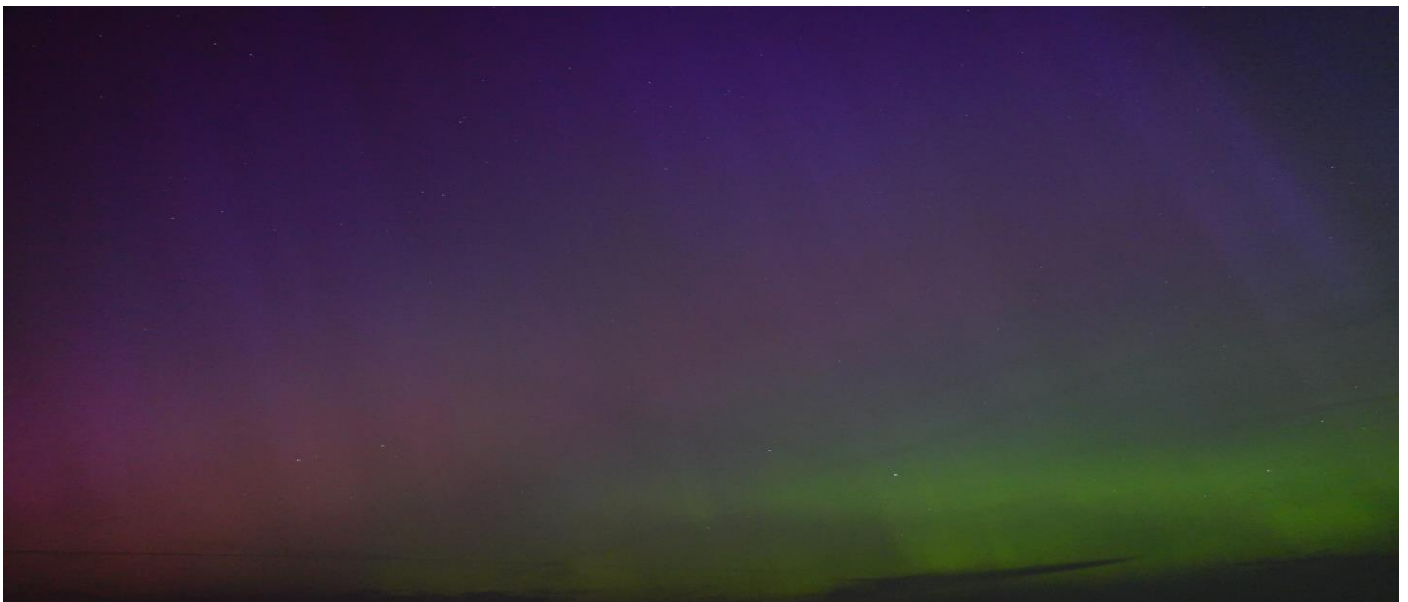


NSWO

Year in review

2022-2023



Northern lights (Aurora borealis) in The Netherlands, 11 May 2024. Photo by Michiel Slingerland ©



NEDERLANDSE VERENIGING VOOR SLAAP-WAAK ONDERZOEK

Foreword by the chair



Dear NSWO members,

As the newly appointed chair of the NSWO I am honoured to present the 2022-2023 NSWO Year in review, an overview of what has been going in the world of Dutch sleep and wake research and what the NSWO has to offer. I specially thank Karin van Rijn and Emma van Andel, editors of this newsletter, and of course also all other contributors.

The newsletter is a testimony to sleep and wake research in the Netherlands which is clearly blossoming. An impressive number of PhD dissertations were successfully defended in 2022 and 2023. Competition for our bi-annual Hilbert Kamphuisen dissertation prize and annual Piet Visser Poster prize was stiff, emphasizing the high quality of the research going on. Our spring and autumn symposia were well visited and SLAAP2023 had a higher number of attendees than ever before. In addition, the NSWO provided funding to multiple early career scientists to be able to attend conferences or visit research centres abroad in support of building their careers.

