

# IMSCOGS 2024 Bern Program

10th Annual Meeting of the International MS Cognition Society

September 2–3,  
2024  
Bern, Switzerland

Further details can  
be found on the  
[website](#)





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# Welcome

## **Dear colleagues and friends,**

On behalf of the International Multiple Sclerosis Cognition Society (IMSCOGS), the local hosts and organizers Iris-Katharina Penner and Andrew Chan and the IMSCOGS president Menno Schoonheim welcome you to Bern, Switzerland for the 10th Annual IMSCOGS meeting.

We are proud to make this event happen and have put together an informative, stimulating and cutting-edge program for the two-day conference. This year we will be looking at cognition in the context of brain health. In addition, we will perform a deep dive into the topic of smoldering MS and focus on digital assessment as well as artificial intelligence. Besides pathophysiology and assessment, we will spotlight on the tried and tested therapeutical options but also on promising new approaches. Finally, we will discuss the most important comorbidities in the context of cognitive impairment in MS.

Renowned experts will introduce each topic and present either their latest research or give overviews on existing evidence. CME points will be applied for the meeting.

On Monday evening we invite you to attend the conference dinner. Here we will have the opportunity for scientific exchange in a relaxed atmosphere in the beautiful city of Bern.

We are excited that you have decided to participate in the 10th IMSCOGS meeting in Bern. We wish you a memorable stay in the capital of Switzerland.

**Prof. Dr. Iris-Katharina Penner, PhD**

Local host and organizer

**Prof. Dr. med. Andrew Chan**

Local host and organizer

**Prof. Dr. Menno Schoonheim**

IMSCOGS president

# General information

## Date

Monday, September 2 until Tuesday, September 3, 2024

## Venue

Inselspital Bern, Auditorium Ettore Rossi  
 Julie-von-Jenner-Haus, Freiburgstrasse 19  
 3010 Bern  
 Switzerland

## Conference Website



## President IMSCOGS

Prof. Dr. Menno Schoonheim

## National committee

Prof. Dr. Iris-Katharina Penner, PhD

Prof. Dr. med. Andrew Chan

## IMSCOGS executive board

Prof. Dr. Bruno Brochet, MD	Bordeaux, France
Prof. Dr. Sarah A. Morrow MD, MS, FRCPC, FAAN	Calgary, Canada
Prof. Dr. Iris-Katharina Penner, PhD	Bern, Switzerland
Prof. Dr. Ralph H. B. Benedict, PhD, ABPP-CN	Buffalo, USA
Prof. Dr. John DeLuca, Ph.D., ABPP-RP	New Jersey, USA
Prof. Dr. Menno Schoonheim	Amsterdam, The Netherlands

### IMSCOGS steering committee

Prof. Dr. Maria Pia Amato	Florence, Italy
Dr. Laura Hancock, PhD, ABPP-CN	Ohio, USA
Prof. Dr. Hanneke Hulst	Leiden, The Netherlands
Prof. Dr. Dawn Langdon	London, UK
Prof. Dr. Sarah A. Morrow MD, MS, FRCPC, FAAN	Calgary, Canada
Prof. Dr. Friedemann Paul	Berlin, Germany
Prof. Dr. Aurélie Ruet	Bordeaux, France
Prof. Dr. ir. Guy Nagels	Brussels, Belgium

### Conference secretariat

Communication Department  
of Neurology, Inselspital  
Lara Baumgartner  
kommunikation.neuro@insel.ch

IMK Institut für Medizin und  
Kommunikation AG  
congress@imk.ch

### Opening hours Conference secretariat

Monday, September 2, 2024 08:00–17:30  
Tuesday, September 3, 2024 08:00–16:00

### Credits

We applied for credits from the following societies:

- SNG
- SGPP
- SVNP

## Conference Registration

Conference registration until August 26, 2024.

All information can be found on the [conference website](#).

## Conference fees (CHF)

Physicians, psychologists	290
Students, assistants, nurses	145
1-day registration physicians, psychologists	190
1-day registration students, assistants, nurses	95
Conference Dinner (value of 115.00 CHF)	70

## Registration fee includes

Two full conference days

(or only 1 conference day if 1-day registration is chosen)

- Admission to all scientific sessions
- Admission to the industrial exhibition
- Admission to the poster session
- Coffee and lunch breaks

## Terms and Conditions

Prepayment by credit card, TWINT or Paypal is mandatory. MasterCard, Visa and American Express are accepted. After successfully booking, each participant will receive a written confirmation/invoice. No-shows will not receive a refund.

## Confirmation of participation

You will receive the confirmation of participation at the congress secretariat.

