



## Deadlines

Special session and tutorial proposal submission: 31 July 2021

Short paper submission: **25 September 2021**

Acceptance/rejection notification: 15 October 2021

Camera ready due: 30 October 2021

Conference: 15-17 November 2021

## Call for short papers

The main goal of the CIBB international conference is to provide a multi-disciplinary forum open to researchers interested in the application of computational intelligence, in a broad sense, to open problems in bioinformatics, computational biology, biostatistics, systems and synthetic biology and medical informatics. Cutting-edge methodologies capable of accelerating life science discoveries will be the main focus of the conference, together with data mining technologies applied to real-life scenarios in biology and health. Following its tradition and roots, this year's meeting will gather researchers and practitioners from the international scientific community interested in advancements and future perspectives in bioinformatics and biostatistics. Moreover, looking at current trends and future opportunities at the edge of computer and life sciences, the application of computational intelligence to system and synthetic biology, and the consequent impact on innovative medicine will be of great interest for the participants. Theoretical and experimental biologists are also invited to participate in order to present novel challenges and foster multidisciplinary collaboration.

The scientific program of CIBB 2021 will include keynote speakers, tutorials, and special sessions. Contributed papers will be presented in plenary oral sessions, and special sessions. The CIBB 2021 conference will be an online event. This call for papers invites researchers to submit a short paper (4–6 pages) that will go through a peer review and, if accepted, will be presented at the conference. After the conference, the authors of all the accepted short papers will be invited to submit an extended version of their manuscripts to the conference proceedings book in [Springer Lecture Notes in Bioinformatics \(LNBI\)](#) or to a journal supplement in [BMC Bioinformatics](#) or [BMC Medical Informatics and Decision Making](#).

Topics of interest include:

- Machine learning applications to bioinformatics or health datasets
- Data mining methods in biomedical contexts

- Next generation sequencing bioalgorithms
- Multi-omics data analysis
- High dimensional statistical analysis of omics data
- Algorithms for alternative splicing analysis
- Algorithms for molecular evolution and phylogenetic analysis
- Methods for the visualization of high dimensional complex omic data
- Software tools for bioinformatics
- Methods for comparative genomics
- Computational tools applied to proteomics
- Methods for functional classification of genes
- Methods for unsupervised analysis, validation and visualization of structures discovered in bio-molecular data
- Health-Informatics and Medical Informatics
- Biomedical and Microscopy Imaging
- Methods for the integration of clinical and genetic data
- Heterogeneous data integration and data fusion for diagnostics
- Algorithms for pharmacogenomics
- Biomedical text mining
- Methods for diagnosis and prognosis within personalized medicine
- Statistical methods for the analysis of clinical data
- Prediction of secondary and tertiary protein structures
- Advanced pathway enrichment analysis methods
- Mass spectrometry data analysis in proteomics
- Algorithms for molecular evolution and phylogenetic analysis
- Bio-molecular databases and data mining
- Mathematical modeling and automated reasoning on biological and synthetic systems
- Computational simulation of biological systems
- Methods and advances in systems biology
- Spatio-temporal analysis of synthetic and biological systems
- Network systems biology
- Models for cell populations and tissues
- Methods for the engineering of synthetic components
- Modelling and engineering of interacting synthetic and biological systems
- Software tools for bioinformatics, biostatistics, systems and synthetic biology

### **Submission of short papers**

Prospective authors should submit short papers prepared according to the following instructions:

- The short papers should be submitted in PDF format (this is the only accepted format).
- The short papers length should be at least 4 pages and should not exceed 6 pages in total.

- The short papers should be written in British English or North American English. Please perform a grammar spell-check and correct any typos or mistakes before the submission.
- The short papers should include 10 references, at most.

We warmly recommend the use of the provided templates available for [LaTeX \(preferred\)](#), [LibreOffice Writer](#), and [Microsoft Word](#). The LaTeX template is also [available for free on Overleaf.com](#)

Authors are allowed to post their articles on preprint servers such as arXiv, bioRxiv, or medRxiv at any time.

Short papers should adhere, as much as appropriate, to the following structure and sections:

- Scientific background
- Data and methods
- Results
- Conclusions
- References (maximum 10)

The authors can submit their short papers to CIBB 2021 only through [EasyChair](#).



## Authorship

When deciding which author names to include in their articles and in which order, the CIBB authors should follow [the authorship guidelines of International Committee of Medical Journal Editors \(ICMJE\)](#), as explained by the [University of Toronto Faculty of Medicine](#).

## Post-conference publication

The PDF versions of accepted short 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 conference. The authors of all the accepted short papers (both of the main track and of the special sessions) will be invited to submit an extended version of their work to the post-conference monograph or supplements. We plan to invite all the papers for a volume in the Springer series of Lecture Notes in Bioinformatics (LNBI), or to a supplement of an international scientific journal (such as BMC Bioinformatics and BMC Medical Informatics, as in the latest editions). Please see [the past editions webpage](#) to find the books of the proceedings and supplements of the past editions of the conference to get a sense of them.