Many thanks to Ysbrand van der Werf, who successfully led the NSWO for the past 6 years. Grateful for his great work, I am excited to follow in his footsteps. With a largely new NSWO board, we will keep contributing to the position and future of sleep and wake research in the Netherlands. And with many exciting opportunities ahead this should not be a problem. In 2024, we will have our annual national symposia and Sleep Europe in Seville - the one before Sleep Europe comes to the Netherlands in 2026! We're also looking forward to further strengthen our good collaborations with other Dutch sleep societies as sleep wake research is truly multidisciplinary and excels when people and disciplines are brought together.

Annemarie Luik

Table of contents

Aims of the NSWO.....	4
NSWO Board.....	5
Leaving board members.....	6
Activities for members.....	7
Hilbert Kamphuisen dissertation prize 2022.....	8
Hora Est: Other dissertations and orations about sleep in 2022-2023.....	10
Young Talent Fund.....	11
Formulation of guidelines.....	12
Articles website.....	13
Piet Visser Poster prize.....	14
Spring and autumn symposia.....	16
Spring symposium 2022.....	16
Autumn symposium 2022.....	17
Spring symposium 2023.....	18
SLAAP2023.....	18

Aims of the NSWO

The NSWO (Dutch Society for Sleep-Wake Research) was founded in June 1990. The NSWO is an independent society consisting of and aimed at professionals in the field of sleep and sleep disorders. We bring together sleep researchers, physicians, and supporting staff working in the area of sleep and sleep disorders and promote the exchange of knowledge and expertise regarding the functions and mechanisms of sleep, including sleep disorders and their treatment.

Aims:

- Encouraging interaction and knowledge transfer between researchers and clinicians working with sleep and sleep disorders.
- Serving as a professional advisory body for the government, health care organisations and institutes.
- Providing information about sleep and sleep disorders to the general public in The Netherlands.
- Facilitating and promoting scientific research in the field of sleep.
- Maintaining contact with patient organisations and (international) scientific societies.

NSWO Board

2022

President	Ysbrand van der Werf
Secretary	Arthur Kurvers/Karin van Rijn (2 nd secretary)
Treasurer	Ellemarije Altena
Chairs:	
Young Scientists Committee	Jari Gool
Scientific Committee	Denise Bijlenga
Educational Committee	Niki Antypa
PR Committee	Karin van Rijn

2023

Ysbrand van der Werf
Karin van Rijn (2 nd secretary)
Ellemarije Altena
Jari Gool/Joyce Reesen
Denise Bijlenga
Niki Antypa
Karin van Rijn

At the general members assembly in November 2023 during SLAAP2023 in Papendal new board members were installed.

As of December 2nd, 2023, the board consists of:

2024

President	Annemarie Luik
Secretary	Sebastiaan Overeem
Treasurer	Karin van Rijn
Chairs:	
Young Scientists Committee	Joyce Reesen
Scientific Committee	Denise Bijlenga
Educational Committee	Max Laansma
PR Committee	Tom Bresser

Leaving board members

The board membership of the NSWO is voluntary and inherently transient. We would like to extend our gratitude to Jari Gool (Chair of the Young Scientists Committee), Niki Antypa (Chair of the Educational Committee), Ellemarije Altena (Treasurer), and Ysbrand van der Werf (President) as they bid farewell from our board. Their efforts have contributed to many successful symposia, an increasing level of professionalism within the NSWO, and securing the joint organization of the 28th Congress of the European Sleep Research Society (ESRS) in Maastricht. We hope they enjoyed their time on the board and wish them much success in their next professional endeavours.



