

# International Symposium on Somnolence, Vigilance, and Safety 2016 (SomnoSafe 2016)

Brussels, Belgium - 21-23 February 2016

## Program & schedule

All presentation durations (e.g. 20 min) include time for optional Q&A and 2 min for transition between speakers.

Speakers are underlined.

The organizers reserve the right to make changes to this program & schedule at any time.

All activities take place at "Brussels Hilton Grand Place" hotel unless noted otherwise.

### DAY 0 – Sunday, 21 February 2016 – SomnoSafe

18:00 - 20:30 **Welcome and registration** (at "Brussels Hilton Grand Place" hotel)

18:30 - 19:30 **Welcome reception** (at "Brussels Hilton Grand Place" hotel)  
Featuring an assortment of complimentary drinks including Belgian beers (with the possibility for attendees to continue on their own).

### DAY I – Monday, 22 February 2016 – SomnoSafe

08:15 - 18:00 **Welcome and registration** (at "Brussels Hilton Grand Place" hotel)

#### AM

09:00 - 09:45 (45 min) **Session I-1: Effects of alcohol and energy drinks on vigilance**

- Chairs: Clémentine François (University of Liège, Belgium), Jacques G. Verly (University of Liège, Belgium)
  - (05 min) Welcome address, and overview of SomnoSafe and of the day's program, Jacques G. Verly (University of Liège, Belgium)
  - (20 min) - Interindividual variabilities in cognitive performance degradation after alcohol consumption and sleep loss are related, Eva-Maria Elmenhorst, Sibylle Benderoth, Martin Vejvoda, Jürgen Wenzel (German Aerospace Center (DLR), Germany), Daniel Aeschbach (German Aerospace Center (DLR), Germany) (Brigham and Women's Hospital, Harvard University, USA)
  - (20 min) - The effect of consuming an energy drink on lapses of attention during prolonged

simulated highway driving,

[Aurora J.A.E. Van de Loo](#), [L Mooren](#), [Adriana C. Bervoets](#) (Utrecht University, The Netherlands), [Johan Garssen](#) (Utrecht University & Nutricia Research, The Netherlands), [Thomas Roth](#) (Henry Ford Health System, USA), [Joris C. Verster](#) (Utrecht University, The Netherlands) (Swinburne University, Australia)

09:45 - 10:15 (30 min) **Keynote presentation:** Questions on narcolepsy, hypersomnolence, and driving issues,

[Markku Partinen](#) (Helsinki Sleep Clinic, Finland)

- Chair: Clémentine François (University of Liège, Belgium)

10:15 - 10:55 (40 min) **Coffee break**

10:55 - 11:25 (30 min) **Keynote presentation:** Perceived sleepiness and its relevance in sleepy driving.

[Torbjörn Åkerstedt](#) (Karolinska Institute, Sweden)

- Chair: Jacques G. Verly (University of Liège, Belgium)

11:25 - 12:25 (60 min) **Session I-2: Effect of drugs and sleep disorders on vigilance; neuroscience**

- Chairs: Clémentine François (University of Liège, Belgium), Jacques G. Verly (University of Liège, Belgium)
  - (20 min) - Lapses during on-road driving and their relevance to traffic safety: next day effects of hypnotic drugs, [Joris C. Verster](#) (Utrecht University, The Netherlands) (Swinburne University, Australia), [Aurora J.A.E. Van de Loo](#) (Utrecht University, The Netherlands), [Thomas Roth](#) (Henry Ford Health System, USA)
  - (20 min) - Monitoring sleep disordered breathing as a frequent cause for sleepiness, [Thomas Penzel](#), [Martin Glos](#), [Christoph Schöbel](#) (Charité Universitätsmedizin Berlin, Germany), [Niels Wessel](#) (Humboldt University Berlin, Germany), [Ingo Fietze](#) (Charité Universitätsmedizin Berlin, Germany)
  - (20 min) - Multivariate assessment of recent history and environment improves assessment of sleepiness, [Bart te Lindert](#), [Jessica Bruijtel](#), [Wisse van der Meijden](#) (Netherlands Institute for Neuroscience, The Netherlands), [Eus Van Sommeren](#) (Netherlands Institute for Neuroscience & VU University and Medical Center, Amsterdam, The Netherlands)

**NOON**

12:25 - 13:40 (75 min) **Lunch break**

**PM**

13:40 - 14:40 (60 min) **Session I-3: Drowsiness and polysomnographic signals (part 1)**

- Chairs: Thomas Penzel (Charité Universitätsmedizin Berlin, Germany), Clémentine François (University of Liège, Belgium)
  - (20 min) - Extraction of alertness/sleepiness components from the EEG spectrum, [Arcady A. Putilov](#), [Olga G. Donskaya](#) (Research Institute for Molecular Biology and Biophysics, Novosibirsk, Russia)