# Technical information

## **Presentation**

- The conference room is equipped with a projector and laptop.
- We kindly ask you to bring your presentation on a USB stick to the conference room one hour prior to your session at the very latest.
- Presentations with your own laptop are not possible.

## **Language**

The official conference language is English.

## **Poster exhibition**

Posterboards in the format 117cm x 142cm (width x height) will be at your disposal.

Poster mounting on both days from 08:00–09:00 in the foyer of the Auditorium Ettore Rossi, Inselspital Bern.

Please find your presentation day on page 20 under the heading “Posters”.

The posters can be viewed on both days during the coffee and lunch breaks.

The authors are requested to present their posters during this time.



## Accommodation

Rooms in different hotels are available for conference participants. Below you can find a selection of hotels. Hotel accommodation is subject to availability.

Hotel	Single room	Double room	Distance to conference	Contact
Best Western Plus Hotel Bern****	CHF 235	CHF 235	2 km	<a href="#">Website</a> reception@hotelbern.ch
NH Bern The Bristol****	CHF 227	CHF 240	1.6 km	<a href="#">Website</a> nhberthebristol@nh-hotels.com
Hotel Kreuz***	CHF 190	CHF 222	1.9 km	<a href="#">Website</a> info@kreuzbern.ch
Sorell Hotel Ador***	CHF 120	CHF 150	0.9 km	<a href="#">Website</a> reservation@sorellhotels.com
Bern Youth Hostel	<ul style="list-style-type: none"> <li>• Single room with shower/toilet CHF 142</li> <li>• Double room with shower/toilet CHF 168</li> <li>• Bed in shared room CHF 51</li> </ul> → other options on the website		1.8 km	<a href="#">Website</a> bern@youthhostel.ch

Find more hotels in Bern: [www.bern.com](http://www.bern.com)

# Travel information

## Directions conference venue

We recommend arrival by public transport. From Bern railway station, take bus line 12 in the direction of Holligen to the „Inselhospital“ stop. If you are travelling by car, take the „Bern Forsthaus“ motorway exit. Limited parking spaces are available in the Inselparking, the Bahnhofparking and the City West multi-storey car park.



## Transfer Airport – Bern City

In case you plan to arrive by plane, please book a flight to Zürich or Basel Mulhouse. From there you have to book a train ticket to Bern main station.

## Train

Online Timetable and tickets: [www.sbb.ch/en](http://www.sbb.ch/en)

# Dinner

## Speakers dinner

The speakers dinner will be held on **Sunday, September 1, 2024** at the Hotel Bern, Restaurant Volkshaus, starting at 18:00 with an aperitif on the roof top bar if the weather conditions allow. The dinner will start at 19:00.

Only for invited guests.

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## Conference dinner

The social evening will take place on **Monday, September 2, 2024** at the Casino Bern starting at 19:00.

## Address

Casino Bern

Casinoplatz 1

3011 Bern

[www.casinobern.ch](http://www.casinobern.ch)

## Costs

The Conference dinner costs additionally CHF 70. The dinner can be added in the registration process and is also open for accompanying persons.

## Sponsors

We would like to thank the following companies for supporting the 10th Annual Meeting of the International MS Cognition Society as a sponsor:

### Platinum

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The Sanofi logo consists of the word "sanofi" in a lowercase, bold, sans-serif font. The letter "s" is black, while the letters "a", "n", "o", and "i" are purple.

### Silver

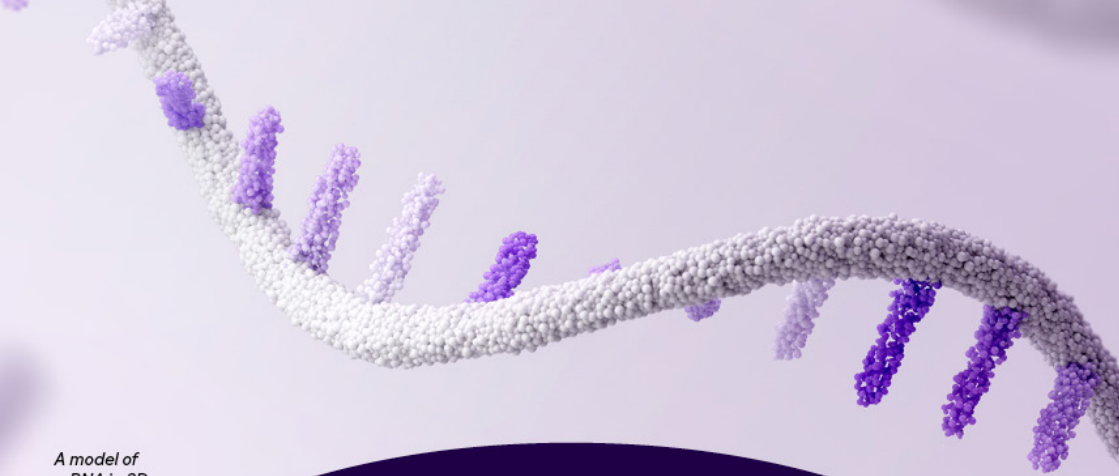
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The Bristol Myers Squibb logo features a stylized purple icon of three vertical bars of increasing height on the left, followed by the text "Bristol Myers Squibb™" in a grey, sans-serif font.The Merck logo is the word "MERCK" in a bold, blue, sans-serif font, with all letters in uppercase.