Jari Gool



Niki Antypa



Ellemarije Altena



Ysbrand van der Werf

Activities for members

- Promotion of research by providing financial support for PhD dissertations
- Organisation of lectures
- The Piet Visser Poster prize, annually
- The Hilbert Kamphuisen dissertation prize for best PhD dissertation, bi-annually
- The annual 'keynote' lecture by a leading scientist; the Rudi van den Hoofdakker lecture
- Various activities organised for and by young sleep researchers
- Formulation of guidelines for e.g. diagnosis and treatment of sleep disorders
- Organisation of the bi-annual SLEEP conference in collaboration with the SVNL (Sleep Medicine Society Netherlands)
- Contribution to education for sleep professionals through the ISMC and educational activities aimed at young researchers
- Communication with national and international societies: ESRS, ANSS, BSS, BASS, SVNL, WASM, and others
- [NSWO website](#)
- An up-to-date agenda with symposia, courses, PhD defences, etc. in the field of sleep science
- Granting the Young Talent Fund
- A reduced membership fee for young researchers

Hilbert Kamphuisen dissertation prize 2022

Every other year, a designated jury from the NSWO awards a PhD student with the Hilbert Kamphuisen dissertation prize for writing the best PhD dissertation.

Hilbert Kamphuisen (1931-2013) was professor of Clinical Neurophysiology at Leiden University. He was, together with the late [Guus DeClerck](#), one of the founders of the NSWO. With other colleagues he founded the sleep centre in The Hague that is to this day a well-established sleep centre in Haaglanden Medisch Centrum.

He was well-known as the “sleep professor” and gained [publicity](#) with his study about sleep on the North Pole. He was author of the book ‘Een hoofd vol slaap; over slapen, waken, dromen, snurken, slapeloosheid en andere slaapkwesties’.

The dissertation prize is named after this honorary member of the NSWO. All PhD students who are members of the NSWO and apply for a contribution towards the costs of publication of their thesis automatically apply for this award. The award consists of an honourable mention and a plaque. On this plaque is written ‘Hilbert Arie Cornelis Kamphuisen Prijs’ and the name of the winner. Al de Weerd wrote an [obituary](#) about Hilbert Kamphuisen.

In 2022, eight PhD dissertations published between 2020 and 2022 were nominated for this prize. The nominees were:

- [Maud de Feijter](#): Sleep and Mental Health in Middle-aged and Elderly Persons
- [Sjoerd J. van Hasselt](#): Studies on sleep patterns and sleep homeostasis in birds: an ecological approach
- [Lieke W.A. Hermans](#): Sleep structure & sleep perception in insomnia
- [Merel Nap - van der Vlist](#): Beyond the diagnosis: A PROactive approach to fatigue, daily life participation, and health-related quality of life in paediatric chronic disease
- [Gabriele Basso Papini](#): Taking the pulse: unobtrusive sleep apnea monitoring using cardiovascular features
- [Mojca K.M. van Schie](#): Attention please: vigilance in patients with excessive daytime sleepiness
- [Mink Schinkelshoek](#): The autoimmune hypothesis of narcolepsy - and its unexplored clinical features
- [Jana Thomas](#): SLOW WAVES: Assessing sleep and detrimental effects of sleep disruption on brain amyloid- β and cognitive function in shift workers

And the winner is...

Gabriele Basso Papini

for his dissertation "Taking the pulse: unobtrusive sleep apnea monitoring using cardiovascular features"!

Jury comments: The thesis is scientifically, clinically and socially relevant. It was also very well written, which made it a joy to read for the panel of judges.

CONGRATULATIONS TO GABRIELE!



