

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 – Part 2 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