## BIT22 Program

Thursday, J	une 23 <sup>th</sup> Venue: Institute of Physics UMK, Grudziadzka 5 street, Toruń; COK Lecture Hall
12:00 - 13:15	Registration
12:00 - 13:15	Lunch (included in registration fee)
13:25 - 13:30	Conference opening / Welcome
13:30 - 14:45	Session I
13:30 - 14:15	Opening lecture: Włodzisław Duch, Nicolaus Copernicus University, Torun, Poland, International Neural
	Network Society Fellow
	"Mental States in Brains and Computers"
14:15 - 14:45	Alex Adams, Oxford University, Oxford, UK
	"The challenges and opportunities of adaptive nanopore sequencing"
14:45 - 15:15	
15:15 - 16:50	
15:15 - 16:00	Yasuteru Shigeta, University of Tsukuba, Tsukuba, Japan
	"Integrated drug discovery simulations for Covid-19 main protease"
16:00 - 16:30	Adolfo Poma Bernaola, University of Lodz, Lodz, Poland
10.00 10.50	"Molecular biomechanics of the SARS-CoV-2 variants: The virus-host cell attachment"
	Krzysztof Kuczera, University of Kansas, Kansas, US
16:30 - 16:50	
	simulations"
16:55 - 17:00	Conference PHOTO at entrance to the Institute of Physics
17:00 - 18:00	Poster session & Coffee break
18:00 - 19:10	Session III
18:00 - 18:30	Guilliem Ylla Bou, Jagiellonian University, Krakow, Poland
18.00 - 18.30	"Comparative genomics of insects to unveil the evolution of gene regulatory networks"
18:30 - 18:50	Bartosz Wilczyński, Warsaw University, Warsaw , Poland
10.50 - 10.50	"Machine learning approaches to regulatory element identification"
18:50 - 19:10	Witold Rudnicki, University of Bialystok, Bialystok, Poland
18.50 - 19.10	"Hunting for Biomarkers in Omics Data - methods and application"
19:15 - 19:45	PTBI Board of Directors meeting (for the Board only)
20:00 - 22:00	Conference social "pierogi & beer " gathering at Restaurant "Pierogarnia Stary Toruń",
20.00 - 22.00	Most Pauliński 2 street. Note: food is included in the registration fee
	<b>e 24<sup>th</sup> Venue: Institute of Physics UMK, Grudziadzka 5 street, Toruń;</b> COK Lecture Hall
9:00 - 10:00	Session IV internet lectures mainly
9:00 - 9:20	Karolina Mikulska-Ruminska, Nicolaus Copernicus University, Torun, Poland
5.00 - 5.20	"The role of PE-binding protein 1 in the ferroptosis process" (INTERNET LECTURE)
9:20 - 9:40	Vasilis Promponas, University of Cyprus, Nicosia, Cyprus
5.20 - 5.40	"Computational resources for studying selective macroautophagy" (INTERNET LECTURE)
	Jan Brezovsky, Adam Mickiewicz University, Poznan; Poland and IIMCB Warsaw, Poland
9:40 - 10:00	"Exploring Dynamic Determinants of Quorum Quenching Activity Employed by N-terminal Serine
5110 20100	Hydrolases to Enable Rational Engineering of their Potency as Alternative Antimicrobial Agents for Selective
	Control of Virulence in Resistant Bacterial Species"
10:00 - 10:15	Coffee break
10:15 - 12:30	Session V
10:15 - 11:00	Shoshana J. Wodak, VIB-VUB Center for Structural Biology, Brussels, Belgium
	"Charting and characterizing the conformational landscape of native proteins" (INTERNET LECTURE)
11:00 - 11:30	Jaroslaw Meller, Cincinnati Children's Hospital Medical Center and University of Cincinnati, Cincinnati, US
	"Exploring Transcriptional Signature Connectivity in Conjunction with Biophysical Complementarity for Drug
	Discovery and Repurposing"
11:30 - 11:50	Robert Nowak, Warsaw University of Technology, Warsaw, Poland
	"Lock-Free de Bruijn graph"
11:50 - 12:10	Malgorzata Kotulska, Wrocław University of Science and Technology, Wroclaw ,Poland
	"Topological analysis as a tool for detection of abnormalities in protein-protein interaction data"
12:10 - 12.30	Paweł Łabaj, Małopolska Centre of Biotechnology, Jagiellonian University, Krakow, Poland
	"News from The Metagenomics and Metadesign of the Subways and Urban Biomes (MetaSUB)"

12:30 - 14:30   Lunch (included in registration fee)   Free sightseeing tour in English (13:00-14:30)     16:00 - 17:30   Session VI     16:00 - 16:30   Damian Wajtowicz, National Institutes of Health (NIH, NLM, NCBI), US	Friday, June 24 <sup>th</sup> Venue: Institute of Physics UMK, Grudziadzka 5 street, Toruń; COK Lecture Hall		
16:00 - 16:30     Damian Wojtowicz, National Institutes of Health (NIH, NLM, NCBI), US       "Signatures of mutational processes in cancer" (INTERNET LECTURE)       Subhash C. Basak, University of Minnesota, Duluth, US       16:30 - 17:00     "Use of alignment-free sequence descriptors (AFSDs) in the characterization of emerging global viral pathogens" (INTERNET LECTURE)       16:30 - 17:00     "Use of alignment-free sequence descriptors (AFSDs) in the characterization of emerging global viral pathogens" (INTERNET LECTURE)       17:00 - 17:30     Ian Kosinski, European Molecular Biology Laboratory (EMBL) and Centre for Structural Systems Biology (CSSB) Hamburg, Germany       "Structure of the human nuclear pore complex by AlphaFold and integrative modeling" (INTERNET LECTURE)       17:30 - 18:00     Poster session & Coffee break       18:00 - 19:00     Session VI       18:00 - 18:10     Patrycja Rosa, University of Warsaw, Warsaw, Poland       "Exploring gene expression features concordant with Topologically Associating Domains"       Katarzyna Nałęcz-Charkiewicz, Warsaw University of Technology, Warsaw, Poland       "Sequericos-Borja, International Institute of Molecular and Cell Biology in Warsaw, Warsaw, Poland       "Squeezing water to the limits, transport of water through narrow tunnels in enzymes and consequences to their (dis/function"       Adam Napieralski, Warsaw University of Technology, Warsaw, Poland       "Sao - 18:40     "Basecal	12:30 - 14:30	Lunch (included in registration fee) Free sightseeing tour in English (13:00-14:30)	
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		"How to visualize biomolecules? VMD and beyond"	
	9:00 - 10.30		
9:00 - 10.30 Alex Adams, Oxford University, Oxford, UK		Alex Adams, Oxford University, Oxford, UK	
"Worked examples of machine learning and biomarker development"		"Worked examples of machine learning and biomarker development"	
Workshop III, room B.1.9 at ICNT (Interdisciplinary Centre for Modern Technologies), Wileńska 4 street,	10:45 - 12:30	Workshop III, room B.1.9 at ICNT (Interdisciplinary Centre for Modern Technologies), Wileńska 4 street,	
10:45 - 12:30 Toruń, by tram no. 1 (start from Faculty of Physics)		Toruń, by tram no. 1 (start from Faculty of Physics)	
"Proteomics at work: trip to experimental BioSep laboratory"		"Proteomics at work: trip to experimental BioSep laboratory"	