B01	VIVISOL

Exhibition Dates and Hours

Wednesday, 26 September 2018	10.00 – 17.00
Thursday, 27 September 2018	10.00 – 17.00
Friday, 28 September 2018	10.00 – 17.00

For your Notes

For your Notes

25th Congress of the

European Sleep Research Society

Seville, Spain I 22 – 25 September 2020

Save the Date

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