

ER²SCHOOL

European Rehabilitation Robotics School

IV Edition

18-23 September 2023

How to implement and deal Evidence

Promoted and organized by ESPRM - Robotic and new Technologies Committee under the auspices of the European Board of PRM, Simfer and SIRN. In cooperation with Santo Stefano Rehabilitation Group and International Industry Society for Advanced Rehabilitation technology.

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COURSE PRESENTATION

Since 2017, we have been supporting an innovative educational approach for Physical and Rehabilitation Medicine Specialists, sharing and taking advantage of concrete clinical experiences in robotic treatments in Europe.

The ER2School is promoted and organized by ESPRM - Robotic and New Technologies Committee on behalf of Esprm for scientific contents and under the auspices of PRM-UEMS Section and Board (which are responsible for selecting young and free PRM participants from all over Europe) and in cooperation with SIMFER and SIRN in Italy.

Santo Stefano Rehabilitation - Kos Group is working for the organization and management, as in previous edition.

IISART (International Industry Society for Advanced Rehabilitation Technology) supports the international diffusion.

In the 2023 edition, cutting-edge knowledge and skills in the innovative field of robotic rehabilitation will be shared through diverse and complementary perspectives: Theoretical, Technological, Managerial, and Ethical. Additionally, the essential role of the specialist in Physical and Rehabilitation Medicine will be better understood and appreciated. "How to implement and deal Evidence" is our motto!

The school will last 6 days and will take place in person. The morning sessions will be dedicated to frontal teaching, while the afternoon ones will consist of clinical/practical activities on the most widespread devices. In the previous edition, the European Robotic Rehabilitation Community was launched, a community born alongside and thanks to the activities of the school itself, with the aim of carrying out educational activities of clinical comparison and research in this field: this year the contents will be enriched by the presentation of the ongoing activities of the Working Groups of the ER2 Community. The contribution of the working groups will be the best introduction to practical activities with the devices covered.

In this edition, **all the educational activities will be conducted in English.** As always, the teaching materials and the key moments will be accessible on the school's website afterwards. Participants will have the opportunity to interact with teachers during the lessons, making the educational experience even more engaging and interactive.

Day 1: Monday, September 18th

OPENING AND PRESENTATION OF THE 4TH EDITION OF THE ER2 SCHOOL

MORNING

8:30 a.m. **Registration**

9:00 a.m. **Opening**

ESPRM/UEMS Section and Board - Perspectives, quality for educational programmes

Speakers: Mauro Zampolini (ITA), Nikolaos Barotsis (GRC), Klemen Grabljevec (SVN), Alessandro Giustini (ITA)

School Partnerships

IISART Representative: Martina Spiess (CHE)

KOS Group Representative: Enrico Brizioli (ITA)

11:00 a.m. **Coffee Break**

11:30 a.m. **National Health Italian Institute – Role and cooperation in PRM**

“General presentation of the CICERONE Consensus Conference”

Speaker: Mauro Grigioni (ITA)

Local authority

Marche Region President: Francesco Acquaroli

Clinical and educational Italian experience

SIMFER President: Giovanna Beretta (ITA)

SIRN President: Mauro Zampolini (ITA)

1:00 p.m. **Questions and closing remarks**

Speeches lasts about 20 minutes: after each of them, there are about 10 minutes of discussion

Day 1: Monday, September 18th

OPENING AND PRESENTATION OF THE 4TH EDITION OF THE ER2 SCHOOL

AFTERNOON

2:00 p.m.

Introductory Intervention

“What can be a Working Group - Exceeded Limits and New Challenges”

Speaker: Alessandro Giustini (ITA)

Focus On Devices

“Lokomat”

Speaker: Gonzalo Puyuelo (CHE)

“Walker View Device”

Speaker: Salvatore Facciorusso (ITA) – Andrea Santamato (ITA)

“Point Pressure”

Speaker: Marc Casellas Viladoms (ESP) – Ismael Ordoñez Rey (ESP)

Discussion/Assessment of Critical Issues and results obtained, also Involving Companies

Practical Training on Devices

5:00 p.m.