### Bronze

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The Amgen logo is the word "AMGEN" in a bold, blue, sans-serif font, with all letters in uppercase.The Roche logo features the word "Roche" in a blue, sans-serif font, enclosed within a blue-outlined hexagonal shape.



A model of  
mRNA in 3D

Every day,  
*we leverage advances*  
in care to help people  
live life on their own terms

**sanofi**

[www.sanofi.com](http://www.sanofi.com)



# Scientific program

## Monday, September 2, 2024

09:00–09:15	Welcome by the local organizers and the IMSCOGS president	Penner (CH), Chan (CH), Schoonheim (NL)
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### Session 1: Brain health and MS

**Chairs: Penner (CH) & Chan (CH)**

09:15–09:45	Introduction to brain health	Bassetti (CH)
09:45–10:15	Brain health and MS	DeLuca (US)
10:15–10:45	Preventative interventions for MS patients	Hulst (NL)
10:45–11:15	Coffee break and poster viewing	

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### Session 2: The concept of smoldering MS and cognition

**Chairs: Brochet (FR) & Morrow (CA)**

11:15–11:40	Smoldering MS: The preclinical view and the potential role of endogenous retrovirus activation	Küry (DE)
11:40–12:05	Smoldering MS: The neuropsychological view	Benedict (US)
12:05–12:30	Smoldering MS: The MRI view	Schoonheim (NL)
12:30–12:55	Smoldering MS: The clinical neuroimmunological view	Berger (AT)
12:55–14:00	Lunch break and guided poster tour	

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### Session 3: Digital assessment and monitoring

**Chairs: Benedict (US) & Hoepner (CH)**

14:00–14:30	Lessons learned from the digital BICAMS	Langdon (UK)
14:30–15:00	Isolated cognitive relapses: Does digital assessment help?	Morrow (CA)
15:00–15:15	Speech assessment and cognition	Hammer (CH)
15:15–15:30	The SITEM Loft: An approach to objectify fatigue and cognition	Nef (CH)
15:30–16:00	Coffee Break and poster viewing	

### Session 4: Artificial intelligence

**Chairs: Tzovara (CH) & Nagels (BE)**

16:00–17:00	Pro/Contra session on the topic: «AI will change cognitive MS care within the next ten years»	Nagels (BE) & van Scheependom (BE)
17:00–17:15	How to apply AI techniques on electrophysiological signals?	Tzovara (CH)
17:15–17:30	AI modelling of electrophysiological correlates of cognition in MS	Rossi (BE)
17:30–18:30	Assembly/Board meeting	
19:00–23:00	Official IMSCOGS conference dinner	

## Tuesday, September 3, 2024

### Well-known and new rehabilitation strategies (joined IMSCOGS & RIMS session)

**Chairs: Hulst (NL) & Brichetto (IT)**

09:00–09:30	Neurorehabilitation of cognitive deficits using an adaptive cognitive exergame	Sokolov (CH)
09:30–10:00	Metacognition, neuroeducation and meditation	Penner (CH)
10:00–10:15	First results of the NEMMI study	Monschein (AT/CH)
10:15–10:30	The CogEx study in progressive MS	Brichetto (IT)
10:30–11:00	Coffee break and poster viewing	

### The power of exercising

**Chairs: Ruet (FR) & Hancock (US)**

11:00–12:00	Exercise and Cognition in MS: From evidence to promotion in clinical practice	Sandroff (US) & Motl (US)
12:00–12:15	Should exercise training be at high intensity?	Bansi (CH)
12:15–12:30	Exercise training, cognition training or both? Evidence and conclusion from a comparative analysis	Gyger (CH)
12:30–13:30	Lunch break and guided poster tour	
		Chair: Schoonheim (NL)

### Comorbidities (fatigue, depression, anxiety)

**Chairs: Penner (CH) & DeLuca (US)**

13:30–14:00	Fatigue	Grothe (DE)
14:00–14:30	Depression	Gold (DE)
14:30–15:00	Anxiety	Hancock (US)
15:00–15:30	Summary and farewell	
		Chan (CH) & Penner (CH)