- (20 min) - Automatic detection of sleep episodes in long-term EEG recordings, [Alexander Malafeev](#) (University of Zürich & ETH Zürich, Switzerland), [Aleksandra Wierzbicka](#), [Adam Wichniak](#) (Institute of Psychiatry and Neurology in Warsaw, Poland), [Peter Achermann](#) (University of Zürich & ETH Zürich, Switzerland)
- (20 min) - Automatic detection of microslepp episodes based on occipital EEG derivation, [Jelena Skorucak](#) (University of Zürich & ETH Zürich, Switzerland), [David Schreier](#) (University Hospital Bern, Switzerland), [Alexander Malafeev](#) (University of Zürich & ETH Zürich, Switzerland), [Johannes Mathis](#) (University Hospital Bern, Switzerland), [Peter Achermann](#) (University of Zürich & ETH Zürich, Switzerland)

14:40 - 15:10 (30 min) **Keynote presentation:** How to evaluate fitness to drive in sleepy patients, [Pierre Philip](#) (University Hospital Bordeaux, France)

- Chair: Clémentine François (University of Liège, Belgium)

15:10 - 15:40 (30 min) **Coffee break**

15:40 - 16:10 (30 min) **Keynote presentation:** Wearables at work: a user risk assessment and remediation system, [Matt Kenyon](#) (Torvec, Inc., USA)

- Chair: Jacques G. Verly (University of Liège, Belgium)

16:10 - 16:50 (40 min) **Session I-4: Drowsiness and polysomnographic signals (part 2)**

- Chairs: Richard J. Hanowski (Virginia Tech Transportation Institute, USA), Jacques G. Verly (University of Liège, Belgium)
  - (20 min) - Automated EEG artifacts handling for driver sleepiness monitoring, [Shaibal Barua](#), [Shahina Begum](#), [Mobyen Uddin Ahmed](#) (Mälardalen University, Sweden), [Christer Ahlström](#) (The Swedish National Road and Transport Research Institute (VTI), Sweden)
  - (20 min) - Development and test of an automated reference approach for quantifying drowsiness using polysomnographic signals, [Clémentine François](#), [Vincent Bosch](#), [Quentin Massoz](#) (University of Liège, Belgium), [Baudouin Fortemps de Loneux](#), [Robert Poirrier](#) (University Hospital of Liège, Belgium), [Jacques G. Verly](#) (University of Liège, Belgium)

16:50 - 17:20 (30 min) **Keynote presentation:** Managing sleep-related crash risk: lessons from NTSB investigations, [Jana Price](#) (National Transportation Safety Board (NTSB), USA)

- Chair: Jacques G. Verly (University of Liège, Belgium)

17:20 **End of Day I of SomnoSafe 2016**

## Evening

19:00 - 22:00 **Banquet** (at restaurant "La Chaloupe d'Or", Grand'Place 24-25, 1000 Brussels) - For those who have registered for it.



La Chaloupe d'Or, Grand-Place, Brussels, Belgium

## DAY II – Tuesday, 23 February 2016 – SomnoSafe

08:00 - 16:00 **Welcome and registration** (at "Brussels Hilton Grand Place" hotel)

### AM

09:00 - 09:55 (55 min) **Session II-1: Drowsiness, ageing, performance, prediction**

- Chairs: Quentin Massoz (University of Liège, Belgium), Jacques G. Verly (University of Liège, Belgium)
  - (05 min) Welcome address, and overview of SomnoSafe and of the day's program, [Jacques G. Verly](#) (University of Liège, Belgium)
  - (20 min) - A priori self-assessed sensitivity to sleep deprivation correlates with individual cognitive performance impairment during prolonged wakefulness, [Eva Hennecke](#), [Eva-Maria Elmenhorst](#) (German Aerospace Center (DLR), Germany), [David Elmenhorst](#), [Andreas Bauer](#) (Research Center Jülich, Germany), [Daniel Aeschbach](#) (German Aerospace Center (DLR), Germany)
  - (15 min) - Healthy ageing at work, [Marlon de Jong](#), [Monicque M. Lorist](#) (University of Groningen, The Netherlands)
  - (15 min) - Prediction of future values of the eye PERCLOS based on its past values, with application to drowsy driving, [Pouyan Ebrahimbabaie](#), [Jacques G. Verly](#) (University of Liège, Belgium)

09:55 - 10:25 (30 min) **Keynote presentation:** Preliminary investigation of motorcoach driver drowsiness using a naturalistic driving method, [Richard J. Hanowski](#), [Rebecca L. Hammond](#), [Susan A. Socolich](#) (Virginia Tech Transportation Institute, USA)

- Chair: Jacques G. Verly (University of Liège, Belgium)