Closing remarks

SESSION COORDINATOR: Alessandro Giustini

Speeches lasts about 20 minutes: after each of them, there are about 10 minutes of discussion

The morning session will be live-streamed at all the "Santo Stefano" rehabilitation facilities of the Kos Care group

Day 2: Tuesday, September 19th

THEORETICAL ASPECTS

MORNING

9^{:00} a.m. **Registration**

9^{:30} a.m. **Innovations and Evidence in PRM: Bridging Theory, Technology, and Clinic**

“New Technologies in PRM: Information and Rights for Patients”

Speaker: Paolo Boldrini (ITA)

“How to Connect Technological Perspectives and Clinical Needs”

Speaker: Klemen Grabljevec (SVN)

“Training Needs and Contents”

Speaker: Calogero Foti (ITA)

11^{:00} a.m. **Coffee Break**

11^{:30} a.m. ***“The Meaning of “Evidence” in Medicine and How It can be Reached in PRM”***

Speaker: Stefano Negrini (ITA)

“Cochrane Evidence on the Role of Robotics in the Field of Rehabilitation”

Speakers: Carlotte Kiekens (ITA)

“HTA: Model and Rules in the Italian Experience”

Speaker: Donatella Bonaiuti (ITA)

1^{:00} p.m. **Questions and closing remarks**

Speeches lasts about 20 minutes: after each of them, there are about 10 minutes of discussion

Day 2: Tuesday, September 19th

THEORETICAL ASPECTS

AFTERNOON

2:00 p.m.

Clinical Intervention

"Analyzing Gait, Posture, and Robotic Rehabilitation Outcomes"

Speaker: Massimo Vallasciani (ITA)

Focus on Devices

"Andago"

Speaker: Evelyne Wiskerke (CHE)

"Geo"

Speaker: Sanaz Pournajaf (ITA)

"Ekso"

Speaker: Antonello Morgantini (ITA)

Discussion/Assessment of Critical Issues and results obtained, also Involving Companies

Practical Training on Devices

5:00 p.m.

Closing remarks

SESSION COORDINATOR: Massimo Vallasciani

Speeches lasts about 20 minutes: after each of them, there are about 10 minutes of discussion

The morning session will be live-streamed at all the "Santo Stefano" rehabilitation facilities of the Kos Care group

Day 3: Wednesday, September 20th

TECHNOLOGICAL ASPECTS

MORNING

9:00 a.m. **Registration**

9:30 a.m. **Advancing in Rehabilitation: Theory, Tech, Practice and Beyond**

“Theoretical Premises for Collecting Evidences of Effectiveness in Robotic Rehabilitation”

Speaker: Maria Gabriella Ceravolo (ITA)

“Rehabilitation Research and Cicerone Conference”

Speaker: Federico Posteraro (ITA)

“Robot-Assisted Neurorehabilitation: from Scientific and Technological Research to Clinical Practice”

Speaker: Stefano Mazzoleni (ITA)

11:00 a.m. **Coffee Break**

11:30 a.m. ***“Advanced Not Robotic Rehabilitation Devices - Virtual Reality and Communication”***

Speakers: Marco Franceschini (ITA)

“The Role of Visual Feedback”

Speaker: Giovanni Morone (ITA)

“The Role of Cognitive Stimulation “

Speaker: Antonio De Tanti (ITA)

1:00 p.m. **Questions and closing remarks**

Speeches lasts about 20 minutes: after each of them, there are about 10 minutes of discussion

Day 3: Wednesday, September 20th

TECHNOLOGICAL ASPECTS

AFTERNOON

2:⁰⁰ p.m.