## Speakers and committee

### **Dr. Jens Bansi**

Head Research and Development, Kliniken Valens and Lecturer at the OST - Eastern Switzerland University of applied Sciences

### **Prof. Dr. med. Claudio L. A. Bassetti, MD**

Dean Faculty of Medicine, University Bern, Switzerland

### **Prof. Dr. Ralph H. B. Benedict, PhD, ABPP-CN**

Department of Neurology, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo (UB), New York, USA

### **Prof. Thomas Berger, MD**

Dept. of Neurology and Comprehensive Center for Clinical Neurosciences & Mental Health, Medical University of Vienna, Austria

### **Giampaolo Brichetto, MD, PhD**

Italian MS Society, Head of Rehabilitation Centers, RIMS President, Genova, Italy

### **Prof. Dr. Bruno Brochet, MD**

Neurocentre Magendie, University of Bordeaux, France

### **Prof. Dr. med. Andrew Chan**

Department of Neurology, Inselspital, Bern University Hospital, Switzerland

### **Prof. Dr. John DeLuca, Ph.D., ABPP-RP**

Senior Vice President for Research and Training, Kessler Foundation, New Jersey, USA

Professor of Physical Medicine and Rehabilitation,

Rutgers University, New Jersey Medical School, New Jersey, USA

### **Prof. Dr. Stefan M. Gold**

Professor of Clinical Neuroscience and Neuroimmunology, Department of Psychosomatic Medicine and Department of Psychiatry, Charité - Universitätsmedizin Berlin, Germany

### **PD Dr. med. Matthias Grothe**

Senior Physician, Clinic and Polyclinic for Neurology, University Medicine Greifswald, Germany

**Naomi Gyger**

Department of Neurology, Inselspital, Bern University Hospital, Switzerland

**Dr. med. Helly Hammer**

Department of Neurology, Inselspital, Bern University Hospital, Switzerland

**Dr. Laura Hancock, PhD, ABPP-CN**

Staff Neuropsychologist, The Cleveland Clinic, Ohio, USA

**PD Dr. med. Robert Hoepner**

Department of Neurology, Inselspital, Bern University Hospital, Switzerland

**Prof. Dr. Hanneke Hulst**

Health, Medical and Neuropsychology, Institute of Psychology, Leiden University, The Netherlands

**Prof. Dr. phil. Patrick Kury**

Heinrich-Heine-University of Düsseldorf, Germany

**Prof. Dr. Dawn Langdon**

Professor of Neuropsychology, Royal Holloway University of London, UK

**Prof. Dr. Sarah A. Morrow MD, MS, FRCPC, FAAN**

Director Multiple Sclerosis Program, Professor of Neurology, Department of Clinical Neurosciences, Hotchkiss Brain Institute University of Calgary, Canada

**Robert W. Motl, PhD**

Professor, Department of Kinesiology and Nutrition  
Director, Exercise Neuroscience Research Laboratory  
College of Applied Health Sciences, University of Illinois Chicago, USA

**Prof. Dr. ir. Guy Nagels**

Artificial intelligence supported modelling in clinical sciences (AIMS),  
University of Vrije, Brussels, Belgium  
Neurology, University Hospital Brussels, VUB, Belgium

**Prof. Dr. Tobias Nef**

ARTORG Center for Biomedical Engineering Research, Gerontechnology & Rehabilitation, University of Bern, Switzerland

**Prof. Dr. Friedemann Paul**

Charité – Universitätsmedizin Berlin, Germany

**Prof. Dr. Iris-Katharina Penner, PhD**

Department of Neurology, Inselspital, Bern University Hospital, Switzerland

**Chiara Rossi**

AIMS lab, Center for Neurosciences and Department of Electronics and Informatics, University of Vrije, Brussels, Belgium

**Prof. Dr. Aurélie Ruet**

Department of Neurology, University Hospital of Bordeaux, France  
Neurocentre Magendie, Bordeaux University, France

**Brian M. Sandroff, PhD**

Assistant Director, Center for Neuropsychology and Neuroscience Research, Kessler Foundation, West Orange, New Jersey, USA

**Prof. Dr. Menno Schoonheim**

MS Center Amsterdam, Amsterdam UMC, Amsterdam, The Netherlands

**Prof. Arseny Sokolov, MD, PhD**

Head of Neuropsychology and Neurorehabilitation Department, CHUV, Lausanne, Switzerland

**Prof. Dr. Athina Tzovara**

Assistant Professor, Institute of Computer Science & Experimental Neurology Center (ZEN), University of Bern, Switzerland

