9TH ECTRIMS SUMMER SCHOOL
organised together with RIMS
27-29 JUNE 2023 | Gdansk, Poland

ECTRIMS
EUROPEAN COMMITTEE FOR TREATMENT
AND RESEARCH IN MULTIPLE SCLEROSIS

RIMS REHABILITATION IN MULTIPLE SCLEROSIS
European network for best practice and research

From biological basis to ecological implications of rehabilitation in MS

TUESDAY, 27 JUNE 2023

09.00	**Welcome and Introduction**
09.20 - 09.50	**Lecture 1: Biological bases of neurorehabilitation** *G. Comi (Milan, IT)*
09.50 - 11.10	**Session 1: Rehabilitation in MS: the point of view of Biology** Chair: P. Feys (Hasselt, BE)
09.50	Motor rehabilitation and Brain plasticity: the evidence in MS *M. Bove (Genoa, IT)*
10.10	Physical activity and Brain plasticity in MS *U. Dalgas (Aarhus, DK)*
10.30	Cognitive rehabilitation and Brain plasticity: the evidence in MS *M. P. Amato (Florence, IT)*
10.50	Discussion / Q&A
11.10 - 11.40	**Coffee Break**
11.40 - 13.00	**Session 2: Measuring MS** Chair: G. Giovannoni (London, UK)
11.40	Wearable technologies to measure clinical outcomes in MS *J. Chataway (London, UK)*
12.00	Trends in the field of machine learning: challenges for future trials *G. Nagels (Brussels, BE)*
12.20	Ecological measures of motor domain and their clinical implications *A. Skjerbæk (Ry, DK)*
12.40	Discussion / Q&A

13.00 - 14.00 Lunch Break

14.00 - 15.40   **Practical session – Workshop 1-3**
(3 rotating groups, 50 minutes each)

Workshop 1: Outcome measures in MS: focus on motor and cognitive Performance Measure
Chairs: L. Moumdjian (Diepenbeek, BE), R. das Nair (Trondheim, NO)
Facilitators: L. Pedullà (Genoa, IT), L. Hvid (Aarhus, DK),
J. Podda (Genoa, IT)

Workshop 2: Outcome measures in MS: focus on administering patient reported outcomes
Chair: G. Brichetto (Genoa, IT)
Facilitators: R. McBurney (Waltham, US), D. Kos (Leuven, BE), M. Monti Bragadin (Genoa, IT)

Workshop 3: Measuring MS with wearables and smart devices
Chair: L. Leocani (Milan, IT)
Facilitators: A. Tacchino (Genoa, IT), A. Kalron (Tel-Aviv, ISR), V. Block (San Francisco, US), V. Bergamaschi (Genoa, Italy)

15.40 - 16.10   **Coffee Break**

16.10 - 17.00   **continuing of practical session – Workshop 1-3**

17.00 - 18.00   **Interactive discussion**
Feedback from Workshop groups, Chairs and Facilitators

18.00 - 18.20   **Conclusions of Day One**

19.30   **Dinner at the hotel**

WEDNESDAY, 28 JUNE 2023

09.00 - 09.30   **Lecture 2: How has technology changed the perspective of people with neurological conditions?**
P. Feys (Hasselt, BE), P. van Galen (Overijse, BE)

09.30 - 10.50   **Session 3: Rehabilitation in MS: technology driven rehab**
Chair: L. de Michieli (Genoa, IT)

09.30   Rehabilitative robotic in MS for upper limb
G. Barresi (Genoa, IT)

09.50   Robotic Exosuit for gait rehabilitation in MS
S. Maludrottu (Genoa, IT)

10.10   Assistive robotic in MS
L. Masia (Heidelberg, DE)

10.30   Discussion / Q&A

10.50 - 11.20   **Coffee Break**

11.20 - 12.20   **continuing of Session 3: Rehabilitation in MS: technology driven rehab**
Chair: L. de Michieli (Genoa, IT)

11.20   Virtual Reality in MS
G. Barresi (Genoa, IT)

11.40   Focus on Telerehabilitation in MS
A. Tacchino (Genoa, IT)

12.00   The role of transcranial magnetic stimulation in MS rehabilitation
L. Leocani (Milan, IT)

12.20 - 12.40   **Debate Session: Is Telerehabilitation an effective strategy for improving quality of life of people with MS?**
Moderator: D. Kos (Leuven, BE)
Discussants: A. Tacchino (Genoa, IT), A. Kalron (Tel-Aviv, ISR), J. Pöttgen (Hamburg, DE), P. van Galen (Overijse, BE)

12.40 - 14.00   **Lunch Break**

14.00 - 15.40   **Practical session – Workshop 4-6**
                          (3 rotating groups, 50 minutes each)

                          Workshop 4: MS Rehabilitation: focus on robotics
                          Chair: L. de Michieli (Genoa, IT)
                          Facilitators: L. Masia (Heidelberg, DE), J. Jonsdottir (Milan, IT)

                          Workshop 5: Devices for home-based rehabilitation
                          Chair: A. Kalron (Tel-Aviv, ISR)
                          Facilitators: A. Tacchino (Genoa, IT), J. Podda (Genoa, IT)

                          Workshop 6: Virtual reality and MS rehabilitation
                          Chair: G. Barresi (Genoa, IT)
                          Facilitators: V. Prada (Genoa, IT), E. Swinnen (Brussels, BE)

15.40 - 16.10   **Coffee Break**

16.10 - 17.00   **continuing of practical session – Workshop 4-6**

17.00 - 18.00   **Interactive discussion**
                          Feedback from Workshop groups, Chairs and Facilitators

18.00 - 18.20   **Conclusions of Day Two**

20.00   **Summer School Dinner**

THURSDAY, 29 JUNE 2023

08.30 - 08.50   **Lecture 3: Recent advances in clinical trial design: focus on the use of digital markers**
H.P. Hartung (Düsseldorf, DE)

08.50 - 09.10   **Lecture 4: Personalizing treatment by identifying differential responders and their characteristics in clinical trials**
M. P. Sormani (Genoa, IT)

09.10 - 09.30   **Lecture 5: Considerations when designing the control group and intervention in rehabilitation: tool development in SRRR (stroke recovery and rehabilitation round table**
P. Feys (Hasselt, BE)

09.30 - 11.00   **Working groups – (3 working groups)**
Participants will work in 3 working groups (A, B, C)

Working group A: Designing a research protocol for evaluating the effectiveness of rehabilitation (including biological/psychological base)
Chair: D. Kos (Leuven, BE)
Facilitators: L. Leocani (Milan, IT), L. Hvid (Aarhus, DK)

Working group B: Designing a research protocol for evaluating effectiveness of rehabilitation with digital biomarkers
Chair: G. Brichetto (Genoa, IT)
Facilitators: J. Podda (Genoa, IT), A. Skjerbæk (Ry, DK)

Working group C: Decentralised clinical trials in rehabilitation
Chair: R. das Nair (Trondheim, NO)
Facilitators: L. Pedullà (Genoa, IT), L. Moumdjian (Diepenbeek, BE)

11.00 - 11.15   **Coffee Break**

11.15 - 12.30   **Interactive discussion**
Feedback from working groups
Definition of a common draft protocol

12.30 - 12.45   **Farewell**

As of 12.45   **Lunch and individual departure**