CALL FOR PAPERS – Special Session on Computational Intelligence Methods for Drug Design

Part of the CIBB 2014 - 11th International Meeting on Computational Intelligence Methods for Bioinformatics and Biostatistics

Computer Laboratory, University of Cambridge, Cambridge, United Kingdom

June 26-28 2014

http://www.cussb.unisr.it/cibb2014/

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Aims and scope

Drug Design is a multi-disciplinary research area at the crossroads between chemistry, biology and computer science. The ever-increasing availability of integrated heterogeneous databases has spurred the use of Computational Intelligence methods in this area. These data-analysis methods are now not only useful, but necessary to optimise experimental efforts and thus increase productivity.

The aim of this special session is to bring together researchers interested in the development of Computational Intelligence methods to address the methodological challenges posed by Drug Design problems. Relevant topics within this context include the development and application of methods for Drug Repositioning, Polypharmacology Prediction, Pharmacogenomics modelling, Virtual Screening, Lead Optimisation, QSAR analysis, Molecular Similarity Search and Docking.

Organisers
Dr. Pedro Ballester (European Bioinformatics Institute, UK)
Ms. Naruemon Pratanwanich (University of Cambridge, UK)

Submissions

Conference papers must be prepared following the guidelines illustrated on the CIB website, which include the requirement of being between four and six pages in length and having five sections:

1. Scientific background
2. Material and methods
3. Results
4. Conclusion
5. References (no more than 10)

Papers should be submitted in PDF format on the Easy Chair conference system. Correct submissions require selecting this special session in the submission system. Each paper will be peer-reviewed and the resulting scores used to determine invitations for oral or poster presentations.

After the conference, a second submission of the paper in a 12-page format is required to be considered for publication in the Springer's Lecture Notes in Bioinformatics (LNBI) series. Furthermore, as it has been the case in previous CIBB conferences, we are planning to publish an extended version of the best papers of CIBB 2014, including special session papers, in a special issue of BMC Bioinformatics.

Important dates

Paper submission deadline :   March 15, 2014
Notification of Acceptance: May 1, 2014
Final papers due: May 30, 2014 (*)
Conference: June 26-28, 2014

(*) for the inclusion in the CIBB14 conference proceeding

About the organisers

Dr. **Pedro Ballester**'s research focuses on the development of new computational tools to analyse and predict the modulation of protein and cell function by small molecules. These methods are typically based on machine learning and specialised pattern recognition techniques exploiting various sources of experimental data. He also has a strong interest in translational research through the application of these methods to a range of problems in drug design, such as ligand-based and structure-based virtual screening, drug repositioning and pharmacogenomics modelling. Since July 2010, he is a MRC Methodology Research Fellow at the European Bioinformatics Institute and a Governing Body Fellow at Wolfson College Cambridge. Previously, he held positions as a Research Associate at the University of Cambridge and a Junior Research Fellowship at the University of Oxford, both in Chemistry departments.   In 2005, he was awarded a PhD from Imperial College London on Evolutionary Computation for Data Inference problems. http://www.pedroballester.com

Ms. **Naruemon Pratanwanich**'s research interests include the application of machine learning techniques, such as Bayesian approaches and latent models, for the optimal integration of heterogeneous data into pathway analysis models for personalised medicine and drug repositioning. She is currently a PhD candidate at the Artificial Intelligence Group of the Computer Laboratory, University of Cambridge, and a member of Darwin College. Previously, she was awarded an MSc in Biomedical Engineering and BEng first degree, both from the Chulalongkorn University in Thailand. http://www.cl.cam.ac.uk/~np394/