

Meeting venue

Wyndham Loutraki Poseidon Resort
Loutraki 203 00
Greece



Contact/ Organizer

University Hospital RWTH Aachen
Institute for Molecular Cardiovascular Research
(IMCAR)
Prof. Dr. Joachim Jankowski & Dr. Zhuojun Wu

Local organizer:
Biomedical Research Foundation Academy of Athens
(BRFAA)
Prof. Dr. Antonia Vlahou

Organization

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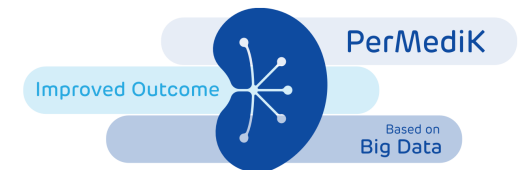


COST Action Permedik

Training School,

Action workshop,

3rd Management Committee Meeting



Athens / Loutraki - Greece
14-16 September 2023



Topic:
**Computational Ecosystem for
medical Big Data**

STRUCTURE

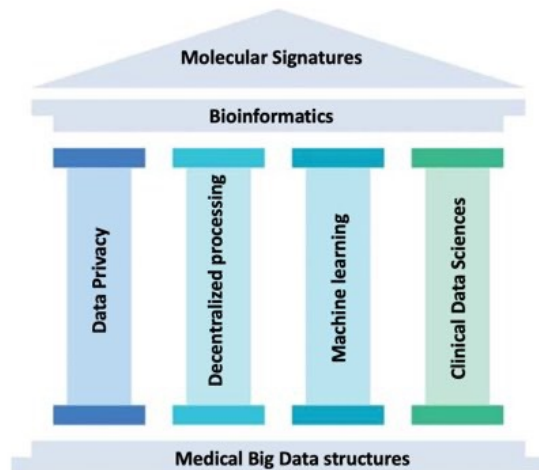
PART I: CA21165 Training School

Topic: Computational Ecosystem for medical Big Data

- Arrival 13.09.2023
- Day 1 (14.09.): Theory and Practice
(Usecases for medical Big Data)
- Day 2 (15.09.): Practical exercise & Action Workshop
- Departure 16.09.2023

PART II: Permedik Action Workshop and MC Meeting

- Arrival 14.09.2023
- Day 1 (15.09.): Action Workshop and WG meeting
- Day 2 (16.09.): Management Committee Meeting
- Departure 17.09.2023



Notes

Day 3: Saturday 16 September 2023

Location: Apollo 1 + 2

Management committee

08.50 - 09.00 COST action Group Photo

9.00 – 10:30 Management Committee Meeting – Part 1
(open to all participants)
Budget 2024, Scientific Communication, future meetings

10:30 – 10:45 Coffee break

10:45 – 12:00 Management Committee Meeting – Part 2
(open to all participants)
Budget 2024, Scientific Communication, future meetings

12:00 – 14:00 Open Working Group Discussion

PART I: CA21165 Training School

Day 1: Thursday 14 September 2023

Location: Neptune

Theory and Practice (Usecases for medical Big Data)

09.00 – 9:15 Welcome by the Local Organizer and Chair
Prof. Vlahou & Prof. Jankowski

9.15 – 10.00 Speeddating (Presentation of the Participants)

10.00 – 11.00 Medical Big data structures and challenges
Prof. Joachim Jankowski

(Institute for Molecular Cardiovascular Research, RWTH Aachen, Germany)

11.00 - 11.20 Coffee break

11.20 - 12.20 Privacy-preserving methods and trusted execution environments
Johannes Lohmöller

(Institute for Communication and Distributed Systems, RWTH Aachen, Germany)

12.20 - 13.20 Federated learning and decentralized data processing
Prof. Riste Stojanov

(Faculty of Computer Science and Engineering, University of Skopje, Republic of Macedonia)

13.20 - 14.30 Lunch break

14.30 – 15:30 Unveiling the Path to Unbiased Biomedical Predictive Analysis: A Multi-Step Approach to Mitigate Inherent Bias
Prof. Tome Eftimov

(Department for Computer Systems, Jozef Stefan Institute, Slovenia)

15.30 - 15.45 Coffee break

15:30 - 16.30 Clinical Data Science and Translational Bioinformatics
Prof. Michael Krauthammer

(Department of Quantitative Biomedicine, University of Zurich, Switzerland)

15.45 - 16.45 Applications of bioinformatics in biomarker and drug target discovery
Prof. Antonia Vlahou

(Biomedical Research Foundation Academy of Athens, Greece)

17.00 – 18.00 Networking & Dinner afterwards

Day 2: Friday 15 September 2023

Action Workshop (Apollo 1+2) and Training school practical (Neptune)

- 08.30 - 08.45 Welcome by the Local organizer and Chair
Prof. Vlahou & Prof. Jankowski
- 08.45 - 09.00 Information about COST
Dr. Inga Dadeshidze
(Science Officer, European Cooperation in Science and Technology (COST), Brussels, Belgium)
- 09.00 - 09.30 *Presentation of the COST Action, Structure, Working groups and open discussion – optional*
- 09.30 - 10.15 Introduction of new members (Speeddating)
(Alessandra Perna, Gregory Papagregoriou, Ivona Vasileska, Joachim Steinwendner, Paul Perco, Tome Eftimov, Ziad Massy, Roberta Coletti)
- 10.15 - 10.45 WG 1 – Big Data handling
Discussion and presentation
Chair Dr. Julie Klein
Presentation of the Data collection tool & guidelines
- 10.45 - 11.00 Coffee break
- 11.00 - 11.30 Introduction to the Workshop – Workgroup 2
Prof. Riste Stojanov
(Faculty of Computer Science and Engineering, University of Skopje, Republic of Macedonia)
- 11.30 - 12:30 WG 2 Workshop – General talk
Chair Prof. Riste Stojanov

AI and Machine learning in Health science
Prof. Joachim Steinwendner
(ETH Zürich, Switzerland)

Modelling of longitudinal Data
Prof. Michael Krauthammer
(Department of Quantitative Biomedicine, University of Zurich, Switzerland)
- 12.30 - 13.30 Lunch break

Day 2: Friday 15 September 2023

Action Workshop and Training school practical

- 13.30 – 15.00 WG 2 Workshop & Discussion
Computational tools & methods
Chair Prof. Riste Stojanov

Data Privacy
Johannes Lohmöller & Jan Pennekamp
(Institute for Communication and Distributed Systems, RWTH Aachen, Germany)

From Language Models to Food and Biomedical Predictive Modelling
Prof. Tome Eftimov & Gjorgjina Cenikj
(Department for Computer Systems, Jozef Stefan Institute, Slovenia)

Exploiting the Power of High-Performance Computing for Biomedical Big Data: Advancements, Challenges, and Future Direction
Prof. Ivona Vasileska
(Faculty of Mechanical Engineering, University of Ljubljana, Slovenia)
- 15.00 - 15.30 Coffee break
- 15.30 - 17.00 Data-driven approaches supporting biomarker, drug target, and drug identification in CKD
Dr. Paul Perco
(Delta 4 GmbH, Vienna / Medical University Innsbruck, Austria)

Data processing in clinical Data science and translational bioinformatics
Dr. Rafael Strogilos / Dr. Vasiliki Lygirou
(Biomedical Research Foundation Academy of Athens, Greece)

Mathematical Models in health sciences
Prof. Marta Lopes
(Universidade Nova de Lisboa, Portugal)
- 18.00 - 19.00 Networking
- 19.00 Dinner