**Prof. Jeroen Van Schependom**

AI-supported modelling in clinical sciences (AIMS) and ETRO, University of Vrije, Brussels, Belgium

# Posters

## Poster exhibition

Monday, September 2, 2024 (green)

Tuesday, September 3, 2024 (red)

**P01 Assessing the utility of the periodic and aperiodic components for detecting cognitive impairment in people with multiple sclerosis**

Nguyen Duc Kien, Fahimeh Akbarian, Doan Quang Manh, Jorne Laton, Sebastiaan Engelborghs, Jeroen Van Schependom, Nguyen Linh Trung and Guy Nagels

AVITECH, VNU University of Engineering and Technology, Hanoi, Vietnam and AIMS lab, Center for Neurosciences, Vrije Universiteit Brussel, Brussels, Belgium

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**P02 An integrative model of cognition in MS: Depression as a major covariate**

Luisa T. Balz, Dorothée E. Lulé, Ingo Uttner, Daniela Taranu, Ioannis Vardakas, Tanja Fangerau, Deborah K. Erhart, Makbule Senel, Hayrettin Tumanli  
Ulm University

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**P03 Stimulus-related modulation in the 1/f spectral slope suggests an impaired inhibition during a working memory task in people with multiple sclerosis**

Fahimeh Akbarian, Chiara Rossi, Lars Costers, Marie B D'hooghe, Miguel D'haeseleer, Guy Nagels, Jeroen Van Schependom

Department of Electronics and Informatics (ETRO), Vrije Universiteit Brussel, Brussels, Belgium, AIMS lab, Vrije Universiteit Brussel, Center for Neurosciences, Brussels, Belgium

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**P04 Thalamic Network Controllability Changes and Cognitive Impairment in Multiple Sclerosis**

Yuping Yang, Anna Woollams, Ilona Lipp, Zhizheng Zhuo,

Marta Czime Litwińczuk, Valentina Tomassini, Yaou Liu, Nelson Trujillo-Barreto, Nils Muhlert

Division of Psychology, Communication and Human Neurosciences, Faculty of Biology, Medicine and Health, University of Manchester, Manchester, UK

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**P05 Cognitive Impairment at MS Onset: Results and Insights from the Temprano Study**

A. van der Kruit, M. van Dam, M.G.M. Schokker, S.C.M. Brama,

B.A. de Jong, M.M. Schoonheim & H.E. Hulst

MS Center Amsterdam

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- P06 Dynamic functional connectivity of the thalamus across cognitive phenotypes of multiple sclerosis**  
Francesco Masi; Marloes Bet; Elisa Colato; Tommy Broeders; Ismail Koubiyr; Elena Colombo; Eleonora Tavazzi; Hanneke Hulst; Eva Strijbis; Frederik Barkhof; Menno Schoonheim  
IRCCS Mondino Foundation, Multiple Sclerosis Centre, Pavia, Italy.
- 
- P07 Cognitive reserve in multiple sclerosis: The role of MS-impact, fatigue, depression, and anxiety**  
Clara Stein, Fiadhnaít O’Keeffe, Méadhbh Brosnan, Claire Flynn, Christopher McGuigan, Jessica Bramham  
University College Dublin
- 
- P08 Microglia-dependent neurodegeneration is fueled by HERV-W envelope protein in different mouse models of MS**  
Joel Gruchot, David Leppert, Hans-Peter Hartung, Hervé Perron, Urs Meyer and Patrick Küry  
Heinrich-Heine-University Düsseldorf
- 
- P09 Driving ability in MS patients in relation to clinical, behavioral and cognitive deficits**  
H. Schreiber, E. Kannamüller, G. Berry, S. Gierer  
Nervenfachärztliche Gemeinschaftspraxis Ulm, Pfauengasse 8, D-89073 Ulm, Germany
- 
- P10 Federated learning for brain image decoding in multiple sclerosis**  
Stijn Denissen, Matthias Grothe, Manuela Vaneckova, Tomáš Uher, Jorne Laton, Matěj Kudrna, Dana Horáková, Johan Bajiot, Iris-Katharina Penner, Michael Kirsch, Jiří Motýl, Maarten De Vos, Oliver Y. Chén, Jeroen Van Schependom, Diana Maria Sima, and Guy Nagels  
AIMS Lab, Center for Neurosciences, UZ Brussel, Vrije Universiteit Brussel
- 
- P11 Relationship of TRACK-MS to Volumetric MRI Measurements and Serum NFL and GFAP: A Cross-Sectional Monocentric Study**  
Deborah K. Erhart, Luisa Balz, Franziska Bachhuber, Roland Opfer, Lothar Spies, Ingo Uttner, Dorothee Lulé, Tanja Fangerau, Daniela Taranu, Ioannis Vardakas, Makbule Senel, Hayrettin Tumani  
Department of Neurology, University of Ulm, Oberer Eselsberg 45, 89081 Ulm, Germany
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**P12 A Mobile Health App for Self-Assessment of Cognitive Impairment in People With Multiple Sclerosis: Validation and Usability of DIGICOG-MS®**

