European University Alliance for Global Health

EUGLOH Summer School
Biomedical Data Processing and Global Aspects of COVID-19

July 6th – 10th 2020
Organized by University of Szeged (Hungary)

with the participation of invited speakers from the member universities of the EUGLOH alliance:

Ludwig-Maximilians-Universität München (Germany)
Lund University (Sweden)
Universidade do Porto (Portugal)
Université Paris-Saclay (France)

Monday July 6, 2020

OPENING AND WELCOME	
9:00 – 9:10	**Welcome by Vice-Rector for Strategic Planning** Márta Széll, University of Szeged, Hungary
9:10 – 9:30	**Introduction by the organizers** Ferenc Peták, University of Szeged, Hungary

DATA PROCESSING, ANALYSES AND MANAGEMENT 1	
10:00 – 10:45	**Data Processing and Data Management Activities at ELI-ALPS** Lajos Schrettner, ELI-ALPS, Szeged, Hungary
11:00 – 11:45	**Dos and Don'ts of Health Data Science – Theoretical lecture** Pedro Pereira Rodrigues, University of Porto, Portugal
12:00 – 12:45	**Dos and Don'ts of Health Data Science – Practical session** Pedro Pereira Rodrigues, University of Porto, Portugal
12:45 – 14:00	**Lunch break**
14:00 – 14:45	**The Crisis of Statistical Inference: Time has Come for an Epistemologic Reflection** Bruno Falissard, Université Paris-Saclay, France
15:00 – 15:45	**Open discussion, socializing, networking**

Tuesday 7, 2020

DATA PROCESSING, ANALYSES AND MANAGEMENT 2	
9:00 – 9:45	**Analogue and Digital Processing of Biomedical Signals** Zoltán Gingl, University of Szeged, Hungary
10:00 – 10:45	**Image Processing and Analysis in (Biomedical) Research** László Nyúl, University of Szeged, Hungary
11:00 – 11:45	**Natural Language Processing in (Biomedical) Research** Gábor Berend, University of Szeged, Hungary
12:00 – 12:45	**Induced Pluripotent Stem Cells Based Models in Parkinson's Disease** Laurent Roybon, Lund University, Sweden
12:45 – 14:00	**Lunch break**
14:00 – 14:45	**Open discussion, socializing, networking**

Wednesday 8, 2020

ARTIFICIAL INTELLIGENCE, MACHINE LEARNING, MODELLING	
9:00 – 9:45	**Knowledge curation for COVID-19: natural language processing, biomedical databases and other resources** Sonja Atis, Lund University, Sweden
10:00 – 10:45	**Life Beyond the Pixels: Image Analysis and Machine Learning Methods for Single-Cell Drug Discovery** Péter Horváth , Biological Research Center, Szeged, Hungary
11:00 – 11:45	**Unsupervised Machine Learning for Gene Expression Analysis – Part 1** Pedro Gabriel Dias Ferreira, University of Porto, Portugal
12:00 – 12:45	**Unsupervised Machine Learning for Gene Expression Analysis – Part2** Pedro Gabriel Dias Ferreira, University of Porto, Portugal
12:45 – 14:00	**Lunch break**
14:00 – 14:45	**From Literature Knowledge to Mechanistic Modelling** Dénes Türei, EMBL Molecular Medicine Partnership Unit, Szeged, Hungary
15:00 – 15:45	**Open discussion, socializing, networking**

Thursday 9, 2020

COVID-19 Thematic Day 1	
9:00 – 9:45	**SARS-Cov-2 And COVID-19: The Past, Present, and Future Perspectives** Lund University Virus Center, Sweden
10:00 – 10:45	**Mathematical Modelling of the COVID-19 Outbreak in Hungary** Gergely Röst, University of Szeged, Hungary
11:00 – 11:45	**An Economic Model of Optimal Lockdown** Stefano Bosi, UEVE/Université Paris-Saclay, France
12:00 – 12:45	**The European Union as A Complex System in The Time of Black Swan Events** Anita Pelle, University of Szeged, Hungary
12:45 – 14:00	**Lunch break**
14:00 – 14:45	**Epidemiological and Clinical Aspects of COVID 19 – How Can Population Testing and Tracing Respond to the Global Pandemic** Henrique Barros, University of Porto, Portugal
15:00 – 15:45	**Summary, Discussion of COVID-19 Outbreak**

Friday 10, 2020

COVID-19 Thematic Day 2	
9:00 – 9:45	**Molecular biology and immunology of the SARS CoV-2 infection** Ernő Duda, University of Szeged, Hungary
10:00 – 10:45	**Epidemiological Studies: Conception and Design (Illustrated Through a Current German Coronavirus Study)** Katja Radon, Ludwig-Maximilians-Universität München, Germany
11:00 – 11:45	**Epidemiological Studies: Data Collection and Interpretation** Tobias Weinmann, Ludwig-Maximilians-Universität München, Germany
11:45 – 14:00	**Lunch break**
14:30 – 15:45	**General Discussion and Feedback, Evaluation of Attendees, Closing of Summer School** Ferenc Peták, University of Szeged, Hungary