

38th TBI WINTERSEMINAR

DAY1 – 2023/02/12

5pm–12pm Arrival

DAY2 – 2023/02/13

11am–12pm Welcome notes and dinner planning

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3pm–6pm Session I – Computational Biology / RNA Structure
Chair: Stephan Bernhart

3pm–3:20pm **PEVO basket trial, combining immunotherapy with an epidrug in squamous cell carcinomas**
Gabor Balogh

3:20pm–3:40pm **CRISPR-Cas and associated RNA secondary structures**
Maximilian Feussner

3:55pm–4:15pm **Computational estimation of energy parameters**
Thomas Spicher

4:15pm–4:35pm **The effect of modified nucleotides on secondary structure prediction in tRNA**
Yuliia Varenyk

5pm–5:20pm **RNA-RNA interaction dynamics**
Maria Waldl

5:20pm–5:40pm **Salt concentration correction in ViennaRNA package**
Hua-Ting Yao

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8pm–10pm Session II – Graph Theory
Chair: Daniel Merkle

8pm–8:20pm **Approximate Graph Products**
Wilfried Imrich

8:20pm–8:40pm **Nut graphs are not edge transitive**
Nino Bašić

8:40pm–9pm **On vertex-transitive nut graphs that are not circulant graphs**
Tomaž Pisanski

9:15pm–9:35pm **k-Median Graphs**
Sandhya Thekkumpadan Puthiyaveedu

DAY3 – 2023/02/14

3pm–6:15pm Session III – Phylogeny / Transcriptomics
Chair: Jan Gorodkin

3pm–3:25pm **A quartet-based approach to infer phylogenetically informative characters from phenotypic data**
Ben Luis Hack

- 3:25pm–3:35pm **A quartet-based approach to inferphylogenetically informative characters from phenotypic data**
Vivian Brandenburg
- 3:35pm–3:55pm **Evolution of Neuropeptide Y/RFamide-like receptors in Nematodes**
Franziska Reinhardt
- 4:10pm–4:30pm **Evolution of the CCA-adding Enzyme in early-branching Metazoa**
Elisa Israel
- 4:30pm–4:50pm **Magnipore: Differential single nucleotide changes of ONT signals**
Jannes Spangenberg
- 4:50pm–5:10pm **DNA methylation analysis using Nanopore sequencing**
Daria Meyer
- 5:30pm–5:55pm **Locus-specific expression analysis of Transposable Elements**
Robert Schwarz
- 5:55pm–6:15pm **The impact of methylation patterns in lymphoma on allele-specific expression**
Christiane Gärtner

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8pm–10pm **Session IV – Graph Theory / Cheminfo**
Chair: Peter Stadler

- 8pm–8:10pm **TACsy : Training Alliance for Computational Systems Chemistry**
Daniel Merkle
- 8:10pm–8:30pm **Atom Transition Networks for Atom Tracing**
Nora Beier
- 8:30pm–8:50pm **A Petri-Net Based Framework for Atom-Tracing in Chemical Networks**
Casper Asbjørn Eriksen
- 9:05pm–9:25pm **Synthesizability of molecules**
Nico Domschke
- 9:25pm–9:45pm **Comparison of Atom Maps**
Marcos Laffitte
- 9:45pm–10pm **An Application of Graph Products in Rule Inference**
Akbar Davoodi

DAY4 – 2023/02/15

- 8pm–10pm **Session V – Genomics / Other**
Chair: Sven Findeiß
- 8pm–8:20pm **Nonretroviral RNA viruses integrated into the human genome**
Muriel Ritsch
- 8:20pm–8:40pm **Bashing irreproducibility with shournal**
Tycho Kirchner
- 9pm–9:30pm **Theory is Dead! Long Live Theory!**
Axel Mosig

DAY5 – 2023/02/16

- 3pm–6pm **Session VI – Graph Theory**
Chair: Josef Leydold
- 3pm–3:20pm **Promoters revisited**
Elina Wiechens
- 3:20pm–3:30pm **Bubble Structures in Digraphs**
Lena Gladbach

- 3:30pm–3:50pm **Quasi Best Match Graphs**
Annachiara Korchmaros
- 4:10pm–4:30pm **Directed Permutation Graphs**
Bruno Schmidt
- 4:30pm–4:50pm **Nesting of Polygons**
Carsten R. Seemann
- 4:50pm–5:10pm **CORENET: Complex chemical reaction networks for breakthrough scalable reservoir computing**
Mehmet Aziz Yirik
- 5:30pm–6pm **Randomization of chemical reaction networks**
Christoph Flamm

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- 8pm–10:10pm **Session VII – Bioinformatics**
Chair: Ivo Hofacker
- 8pm–8:20pm **Bashbone: NGS Bash library**
Konstantin Riege
- 8:20pm–8:30pm **VirJenDB: the virus genome database based at FSUJena**
Shahram Saghaei
- 8:30pm–8:55pm **Automated gating of flow cytometry data**
Carmen Bruckmann
- 9:10pm–9:30pm **Differential analysis of RNA cross-linked HTS reads with RNAswarm**
Gabriel Lencioni Lovate
- 9:30pm–9:50pm **Approaching RNA-protein interaction predictions from an evolutionary perspective using co-alignments**
Sarah Krautwurst
- 9:50pm–10:10pm **Prediction of base editing outcomes by deep learning**
Ying Sun

DAY6 – 2023/02/17

- 10am–1pm **Session VII – Genomics**
Chair: Steve Hoffmann
- 10am–10:20am **Screen for conserved RNA structures in cyanobacteria**
Adrian Geissler
- 10:20am–10:40am **De-novo canonical microRNA annotation: Insights using iterative models**
Cristian Velandia
- 10:40am–11am **Genome regulation by tumor suppressors and oncoproteins**
Martin Fischer
- 11:15am–11:30am **Deciphering the molecular causes of exceptional aging phenoms in the animal kingdom by applying multi-omics**
Arne Sahm
- 11:30am–11:50am **Annotation-free Identification of Synteny Anchors**
Karl Kaether
- 11:50pm–12:10pm **Genomics on a Shoestring Budget**
Thomas Gatter