
**** SUBMISSION DEADLINE EXTENDED: February 11 ****

**1st INTERNATIONAL CONFERENCE ON ALGORITHMS FOR COMPUTATIONAL
BIOLOGY**

AlCoB 2014

Tarragona, Spain

July 1-3, 2014

Organized by:

Research Group on Mathematical Linguistics (GRLMC)
Rovira i Virgili University

<http://grammars.grlmc.com/alcob2014/>

AIMS:

AlCoB aims at promoting and displaying excellent research using string and graph algorithms and combinatorial optimization to deal with problems in biological sequence analysis, genome rearrangement, evolutionary trees, and structure prediction.

The conference will address several of the current challenges in computational biology by investigating algorithms aimed at: 1) assembling sequence reads into a complete genome, 2) identifying gene structures in the genome, 3) recognizing regulatory motifs, 4) aligning nucleotides and comparing genomes, 5) reconstructing regulatory networks of genes, and 6) inferring the evolutionary phylogeny of species.

Particular focus will be put on methodology and significant room will be reserved to young scholars at the beginning of their career.

VENUE:

AlCoB 2014 will take place in Tarragona, located 90 kms. to the south of Barcelona. The venue will be the Catalunya Campus.

SCOPE:

Topics of either theoretical or applied interest include, but are not limited to:

Exact sequence analysis
Approximate sequence analysis
Pairwise sequence alignment

Multiple sequence alignment
Sequence assembly
Genome rearrangement
Regulatory motif finding
Phylogeny reconstruction
Phylogeny comparison
Structure prediction
Compressive genomics
Proteomics: molecular pathways, interaction networks ...
Transcriptomics: splicing variants, isoform inference and quantification, differential analysis ...
Next-generation sequencing: population genomics, metagenomics, metatranscriptomics ...
Microbiome analysis
Systems biology

STRUCTURE:

AlCoB 2014 will consist of:

invited talks
invited tutorials
peer-reviewed contributions

INVITED SPEAKERS:

Michael Galperin (National Center for Biotechnology Information, Bethesda), Comparative Genomics Approaches to Identifying Functionally Related Genes

Uwe Ohler (Max-Delbrück Centre for Molecular Medicine, Berlin), Decoding Non-coding Regulatory Regions in DNA and RNA (tutorial)

Jason Papin (University of Virginia, Charlottesville), Network Analysis of Microbial Pathogens

PROGRAMME COMMITTEE:

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Michael Q. Zhang (Dallas, US)

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Carlos Martín-Vide (Tarragona, chair)
Bianca Truthe (Magdeburg)
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SUBMISSIONS:

Authors are invited to submit non-anonymized papers in English presenting original and unpublished research. Papers should not exceed 12 single-spaced pages (including eventual appendices) and should be formatted according to the standard format for Springer Verlag's LNCS series (see <http://www.springer.com/computer/lncs?SGWID=0-164-6-793341-0>).

Submissions have to be uploaded to:

<https://www.easychair.org/conferences/?conf=alcob2014>

PUBLICATIONS:

A volume of proceedings published by Springer in the LNCS/LNBI series will be available by the time of the conference.

A special issue of IEEE/ACM Transactions on Computational Biology and Bioinformatics (TCBB, 2012 impact factor: 1.616) will be later published containing peer-reviewed extended versions of some of the papers contributed to the conference. Submissions to it will be by invitation.

REGISTRATION:

The period for registration is open from September 21, 2013 to July 1, 2014. The registration form can be found at:

<http://grammars.grlmc.com/alcob2014/Registration.php>

DEADLINES:

Paper submission: February 11, 2014 (23:59 CET) – EXTENDED –
Notification of paper acceptance or rejection: March 15, 2014
Final version of the paper for the LNCS/LNBI proceedings: March 22, 2014
Early registration: March 29, 2014
Late registration: June 17, 2014
Starting of the conference: July 1, 2014
End of the conference: July 3, 2014
Submission to the post-conference TCBB special issue: October 3, 2014

QUESTIONS AND FURTHER INFORMATION:

florentinalilica.voicu@urv.cat

POSTAL ADDRESS:

AlCoB 2014
Research Group on Mathematical Linguistics (GRLMC)
Rovira i Virgili University
Av. Catalunya, 35
43002 Tarragona, Spain

Phone: +34 977 559543
Fax: +34 977 558386

ACKNOWLEDGEMENTS:

Departament d'Economia i Coneixement, Generalitat de Catalunya
Universitat Rovira i Virgili