



جامعة الملك عبد الله
للعلوم والتقنية
King Abdullah University of
Science and Technology

CBRC Computational Bioscience
Research Center

KAUST Research Conference on Computational and Experimental Interfaces of Big Data and Biotechnology

AGENDA

January 25 – 27, 2016

Conference Center, Building 19
Level 3, Hall 1-3

Day 1, January 25

Time	Event
8:00 – 8:30	Coffee & Breakfast (Bld 19)
8:30 – 9:00	Registration
9:00 – 9:10	Welcome Address <i>Prof Jean Fréchet</i> <i>Vice President of Research</i> <i>King Abdullah University of Science and Technology</i>
9:10 – 9:20	Opening Remarks <i>Vladimir Bajic</i> <i>CBRC Director</i> <i>King Abdullah University of Science and Technology</i>
Session 1: Information Integration, Knowledge & Data Mining Chair: Vladimir Bajic	
9:30 – 10:10	Keynote Lecture: The power of data: structural bioinformatics yesterday and today <i>Anna Tramontano</i> <i>University of Rome</i>
10:10 – 10:40	Big Data analysis of human genome variations <i>Takashi Gojobori</i> <i>King Abdullah University of Science and Technology</i>
10:40 – 11:00	Coffee Break
11:00 – 11:30	High performance Computing and Big Data: A Happy Marriage <i>Rashid Mehmood</i> <i>King Abdulaziz University</i>
11:30 – 12:00	Finding a leucine in a haystack: Searching the proteome for ambiguous leucine-aspartic acid motifs <i>Stefan Arold</i> <i>King Abdullah University of Science and Technology</i>
12:00 – 13:30	Lunch Break

Session 2: Computation, Experimentation & Applications I

Chair: Takashi Gojobori

13:30 – 14:10	Keynote Lecture: Systems biology for mapping genotype–phenotype relations in yeast <i>Jens Nielsen</i> <i>Chalmers University of Technology</i>
14:10 – 14:40	Emerging experimental and computational technologies for purpose designed engineering of photosynthetic prokaryotes <i>Peter Lindblad</i> <i>Uppsala University</i>
14:40 – 15:10	The Genomic Code <i>Giorgio Bernardi</i> <i>Roma Tre University</i>
15:10 – 15:40	Trusted allies with new benefits: Repositioning existing drugs <i>Xin Gao</i> <i>King Abdullah University of Science and Technology</i>
15:40 – 16:00	Coffee Break
16:00 – 16:30	Molecular Genetic Diversity of Date Palm (<i>Phoenix dactylifera</i>) Germplasm in Qatar based on Microsatellite Markers <i>Talaat Ahmed Youssef</i> <i>Qatar University</i>
16:30 – 18:00	CBRC Lab Tours
18:30 – 20:30	Student Poster Session and Finger Buffet - Open to all (Library) Co-sponsored by KAUST Industry Engagement Office

Day 2, January 26

Session 3: Protein Bioinformatics

Chair: Xin Gao

Time	Event
8:30 – 9:00	Coffee & Breakfast (Bld 19)
9:00 – 9:40	Keynote Lecture: Network-based analysis of proteomics profiles <i>Limsoon Wong</i> National University of Singapore
9:40 – 10:10	Protein phosphorylation in bacterial signaling and regulation <i>Ivan Mijakovic</i> Chalmers University of Technology
10:10 – 10:40	Three-dimensional structures of autophosphorylation complexes in crystals of protein kinases <i>Roland Dunbrack</i> Fox Chase Cancer Center
10:40 – 11:00	Coffee Break
11:00 – 11:30	Modeling G protein-coupled receptors in human genome <i>Yang Zhang</i> University of Michigan
11:30 – 12:00	A deep learning framework for modeling structural features of RNA-binding protein targets <i>Jianyang Zeng</i> Tsinghua University
12:00 – 12:30	Group Photo Session CBRC & Speakers
12:30 – 14:00	Lunch Break

Session 4: Computation, Experimentation & Applications II

Chair: Robert Hoehndorf

14:00 – 14:40 Keynote Lecture: Big Data integration: Scalability and sustainability
Zhang Zhang
Chinese Academy of Sciences

14:40 – 15:10 Heterologous expression of pesticide coding genes in *Bacillus thuringiensis*, *P. luminescens* and *E. coli*
Samir Jaoua
Qatar University

15:10 – 15:40 High throughput comparisons and profiling of metagenomes for industrially relevant enzymes
Intikhab Alam
King Abdullah University of Science and Technology

15:40 – 16:00 Coffee Break

16:00 – 16:30 Comparative marine metagenomics of the Red Sea
Katsuhiko Mineta
King Abdullah University of Science and Technology

16:30 – 17:00 Diversity indices as measures of performance of functional annotation methods in metagenomics studies
Boris Jankovic
King Abdullah University of Science and Technology

17:00 – 18:00 Career Planning Panel Discussion with Speakers, Students, Postdocs & Researcher
Jelena Bajic

19:00 – 21:00 Gala Dinner - Invitation only (Yacht Club)
Bus will depart from KAUST Inn at 18:50

Day 3, January 27

Session 5: Text Mining, Natural Language Processing and Ontologies

Chair: Stefan Arold

Time	Event
8:30 – 9:00	Coffee & Breakfast (Bld 19)
9:00 – 9:40	Keynote Lecture: Adventures with large biomedical datasets: Diseases, medical records and genetics <i>Andrey Rzhetsky</i> <i>University of Chicago</i>
9:40 – 10:10	Knowledge exploration from Big Data in Biomedicine <i>Vladimir Bajic</i> <i>King Abdullah University of Science and Technology</i>
10:10 – 10:40	The glory and misery of electronic health records <i>Barry Smith</i> <i>University at Buffalo</i>
10:40 – 11:00	Coffee Break
11:00 – 11:30	Function and phenotype prediction through data and knowledge fusion <i>Karin Verspoor</i> <i>Melbourne University</i>
11:30 – 12:00	Knowledge-based analysis of phenotypes <i>Robert Hoehndorf</i> <i>King Abdullah University of Science and Technology</i>
12:00 – 12:30	Drug repurposing based on integrated information <i>Magbubah Essack</i> <i>King Abdullah University of Science and Technology</i>
12:30 – 14:00	Lunch Break

Session 6: Computation, Experimentation & Applications III

Chair: John Archer

14:00 – 14:30	Diversity of metabolism of hydrocarbon-degrading bacteria through adaptation to Qatari oil-polluted soils <i>Nabil Zouari</i> <i>Qatar University</i>
14:30 – 15:00	Potential for application of big data to cyanobacterial cell factories <i>John Archer</i> <i>King Abdullah University of Science and Technology</i>
15:00 – 15:20	Coffee Break
15:20 – 15:50	Machine learning and complex networks for personalized and systems biomedicine <i>Carlo Cannistraci</i> <i>Technische Universität Dresden</i>
15:50 – 16:20	Some thoughts on what kind of information from data mining may be useful for designing a microbial cell factory <i>Duncan Rowe</i> <i>SABIC</i>
16:20 – 16:30	Student Poster Winner Announcement – Vladimir Bajic Co-sponsored by KAUST Industry Engagement Office
16:30 – 16:40	Closing Remarks Vladimir Bajic and Takashi Gojobori
17:00 – 19:30	Sunset Cruise and Dinner – Invitation Only Bus will depart from Building 16 at 17:00