Clinical Intervention

“The Role of Virtual Reality in Rehabilitation”

Speaker: Marianna Capecci (ITA)

Focus On Devices

“Vrrs”

Speaker: Sanaz Pournajaf (ITA)

“Hunova”

Speaker: Rocco Salvatore Calabrò (ITA)

Discussion/Assessment of Critical Issues and results obtained, also Involving Companies

Practical Training on Devices

5:⁰⁰ p.m.

Closing remarks

SESSION COORDINATOR: Stefano Mazzoleni

Speeches lasts about 20 minutes: after each of them, there are about 10 minutes of discussion

The morning session will be live-streamed at all the "Santo Stefano" rehabilitation facilities of the Kos Care group

Day 4: Thursday, September 21st

RIGHTS AND ETHICS

MORNING

9:00 a.m.

Registration

9:30 a.m.

Patients' Rights and Ethical, Deontological Issues

“Cicerone Consensus: Evidences to Support Patient's Rights”

Speaker: Alessandro Giustini (ITA)

“Science, Technology Innovation and Persons with Disabilities”

Speaker: Giampiero Griffo (ITA)

“Innovation in Health Systems and Ethical Issues”

Speaker: Padre Carlo Casalone (ITA)

11:00 a.m.

Coffee Break

11:30 a.m.

“Artificial Intelligence”

Speaker: Mauro Zampolini (ITA)

“Privacy and Data Security in Healthcare: Addressing the Challenges of the Digital Era”

Speaker: Pierpaolo Montali (ITA)

State of Diffusion of Robotics for Rehabilitation in European National Health Systems

The Survey “Technological Equipment in European Healthcare Systems”

Speaker: Aydan Oral (TUR)

1:00 p.m.

Questions and closing remarks

Speeches lasts about 20 minutes: after each of them, there are about 10 minutes of discussion

Day 4: Thursday, September 21st

RIGHTS AND ETHICS

AFTERNOON

2:00 p.m.

Clinical Intervention

“Upper Limb Treatment - Kos Experience”

Speaker: Antonello Morgantini (ITA) - Paola Bovari (ITA)

Focus On Devices

“Motore”

Speaker: Stefano Mazzoleni (ITA)

“Amadeo”

Speaker: Rocco Salvatore Calabrò (ITA)

“Diego”

Speaker: Elena Lozano Caverio (SPN)

“Pablo”

Speaker: Alessandro Ciarimboli (ITA)

Discussion/Assessment of Critical Issues and results obtained, also Involving Companies

Practical Training on Devices

5:00 p.m.

Closing remarks

SESSION COORDINATOR: Mauro Zampolini

Speeches lasts about 20 minutes: after each of them, there are about 10 minutes of discussion

The morning session will be live-streamed at all the "Santo Stefano" rehabilitation facilities of the Kos Care group

Day 5: Friday, September 22nd

ORGANIZATION AND MANAGEMENT

MORNING

9:00 a.m. **Registration**

9:30 a.m. **Organizational and Safety for Professionals and Patients**

“Management of Complexity in Treatment”

Speaker: Antonello Morgantini (ITA)

“Robotics in treatment and management complexity”

Speaker: Paolo Guidoni (ITA)

Operational Settings: Structures and Experiences

“Continuum of Care After Stroke Using Robotic Technology”

Speaker: Daiana Popa (ROU)

“How can we benefit from technology through different stages of the “Rehabilitation Management Plan” ?”

11:00 a.m. *Speaker: Iuly Treger (ISR)*

11:30 a.m. **Coffee Break**

Home-Based Rehabilitation Services

“New Technologies Applied to Outpatients”

Speaker: Valentina Agostinelli (ITA)

“Feasibility and Usability of a Telerehabilitation System: KOS Experience”

Speaker: Francesca Tombolini (ITA)

Educational and Training Aspects

“Training skills for the Young PRM Specialist”

Speaker: Asmaa Mahmoud (ITA)

1:00 p.m. **Questions and Closing Remarks**

Speeches lasts about 20 minutes: after each of them, there are about 10 minutes of discussion

HOW TO IMPLEMENT AND DEAL EVIDENCE

Day 5: Friday, September 22nd

ORGANIZATION AND MANAGEMENT

AFTERNOON

2:⁰⁰ p.m.