10:25 - 11:00 (35 min) **Coffee break**

11:00 - 11:30 (30 min) **Keynote presentation:** Drowsy driving: measurement, mitigation, and policy making, [Hans P.A. Van Dongen](#) (Washington State University, USA)

- Chair: Clémentine François (University of Liège, Belgium)

11:30 - 12:25 (55 min) **Session II-2: Drowsiness, performance, prediction, 3D sensing**

- Chairs: Clémentine François (University of Liège, Belgium), Jacques G. Verly (University of Liège, Belgium)
  - (15 min) - Prediction of future values of a level of drowsiness derived from images of an eye based on its past values, with application to drowsy driving, [Pouyan Ebrahimbabaie](#), [Jacques G. Verly](#) (University of Liège, Belgium)
  - (20 min) - Investigating fatigue offshore: the 3/4 dip, [Vanessa Riethmeister](#), [Sandra Brouwer](#), [Ute Bültmann](#) (University of Groningen, The Netherlands)
  - (20 min) - Preliminary development and test of a new automatic drowsiness quantification system using range and intensity images obtained from a dashboard-mounted near-infrared 3D range sensor, [Quentin Massoz](#), [Thomas Langohr](#), [Jacques G. Verly](#) (University of Liège, Belgium)

**NOON**

12:25 - 13:40 (75 min) **Lunch break**

**PM**

13:40 - 14:40 (60 min) **Session II-3: Drowsiness and driving (part 1)**

- Chairs: Jana Price (National Transportation Safety Board (NTSB), USA), Jacques G. Verly (University of Liège, Belgium)
  - (20 min) - Sleep-related impairment at detecting changes in rural driving scenes, [Ashleigh J. Filtness](#) (Queensland University of Technology, Australia), [Vanessa Beanland](#), [Rhiannon Jeans](#) (The Australian National University, Australia)
  - (20 min) - The impact of external factors on driver sleepiness, [Christer Ahlström](#), [Anna Anund](#), [Carina Fors](#) (The Swedish National Road and Transport Research Institute (VTI), Sweden)
  - (20 min) - English validation of the attention-related driving errors scale (ARDES) and its correlates, [Daniela Barragan](#), [Daniel M. Roberts](#), [Caryll L. Baldwin](#) (George Mason University, USA)

14:40 - 15:10 (30 min) **Keynote presentation**: How technology makes the driver smarter, [Wolfgang K. Eppler](#), [Alex Mouzakitis](#) (Jaguar Land Rover, UK)

- Chair: Jacques G. Verly (University of Liège, Belgium)

15:10 - 15:40 (30 min) **Coffee break**

15:40 - 16:10 (30 min) **Keynote presentation**: Driver cognitive distraction by facial image analysis, [Jean-Philippe Thiran](#) (Swiss Federal Institute of Technology (EPFL), Switzerland)

- Chair: Jacques G. Verly (University of Liège, Belgium)

16:10 - 16:55 (45 min) **Session II-4: Drowsiness and driving (part 2)**

- Chairs: Hans P.A. Van Dongen (Washington State University, USA), Clémentine François (University of Liège, Belgium)
  - (20 min) - Indices of internal distraction during simulated driving and the sustained attention to response task,  
[Daniel M. Roberts](#), [Daniela Barragan](#), [Donald W. Tweedie](#) (George Mason University, USA), [Julia Cantwell](#), [Noah Lipshie](#) (Oberlin College, USA), [Caryl L. Baldwin](#) (George Mason University, USA)
  - (20 min) - The impact of sleepiness on human-machine interaction in driving environment, [Kristina Stojmenova](#), [Grega Jakus](#) (University of Ljubljana, Slovenia), [David Grogna](#), [Jacques G. Verly](#) (University of Liège, Belgium), [Jaka Sodnik](#) (University of Ljubljana, Slovenia)
  - (05 min) Closing words,  
[Jacques G. Verly](#) (University of Liège, Belgium)

16:55 - 17:30 (35 min) **Panel discussion: The future of real-time, automatic drowsiness monitoring for transportation (road, air,...)**

- Chair: Jacques G. Verly (University of Liège, Belgium)
- Panel members:
  - [Richard J. Hanowski](#) (Virginia Tech Transportation Institute, USA)
  - [Matt Kenyon](#) (Torvec, Inc., USA)
  - [Alex Mouzakis](#) (Jaguar Land Rover, UK)
  - [Jean-Philippe Thiran](#) (Swiss Federal Institute of Technology (EPFL), Switzerland)
  - [Hans P.A. Van Dongen](#) (Washington State University, USA)
  - [Jérôme Wertz](#) (Phasya, Belgium)

17:30 **End of Day II of SomnoSafe 2016**

17:30 **End of SomnoSafe 2016**

Thank you for your participation!