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Call for Papers

Algebraic and Computational Methods for the Study of RNA Behaviour

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Call for Papers

CIBB 2019

16th International Conference on

Computational Intelligence methods for Bioinformatics and Biostatistics

Bergamo, 4-6 September 2019

Special Session

AlgebraicRNA

ALGEBRAIC AND COMPUTATIONAL METHODS FOR THE STUDY OF RNA BEHAVIOUR

AIMS AND SCOPE

The study of RNA molecules has given rise to a wide range of open problems, from the prediction of spatial conformations to the comprehension of the relation between their structures and functions. A deeper understanding of these issues has great scientific relevance and paves the way for novel applications in medicine and pharmacology. Such a huge potential has attracted interest from different disciplines, theoretical and applied as well as computational and experimental. Nevertheless, achieving any real advances in this field requires the effort to pull together methodologies and expertise from all these even distant approaches.

Our special session aims to gather scientists (from various disciplinary background) whose studies address RNA molecules, and facilitate the integration of different research areas. We encourage the presentation of main objectives and preliminary results of active studies and surveys.

In recent years, emerging techniques have come into play alongside the more "traditional" ones. Formal languages, process algebras, computational topology, quantum information processing, and learning algorithms were found to be decisive in facing the complexity of RNA modelling. The main goal of our special session is to highlight the advantages and limitations of these alternative points of view, to show how they can steer RNA modelling towards new directions. We want to promote the interplay of such different disciplines to widen our ability to understand RNA behaviour.

Topics of interest include, but are not limited to:

- RNA structure and functions entangled relation
- Higher order RNA properties
- RNA 2D and 3D structure analysis and prediction
- RNA-RNA/RNA-protein interactions
- RNA structures comparison
- RNA kinetics
- Long non-coding RNAs (IncRNA)
- RNA pattern recognition, clustering and classification
- RNA force field and simulation
- RNA inverse folding
- RNA-nanoparticles interaction
- Nanoparticles for RNA delivery

SUBMISSION OF PAPERS

As described on the CIBB 2019 website, prospective authors should submit papers prepared according to the following instructions:

- Papers should be submitted in PDF format (this is the only accepted format) through the EasyChair of the conference (https://easychair.org/conferences/?conf=cibb2019) by choosing "Algebraic and Computational Methods for the Study of RNA Behaviour" on the "Select a Track" menu.
- Papers length should be at least four pages and should not exceed six pages.
- It is recommended to use the provided latex template and instructions. If this were not possible, authors should reproduce the format and style of this sample paper.
- Papers should adhere, as much as appropriate, to the following structure and sections:
 - Scientific background
 - Materials and methods
 - Results
 - Conclusions
 - References

PUBLICATION

PDF versions of accepted papers will be distributed at the conference. At least one author of an accepted paper is required to register and present the paper at the special session.

IMPORTANT: An accepted paper will be published in the proceedings only if the final camera-ready version is accompanied by the payment of at least one registration for one of the authors.

Authors of accepted papers will be invited to submit an extended version of their work to a post-conference monograph.

CIBB organisers plan to invite all papers for a volume in the Springer series of *Lecture Notes in Bioinformatics (LNBI)*. They are also planning to invite the best papers, as an alternative to the publication on LNBI, to a special issue of an international scientific journal (such as *BMC Bioinformatics*, as in the latest editions).

IMPORTANT DATES

Submission deadline: 9 June 2019 (FINAL)

Notification to authors: 30 June 2019

Camera-ready version for the proceedings: 14 July 2019

• Conference: 4 - 6 September 2019

• Special Session: available soon.

SELECTION PROCEDURE

Each submitted contribution will be peer-refereed by international experts in the corresponding field. The final decision about the received papers will be taken by the PC chairs based on the opinion of the reviewers. Controversial papers will be debated within the PC.

CONTACTS

For any request, please contact us through our Facebook page (m.me/AlgebraicRNA) or by email at stefano.maestri@unicam.it.

SESSION CO-CHAIRS

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