Clinical Intervention

“Dexterity recovery”

Speaker: Elisa Andrenelli (ITA)

Focus on Devices

“Gloreha”

Speaker: Kristyna Hoidekrová (CZE)

“Limix”

Speaker: Francesco Pezzuoli (ITA)

“Luna EMG”

Speaker: Marco Alpi (ITA)

Discussion/Assessment of Critical Issues and results obtained, also Involving Companies

Practical Training on Devices

5:⁰⁰ p.m.

Closing remarks

SESSION COORDINATOR: Daiana Popa

Speeches lasts about 20 minutes: after each of them, there are about 10 minutes of discussion

The morning session will be live-streamed at all the "Santo Stefano" rehabilitation facilities of the Kos Care group

Day 6: Saturday, September 23rd

CONCLUSION OF THE 4th Edition of the ER2 School

MORNING

9⁰⁰ a.m. **Registrations**

9³⁰ a.m. **Introductory Intervention**

“European Rehabilitation Robotics Community: a Project Toward Evidence”

Speaker: Francesco Spigarelli (ITA)

Debate

Developments for Working Groups and for New School Editions

11³⁰ a.m. **Closing remarks**



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SCIENTIFIC COMMITTEE

Nikos Barotsis; Giovanna Beretta; Paolo Boldrini; Maria Gabriella Ceravolo; Antonio De Tanti; Calogero Foti; Marco Franceschini; Alessandro Giustini; Klemen Grabljevec; Daiana Popa; July Treger; Mauro Zampolini.

FACULTY

Francesco Acquaroli; Valentina Agostinelli; Marco Alpi; Elisa Andrenelli; Nikos Barotsis; Giovanna Beretta; Paolo Boldrini; Donatella Bonaiuti; Paola Bovari; Enrico Brizioli; Rocco Salvatore Calabrò; Marianna Capecci; Padre Carlo Casalone; Marc Casellas Vilaldoms; Maria Gabriella Ceravolo; Alessandro Ciarimboli; Antonio De Tanti; Salvatore Facciorusso; Calogero Foti; Marco Franceschini; Alessandro Giustini; Klemen Grabljevec; Giampiero Griffo; Mauro Grigioni; Paolo Guidoni; Kristýna Hoidekrová; Carlotta Kiekens; Elena Lozano Caverio; Asmaaa Mahmoud; Stefano Mazzoleni; Pierpaolo Montali; Antonello Morgantini; Giovanni Morone; Stefano Negrini; Aydan Oral; Ismael Ordoñez Rey; Francesco Pezzuoli; Daiana Popa; Federico Posteraro; Sanaz Pournajaf; Gonzalo Puyuelo; Andrea Santamato; Martina Spiess; Francesco Spigarelli; Francesca Tombolini; July Treger; Massimo Vallasciani; Evelyne Wiskerke; Mauro Zampolini.

Speakers in requested to be in presence but could be online if necessary.

**Tutors for afternoon practical training, dividing participants in little groups:
Doctors, Physical Therapists, Occupational Therapists, Bioengineers.**

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ORGANIZATION

Prof. Alessandro Giustini

ESPRM Robotic SISC – RRSS - Community Chair

Dr. Daiana Popa

ESPRM Robotic SISC – RRSS

Dr. Antonello Morgantini

Porto Potenza Picena Rehabilitation Center General Director

Cristina Gamberini

Santo Stefano - KOS Group / ERRS - School Secretary

Antonio Ruggiero

Bioengineer / Santo Stefano - KOS Group / ERRS - Community Facilitator

Francesco Spigarelli

Data Scientist / Santo Stefano - KOS Group / ERRS - Community Facilitator

EVENT SECRETARIAT

Kos Care

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