3rd Course on Computational Systems Biology of Cancer: Promises of Artificial Intelligence
September 28 - October 2, 2020

VIRTUAL   EMBO / FEBS / Institut Curie Training Unit International Course   *VIRTUAL*

Monday, September 28th		Session 1: Machine learning in prior knowledge applications for data analysis
Chairs: TBA		
08:50 09:00	**Emmanuel Barillot** IInstitut Curie, FR	Welcome and opening remarks
09:00 10:00	**Andrei Zinovyev** Institut Curie, FR	**Didactic introductory lecture on AI approaches in systems biology**
10:00 10:30		Coffee break / Meet a speaker in a virtual discussion room
10:30 11:30	Selected Talks from Abstracts	15 minutes/presentation
11:30 12:30	Flash presentations of projects by post-docs	7 minutes/presentation
12:30 13:30		Lunch / See posters online
Monday, September 28th		**Session 2: Network biology in Artificial Intelligence era**
Chairs: TBA		
13:30 14:30	**Laura Cantini** IBENS-ENS, FR	**Benchmarking of computational approaches to multi-omics data analysis**
14:30 15:30	**Nataša Pržulj** Barcelona Supercomputing Center, ES	Analyzing Network Data in Biology and Medicine
14:30 15:30	Flash presentations of projects by PhD students	5 minutes/presentation
17:30 19:00		**Welcome cocktail / Virtual Apéro**

Tuesday, September 29th		Session 3: Patient stratification and disease classification using Artificial Intelligence methods (1)
Chairs: TBA		
09:00 10:00	**Valentina Boeva** ETH, Zurich, CH	**Machine learning methods for the detection of intratumoral heterogeneity in cancer**
10:00 10:30		Coffee break / Meet a speaker in a virtual discussion room
10:30 11:30	**David Wedge** The Big Data Institute, UK	**Stratification of prostate cancers through the application of machine learning to sequencing data**
11:30 12:30	Selected Talks from Abstracts	15 minutes/presentation
12:30 13:30		Lunch / See posters online
Tuesday, September 29th		**Session 4: Patient stratification and disease classification using Artificial Intelligence methods (2)**
Chairs: TBA		
13:30 14:30	**Susana Vinga** Instituto Superior Técnico, PT	**Cancer classification and survival analysis through sparse optimization and network-based regularisers**
14:30 15:00		Coffee break / Meet a speaker in a virtual discussion room
15:00 16:00	**Nataliya Sokolovska** University Pierre et Marie Curie, FR	**Interpretable models for clinical scores**
16:00 17:30	Flash presentations of projects by post-docs	7 minutes/presentation
17:30 18:00		**COVID19 and cancer / Virtual round table dicussion**

Wednsday, September 30th		Session 5: Machine Learning applications in precision medicine (1)
Chairs: TBA		
09:00 10:00	**Chloé-Agathe Azencott** Centre for Computational Biology, MINES ParisTech, FR	**TBA**
10:00 10:30		Coffee break / Meet a speaker in a virtual discussion room
10:30 11:30	**Yves Moreau** KULeuven, BE	**Bayesian matrix factorization and deep learning for drug discovery and precision medicine**
11:00 12:30	Flash presentations of projects by PhD students	5 minutes/presentation
12:30 13:30		Lunch / See posters online
Wednsday, September 30th		**Session 6: Machine Learning applications in precision medicine (2)**
Chairs: TBA		
13:30 14:30	**Jean-Philippe Vert** Google, FR	**Robust machine learning for cancer precision medicine**
14:30 15:00	**Olli Kallioniemi** SciLifeLab, SE	**AI approaches in Precision Cancer Medicine**
15:00 16:00		Coffee break / Meet a speaker in a virtual discussion room
16:00 17:00	**Lodewyk Wessels** Netherlands Cancer Institute, NL	**Mapping cellular networks in cancer**
17:00 18:00	Selected Talks from Abstracts	15 minutes/presentation

Thursday, October 1st Chairs: TBA		Session 7: Tumor genetics and epigenetics (1)
09:00 10:00	**Christina Leslie** Memorial Sloan Kettering Cancer Center, USA	**Machine learning in regulatory genomics and systems biology**
10:00 10:30		Coffee break / Meet a speaker in a virtual discussion room
10:30 11:30	**Andrew Teschendorff** University College, UK	**Machine Learning approaches for large scale multi-dimensional cancer omics data analysis**
11:30 12:30	**Julio Saez-Rodriguez** Heidelberg University, DE	**Supporting Machine Learning with Prior Biological Knowledge to extract insight from omics data**
12:30 13:30		Lunch / See posters online
Thursday, October 1st Chairs: TBA		**Session 8: Tumor genetics and epigenetics (2)**
13:30 14:30	**Touati Benoukraf** MUN, CA	**DNA methylation and Cancer**
14:30 15:30	**List of speakers TBA**	**Career development WS: Invited speakers, pharma and scientific editing representatives, platform managers speaking on their career**
15:30 16:00		Coffee break / Meet a speaker in a virtual discussion room
16:00 16:30	Master student's journal club	Preesentation of 4-5 milestone papers
16:30 17:30	Tutorial/Demo	TBA

Friday, October 2nd Chairs: TBA		Session 9: Bioimage Informatics in cancer research (1)
09:00 10:00	**Nasir Rajpoot** University of Warwick, UK	**The Promise of Computational Pathology**
10:00 10:30		Coffee break / Meet a speaker in a virtual discussion room
10:30 11:30	**Florian Markowetz** University of Cambridge, UK	**Image analysis of the tumour tissue and early detection by AI**
11:30 12:30	Master student's journal club	Preesentation of 4-5 milestone papers
12:30 13:30		Lunch / See posters online
Friday, October 2nd Chairs: TBA		**Session 10: Bioimage Informatics in cancer research (2)**
13:30 14:30	**Thomas Walter** Centre for Computational Biology, MINES ParisTech, FR	**Exploring the spatial aspects of gene expression**
14:30 15:30	**Emma Lundberg** SciLifeLab, SE	**AI for improved spatial proteomics**
15:30 16:00		Coffee break / Meet a speaker in a virtual discussion room
16:00 17:30	Master student's journal club	Preesentation of 4-5 milestone papers
17:30 18:00		**Closing remarks, prizes for presentations and posters**
17:30 19:00		**Farewell cocktail / Virtual Apéro**