Podda Jessica, Tacchino Andrea, Susini Alessia, Di Antonio Federica,  
Ponzio Michela, Pedullà Ludovico, Battaglia Mario Alberto,  
Brichetto Giampaolo  
Italian Multiple Sclerosis Foundation

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**P13 Personalized home-based rehabilitation decreases cognitive impairment, cognitive fatigue, anxiety, and the level of work difficulties in patients with Multiple Sclerosis**

Héloïse Joly, Hélène Brissart, Mikael Cohen, Saskia Bresch,  
Christine Lebrun-Frenay  
CRC SEP, MS Clinic, Neurology Department, CHU Pasteur 2, Nice, France

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**P14 Associating Age of Symptom Onset with Cognitive Impairment Severity in Multiple Sclerosis: A Comparative Study**

Serkan Ozakbas, Gözde Deniz Ünal, Said Alizada, İrem Kara, Yasemin Şimşek  
Izmir University of Economics, Medical Point Hospital, IZMIR, Turkey

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**P15 Fibre-specific white matter damage explains cortical atrophy in multiple sclerosis**

M. Barrantes-Cepas, G. Pontillo, M.D. Steenwijk, D. Van Nederpelt,  
E.M.M Strijbis, F. Barkhof, M.M. Schoonheim, I. Koubiyr  
MS Center Amsterdam, Anatomy and Neurosciences, Vrije Universiteit  
Amsterdam, Amsterdam Neuroscience, Amsterdam UMC location VUmc,  
Amsterdam, The Netherlands

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**P16 Upscale and Downscale Representation Filtering of Event-Related Potentials Improves Cognitive Classification in MS**

Quang Manh Doan, Nguyen Duc Kien, Nguyen Linh Trung, Tran Hiep Dinh,  
Truong Xuan Doan, Long Doan Dinh, Jorne Laton, Jeroen Van Schependom,  
and Guy Nagels  
Advanced Institute of Engineering and Technology, VNU University of  
Engineering and Technology

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**P17 Evolution of cortical lesions and domain-specific cognitive decline in multiple sclerosis**

Eva A. Krijnen, Maureen van Dam, Samantha Noteboom, Piet M. Bouman,  
Frederik Barkhof, Hanneke E. Hulst, Eric C. Klawiter, Eva M.M. Strijbis,  
Menno M. Schoonheim  
MS Center Amsterdam, Anatomy and Neurosciences, Amsterdam UMC  
location VUmc | Department of Neurology, Massachusetts General Hospital,  
Harvard Medical School

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- P18 Exploring the relationship between consolidated resilience and inter-network connectivity in adult and pediatric multiple sclerosis**  
Damiano Mistri, Monica Margoni, Paola Valsasina, Alessandro Meani, Massimo Filippi, Maria A. Rocca  
Neuroimaging Research Unit, Division of Neuroscience, 2Neurology Unit, Vita-Salute San Raffaele University, Milan, Italy
- 
- P19 Clinical and Cognitive Differences in Late-Onset versus Adult-Onset Multiple Sclerosis: A Comparative Study**  
Nicolò Tedone, Paolo Preziosa, Alessandro Meani, Damiano Mistri, Federica Esposito, Massimo Filippi, Maria A. Rocca  
Neuroimaging Research Unit, Division of Neuroscience, Vita-Salute San Raffaele University, Milan, Italy
- 
- P20 Exploring self-perceived physical and psychological impacts of multiple sclerosis by the MSIS-29 in progressive and relapsing-remitting patients**  
Carolin Balloff, Iris-Katharina Penner, Sven-Günther Meuth, Philipp Albrecht  
Department of Neurology, Medical Faculty and University Hospital Düsseldorf, Heinrich Heine University, Düsseldorf, Germany
- 
- P21 Screening for more with less: Comparative assessment of BDI-II and BDI-FS in screening for depression in MS**  
L.Zikos, B.Degraeve, B.Lenne, C.Massot, C.Donzé  
FLSH - ETHICS (EA7446)
- 
- P22 Experiences with Cognitive Testing and Discussing Cognitive Functioning with Healthcare Professionals: Perspectives of People with Multiple Sclerosis**  
P.T. Waskowiak, A. Myronenko, E.C.F. Schippers, H.E. Hulst, G.A.M. Widdershoven & S. van der Veen  
Amsterdam UMC location Vrije Universiteit Amsterdam, Medical Psychology, MS Center Amsterdam, Amsterdam Neuroscience, Amsterdam, The Netherlands
- 
- P23 Effect of a Computer-Based Cognitive Training Intervention on Neuropsychological Performance in People with Multiple Sclerosis – Randomized Controlled Trial (RCT)**  
V. Eifler, M. Heibel, M. Piefke  
Sauerlandklinik Hachen gGmbH, Sundern, Deutschland
- 
- P24 Cognitive impairment as a first manifestation of multiple sclerosis: a case series**  
J. Aarts, M.F.L. Ruitenberg, H.E. Hulst, M.M. Schoonheim, A.E. van der Vlies, F. Barkhof, Y.A.L. Pijnenburg, B.A. de Jong  
Health, Medical and Neuropsychology Unit, Institute of Psychology, Faculty of Social and Behavioural Sciences, Leiden University, Leiden, The Netherlands
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**P25 Generic and Disease Specific Risk Factors for Work Difficulties and Working Hours After 1 Year in Recently Diagnosed People With Multiple Sclerosis**