Hora Est

OTHER DISSERTATIONS AND ORATIONS ABOUT SLEEP IN 2022-2023

PhD dissertations

- [Laura S. Belmon](#): Let them sleep, for when they are awake, they will move mountains
- [Margreet Harskamp-van Ginkel](#): Sleep and health during the first 1000 nights
- [Floortje Kanits](#): Sleep Safe: Evidence-based Prevention of Sudden Unexpected Death in Infancy in the Netherlands
- [Jeanne Leerssen](#): A neurobiological and clinical perspective on preventing depression with insomnia treatment
- [Angelina Santoso](#): Sleep quality in head and neck cancer patients
- [Ilona M.G. Schouwenaars](#): The Interplay Between Sleep and Daytime Functioning in Autistic Teenagers
- [Niek den Teuling](#): On approaches for clustering longitudinal data: With extensions for modeling therapy adherence of sleep apnea patients
- [Maaïke M. van Veen](#): On edge: night and day. Understanding the association between poor sleep and aggression
- [Yumeng Wang](#): Sleep and circadian rhythms: The effects of ketamine, caffeine and anthracyclines

Orations

- May 20th, 2022 - Prof. dr. Gert Jan Lammers: De slaap vatten.
- February 17th, 2023 - Prof. dr. Ghizlane Aarab: Slaapzorg(en) in de tandartspraktijk.

Young Talent Fund

The Young Talent Fund was awarded for the first time during the annual spring symposium in 2022. This fund of a maximum of €750 has been set up in collaboration with the Young Scientist Committee to give early-career NSW0 scientists the opportunity to attend conferences, courses, or another lab. This way, we hope to encourage the pursuit of knowledge and (inter)national collaborations.

There were as many as eight applications. Because of the high quality of all applications and to make this first edition extra special, the board decided to award all applications (for this one time only). Congratulations to all winners! They are:

- Veronique Vael
- Adrienne van der Hoeven
- Jingru Zhou
- Laura Pape
- Iris Huijben
- Joyce Reesen
- Eva van Heese
- Floor Hiemstra

Formulation of guidelines

The article 'Recommendations for the correct use of melatonin in clinical practice; Practical guidelines and expert opinion' has been published on the NSWO website.

We are proud to publish the result of the joint effort of the Task Force Melatonin consisting of members of the [NSWO](#), [Slaapgeneeskunde Vereniging Nederland](#) (SVNL; Sleep Medicine Society Netherlands), [Vereniging Kind en Slaap](#) (Society Child and Sleep), and the task force sleep-wake disorders of the [Nederlandse Vereniging voor Neurologie](#) (NVN; Dutch Society for Neurology).

The article concludes with a number of expert opinions:

- 1) Melatonin is a chronobiotic that acts on the functioning of the biological clock
- 2) Melatonin is a pharmaceutical drug, according to the [Inspectie Gezondheidszorg en Jeugd](#) (IGJ; Health and Youth Care Inspectorate) and should be covered by basic healthcare insurance.
- 3) DLMO measurement should be included in billable diagnostics.

The document (in Dutch) can be downloaded from the [NSWO website](#).



Aanbevelingen voor het juiste gebruik van melatonine in de klinische praktijk; Praktisch handvat en expert opinion.

Door de Werkgroep Melatonine, samengesteld vanuit Nederlandse Vereniging voor Slaap-Waak Onderzoek (NSWO), Slaapgeneeskunde Vereniging Nederland (SVNL), Vereniging Kind & Slaap, werkgroep Slaap Waak Stoornissen Nederlandse Vereniging voor Neurologie (NVN).

Auteurs (in alfabetische volgorde)

Myrthe Boss, Somnoloog-Neuroloog, Ziekenhuis Gelderse Vallei, Ede
Marijke Gordijn, Chronobioloog, Chrono@Work & Universiteit Groningen, Groningen
Jeanine Kamphuis, Psychiater, Universitair Centrum Psychiatrie, UMC Groningen
Irene Miedema, Somnoloog-Neuroloog, Ziekenhuis Gelderse Vallei, Ede
Floor van Oosterhout, Somnoloog-Chronobioloog, PA - SEIN expertisecentrum voor Slaapgeneeskunde, Heemstede
Angelique Pijpers, Somnoloog-Neuroloog, Centrum voor Slaapgeneeskunde Kempenhaeghe, Heeze
Sigrid Pillen, Somnoloog-Kinderneuroloog, Kinderslaapexpert BV, Mook
Karin van Rijn, Somnoloog-GZ psycholoog, SEIN expertisecentrum voor Slaapgeneeskunde, Zwolle
Annelies Smits, Somnoloog-Arts VG-, SEIN expertisecentrum voor Slaapgeneeskunde, Zwolle

Articles website

Susanne de Joode, medical journalist, interviews researchers for our website. Inspiration from daily news in the field of interest shapes the articles. Below is an overview of the articles published in 2022 and 2023 with links to the website. Note that the articles are in Dutch.