Shalina Saddal, Karin van der Hiele, Ehsan Motazedi, Elianne van Egmond, Leo Visser, Amber van der Kruit, Pauline Waskowiak, Maureen van Dam, Menno Schoonheim, Vincent de Groot, Hanneke Hulst & Frederieke Schaafsma  
MS Center Amsterdam, Public and Occupational Health, Vrije Universiteit Amsterdam, Amsterdam UMC location VUmc, Amsterdam, The Netherlands

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**P26 Reliable Change Index for the self-administered, iPad-based processing speed test – the PST**

Stefanie Hechenberger, Birgit Helmlinger, Sara Jordan, Sebastian Wurth, Bettina Heschl, Anna Damulina, Sebastian Eppinger, Michael Khalil, Christian Enzinger, Daniela Pinter  
Department of Neurology, Medical University of Graz

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**P27 Enhancing Cognitive Impairment Detection in Multiple Sclerosis: Exploring More Sensitive Measurement Tools**

Serkan Ozakbas, İrem Kara, Gözde Deniz Ünal, Pinar Yigit, Zuhail Abasiyanik  
Izmir University of Economics, Medical Point Hospital, Izmir, Turkey

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**P28 Distinct contribution of motor function and psychological factors on motor fatigue**

Birgit Helmlinger, Stefanie Hechenberger, Johanna Hutter, Sara Jordan, Sebastian Wurth, Anna Damulina, Bettina Heschl, Michael Khalil, Christian Enzinger, Daniela Pinter  
Medical University of Graz

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**P29 Uncovering the altered event-related network dynamics underlying working memory in MS**

Chiara Rossi, Diego Vidaurre, Lars Costers, Marie B D'hooghe, Fahimeh Akbarian, Miguel D'haeseleer, Mark Woolrich, Guy Nagels, Jeroen Van Schependom  
AIMS, VUB

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**P30 Cognitive Awareness in Multiple Sclerosis before and after Neuropsychological Assessment**

P.T. Waskowiak, B.A. de Jong, B.M.J. Uitdehaag, H.E. Hulst & M. Klein  
Amsterdam UMC location Vrije Universiteit Amsterdam, Medical Psychology, MS Center Amsterdam, Amsterdam Neuroscience, Amsterdam, The Netherlands

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- P31 Effectiveness of BDI-FS in Detecting Depressive Symptoms in Multiple Sclerosis: An Exploratory Factor Analysis**  
B.Degraeve, B.Lenne, L.Zikos, C.Massot, C.Donzé  
FLSH - ETHICS (EA7446)
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- P32 The “constrained brain” in multiple sclerosis: Cognitive impairment is related to modular (de)coupling of structural and functional connectivity**  
M.D.A. Bet, M. van Dam, T.A.A. Broeders, I. Koubiyr, A. Ruet, F. Barkhof, E.M.M. Strijbis, L. Douw, H.E. Hulst, & M.M. Schoonheim  
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- P33 Disconnection of resting-state networks can help predict specific cognitive outcomes in people with Multiple sclerosis**  
Kouwenhoven R, Lipp I, Yang Y, Moran K, Schoonheim M, Tomassini V, Muhlert N  
Division of psychology, communication & human neuroscience, University of Manchester, UK, Vrije Universiteit Amsterdam, Netherlands
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- P34 Combining structural and functional connectomes to estimate changes in excitatory and inhibitory activity in Multiple Sclerosis patients**  
Gaia Zin, Guy Nagels, Jeroen Van Schependom, Thanos Manos  
AIMS, ETRO, Vrije Universiteit Brussel, Belgium
- 
- P35 The influence of internuclear ophthalmoplegia on the results of the Symbol Digit Modalities Test in patients with multiple sclerosis**  
Eva Keytsman and Sam N. Hof. Co-authors: Menno M. Schoonheim, Eva M. M. Strijbis, Jeroen Van Schependom, and Bob W. Van Oosten  
AIMS, VUB, and MS Center, Amsterdam UMC
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- P36 CoGames - Development of a smartphone-based and gamified monitoring tool for cognitive function in Multiple Sclerosis**  
Silvan Pless, Tim Woelfle, Johannes Lorscheider, Andrea Wiencierz, Óscar Reyes, Carlos Luque, Pasquale Calabrese, Cristina Granziera, Ludwig Kappos  
RC2NB - DKWN University Hospital Basel
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- P37 Event-related potentials as a potential marker of cognitive fatigability in MS**  
Delphine Van Laethem, Jorne Laton, Chiara Rossi, Jeroen Van Schependom, Guy Nagels  
AIMS VUB
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**P38 Cognitive Functioning is Relatively Independent of Fine and Gross Motor Functioning in People with Multiple Sclerosis**

Jip Aarts, Rosanne Govaarts, Menno M. Schoonheim, Muna Nagtegaal, Vincent van Twuijver, Hanneke E. Hulst, Marit F.L. Ruitenber  
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**P39 Psychometric Curse: Transforming Neuropsychological Evaluation through Digital Automation**

Motyl Jiri, Friedova Lucie, Bezdicek Ondrej, Nikolai Tomas, Klicnikova Alzbeta, Uher Tomas  
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**P40 Cognitive Processing Speed and Fatigue in Multiple Sclerosis are Reflected by Global Rearrangement of Degree Centrality**

Pavel Hok, Quang Thong Thai, Barbora Reháková, Martin Domin, Kamila Řasová, Jaroslav Tintěra, Martin Lotze, Matthias Grothe, Jaroslav Hlinka  
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**P41 Social Cognition in Multiple Sclerosis: An Online Validation Study of the COSIMO Screening Tool**

Lesley Ramseier  
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**P42 The influence of internuclear ophthalmoplegia on the results of the Symbol Digit Modalities Test in patients with multiple sclerosis**

Eva Keytsman and Sam N. Hof. Co-authors: Eva M. M. Strijbis, Menno M. Schoonheim, Jeroen Van Schepondom, and Bob W. Van Oosten  
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**P43 A multifaceted symphony: Understanding cognitive impairment in MS through the complex interplay between network measures using machine learning classification**

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**P44 The contribution of iron deposition in the caudate nucleus to cognitive fatigue in MS**

Glenn R. Wylie, John DeLuca, Bing Yao

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**P45 Understanding the Relationship of Cervical Spinal Cord Cross Sectional Area with Physical and Cognition Status**

Banu Alicioğlu, Osman Iyilikci, Mustafa Acikgoz, Burcu Yüksel, Özlem Ethemoglu, Nazlı Gamze Bulbul, Beste Dagdeviren Boz, Eyup Cetin, Nursena Ceylan, Arzucan Toksal Uçar, Halimener nurlu, Serkan Ozakbas  
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**P46 Impact of Healthcare-Related Social Determinants of Health and Cognition on Cardiovascular Risk Burden in U.S.-Dwelling Hispanic/Latinx People with Multiple Sclerosis: Preliminary Data**

Cristina A.F. Román, PhD, Odalys Arbaleaz, MA, John DeLuca, PhD, and Glenn Wylie, DPhil  
Kessler Foundation, West Orange, New Jersey, USA

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**P47 Cognitive Fatigability: A Call to Action for Improved Methodology**

Mieke D'hooge, MSc; Niels Peeters, MSc; Cintia Ramari, PhD; Daphne Kos, PhD  
National MS Center Melsbroek, Belgium, REVAL Rehabilitation Research Center, UHasselt, Belgium

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**P48 Test-retest reliability of measures for walking and cognitive in persons with moderate to severe multiple sclerosis, and relation with fatigue**

Cintia Ramari, Felipe Balistieri Santinelli, Lisa Tedesco Triccas, Celine Geelen, Gaelle Vertriest, Daphne Kos, Mieke D'Hooge, Zuhail Abasiyanik, Peter Feys  
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**P49 Self-reported communication and language difficulties as predictors of vocational status amongst people with multiple sclerosis**

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