Tom de Boer, associate professor in the Neurophysiology group at LUMC, was one of the interviewees in April 2022. The subject is ['what does coffee do with one's sleep?'](#) Tom spoke about this at the 2022 autumn symposium as well.

Both senior and junior researchers are given the opportunity to tell more about their studies. In September 2022, two winners of the Young Talent Fund are interviewed about their research.

Laura Pape, PhD student at the department of Clinical Psychology at Leiden University, speaks about her study, an online sleep intervention called ['i-Sleep & BioClock'](#). The focus of this study is to improve sleep in students and to prevent psychological problems.

Joyce Reesen, PhD student at the Sleep and Cognition group of the Netherlands Institute for Neuroscience, tests the effectiveness of sleep intervention ['Betere nachten, betere dagen'](#) (Better nights, better days), focused on people with anxiety or PTSS and sleep problems.

Twice a year, in spring and autumn, the NSWO writes about [the shift to and from daylight saving time \(DST\)](#). The NSWO supports the [proposal](#) of implementing permanent time zones in the European Union. For the Netherlands, it is advised that the clock doesn't shift back after the time shift at the end of October. The aforementioned links include a graph for the advised time zone for the Netherlands; the Western European Time Zone.

Dr. Sjoerd van Hasselt, biologist and neuroscientist at the Faculty of Science and Engineering of the University of Groningen, tells more about his study on [sleep in barnacle geese](#). How do these geese sleep during their migration?

Dr. Laura Kervezee is chronobiologist and assistant professor at the LUMC and co-founder of the [BioClock consortium](#). She speaks about her research on [sleep in hospitals](#). Most people have poor sleep when hospitalised. Her study focuses on disruptions of the biological clock in hospital settings for both patients and staff.

Chronobiologist dr. Marijke Gordijn, researcher at the Faculty of Science and Engineering of the University of Groningen and founder of [Chrono@Work](#), tells more about the effects of daylight and artificial light sources such as smartphones and computers in a triptych: 1) [Does the light from smartphones keep us awake?](#) 2) [Better sleep? Get more light and more darkness at the right moment](#) and 3) [Adolescents, smartphones and sleep: what is wise?](#)

Piet Visser Poster prize

The Piet Visser Poster prize is annually awarded at the autumn symposium. The prize consists of a trophy and a monetary award of €500. Engraved on the trophy, a small bronze statue, is the motto 'Het hoogste nastreven': strive for the highest. The winner's name is engraved on the statue, joining the names of all previous winners.

The Piet Visser Poster prize is awarded by a designated panel of judges based on the scientific quality of the research and the poster presentation.

An Audience prize is also awarded to the poster with the most votes from the audience.

Piet Visser (1919-2009) was an honorary member of the NSWO and one of the founders of the society back in the day. He had a background in psychophysiology at the University of Amsterdam (UvA) at the Swammerdam Institute. He was convinced that a multi-disciplinary approach was the only way for psychophysiology to blossom. Disciplines involved in his lab were medicine, psychology, biology, engineering, and physics. His focus on sleep started in 1970, including dream research together with the methodology department.

Already in the 1970's, Piet Visser promoted the development of new measurement techniques, such as impedance and induction breathing and measuring core body temperature and oxygen. Piet Visser always emphasised the importance of integrating both physiological and psychological models. Under Piet's leadership, a sleep quality scale was developed, a scale that would later be revalidated in Groningen and renamed the 'Groningen Sleep Quality Scale'.

Piet Visser was very involved in the affairs of the NSWO until the end of his life and he enjoyed joining the meetings. At the autumn symposium in 2007 he was seen talking animatedly by the posters. Naming the poster prize after him fits well with the great amount of attention that Piet always had for young researchers.

Winni Hofman wrote an [obituary](#) about Piet Visser.



Gali Albalak won the Piet Visser Poster prize 2022 for her poster 'Setting your clock: associations between timing of objective physical activity and cardiovascular risk in the general population'.



Jeanne Leersen won the Audience prize 2022 for her poster 'Treating insomnia to prevent depression'.



Veronique Vael won the Piet Visser Poster prize 2023 for her poster 'The diagnostic value of a single nocturnal sleep-onset rapid eye movement (nSOREM) for narcolepsy'.



Peter Karel won the Audience prize 2023 for his poster 'The dark side of apnea: altered 24-hour melatonin secretion in obstructive sleep apnea (OSA) is disease severity dependent'.

Spring and autumn symposia

SPRING SYMPOSIUM 2022

The theme of the 2022 spring symposium was '[A translational view on sleep wearables](#)', which took place at Amsterdam VUmc. We delved into the realm of wearable technology for the measurement of sleep. Various interesting topics were discussed.

We started with a talk from Sjoerd van Hasselt who showed how accelerometer data can be used for predicting sleep in barnacle geese. Detailed measurements of head movements can accurately distinguish between sleep and wakefulness, but accuracy is lower for the distinction between NREM and REM sleep. Interestingly, the predictive strength of accelerometry as a proxy for sleep can vary across season which may be species-dependent. Overall, head accelerometry can be reliably used in studies when EEG measurements are not feasible, for instance in bird migration.

Following this, Sebastiaan Overeem discussed current developments in the field of wearables as a surrogate for the measurement of sleep. Advanced methods and algorithms demonstrate that the performance and accuracy of sleep staging based on these devices is improving, and clinical application may be within reach. However, caution is advised with consumer sleep trackers, as they have been tested mainly in healthy populations and operate on 'black-box', proprietary algorithms. Nonetheless, these technological advancements hold promise for the future of sleep research and clinical practice.

Next, Jerome Siegel took us through sleep in hunter-gatherers. He showed how wearables can be instrumental to collect unique data on sleep in populations far removed from Western and digitalised society.

After this, all speakers came together to discuss the current status and future trajectory of sleep wearables. From technological advancements to clinical integration, there was a dynamic exchange of ideas, opinions, and insights.

Finally, Sarah Schoch conducted a workshop on actigraphy. The basic principles were explained, and analysis tips were provided. Whether a novice or seasoned researcher, this workshop offered valuable insights into this essential tool for sleep research.

This spring symposium also marked the debut of the NSW Young Talent Funds, aimed at supporting early career scientists. Given the quality of the applications and to make this first edition extra special, the board (exceptionally) approved all 8 applications (see also page 11).

From foundational principles to cutting-edge technologies, the symposium provided a glimpse into the exciting future of sleep science.

AUTUMN SYMPOSIUM 2022

The 2022 autumn symposium '[The depths of sleep](#)' took place on November 25th at conference centre De Eenhoorn in Amersfoort. It was an afternoon filled with the most recent advances of sleep science taking place in the Netherlands (and beyond!). The day started with the general members meeting and came into full swing with the poster blitz session, in which a selection of poster presenters gave an elevator pitch of 1 minute to convince people to come and visit their poster later. This was followed by a delicious lunch and a poster session. With 24 posters spanning the full breadth of Dutch sleep research, it was a busy session and arguably a bit short; not only for the jury, who had the difficult task of selecting the winner of the coveted Piet Visser Poster prize, but also for the other attendees, who had the opportunity to vote for their favourite poster.

After lunch, the symposium was officially opened by the chair of the Scientific Committee, Denise Bijlenga. Next up in the program was a special session on if and how caffeine influences sleep, which included two speakers with rather opposing views on this topic, followed by a debate. First, Eva-Maria Elmenhorst from the DLR Institute of Aerospace Medicine in Germany gave a talk on how caffeine impacts deep sleep in humans. Next, Tom de Boer from the Leiden University Medical Center presented his work on the interaction between caffeine, sleep and the circadian system. During the debate, moderated by Sebastiaan Overeem, it became clear that the answer to the question whether caffeine influences sleep depends to a large extent on differences between individuals: their genetic make-up, their habitual intake of caffeine, and so on. Therefore, teasing apart these different factors requires more research.

Following a short break, it was time for the poster award ceremony. It had been a tough decision for the jury, but in the end a unanimous decision was reached: the Piet Visser Poster Prize was awarded to Gali Albalak, PhD candidate from the Leiden University Medical Center for her poster titled 'Setting your clock: associations between timing of objective physical activity and cardiovascular disease risk in the general population'. The audience award was awarded to Jeanne Leerssen for her poster titled 'Treating insomnia to prevent depression'. Congratulations to both Gali and Jeanne (see also page 14).

Next, there were three short talks by recent PhD graduates whose thesis was focused on sleep, followed by the highlight of the afternoon: Rob Henning, professor from the department of Clinical Pharmacology at UMC Groningen, gave a keynote lecture on hibernation in the animal kingdom and how a better understanding of this fascinating biological phenomenon can benefit patient care, for example in the case of hypothermia. The afternoon finished with drinks, snacks, and networking time.

SPRING SYMPOSIUM 2023

The 2023 spring symposium was themed '[Chronobiology meets sleep: from animal to human research](#)'. Biological rhythms, and their relation to sleep, were the focus of this edition of spring symposium, which was hosted in Leiden and organised in collaboration with the BioClock consortium.

The first talks delved into fundamental aspects of chronobiology, exploring molecular rhythms and their relation to sleep-wake behaviour, methodologies for studying these phenomena in human subjects, and the BioClock consortium (Laura Kervezee).

After the break, early-career researchers took the floor. Rick van Dorp talked about the photoperiod in developing mice and showed that it affects rest-activity cycles. Floor Heimstra discussed challenges for good sleep at the intensive care unit, and how circadian rhythms could give insights for improvement. Laura Pape presented results from a pilot trial of sleep and circadian interventions in university students.

Following this, an engaging panel discussion took place, focusing on the connections between chronobiology and sleep. One of the primary takeaways was the mutual dependency of both disciplines, underscoring their inseparable relationship.

The day was closed with an interactive chronobiology exercise: how to draw a phase response curve from actograms. For those not familiar with the chronobiology field, it provided useful exposure to interpreting such plots.

The symposium on chronobiology served as a compelling reminder for sleep researchers, highlighting the interconnectedness and significance of understanding both fields for advancing our understanding of sleep.

SLAAP2023

On November 29th and December 1st of 2023, the NSWO and SVNL organised the [SLAAP2023 congress](#) at Papendal. The famous Dutch hurdler Gregory Sedoc kicked off the conference with his keynote lecture. At the end of a day with a varied programme, there was plenty of time for networking and socialising around the dinner table and later on the dancefloor. The next morning, prof. Francesca Siclari took us on a journey through the dreaming brain and more interesting sessions followed.



Spring symposium 2022



Autumn symposium 2022



Gregory Sedoc at SLAAP2023
© Barbara Kieboom



Gert Jan Lammers & Ysbrand van der Werf
Chairs of SVNL and NSW0 at SLAAP2023
© Barbara Kieboom



Conference dinner SLAAP2023
© Barbara Kieboom

This newsletter is presented at the spring symposium on the 24th of May, 2024, in Nijmegen.

Many thanks to everyone who has contributed!

Karin van Rijn and Emma van Andel (editors)