

BIOINFORMATICS AND SYSTEMS BIOLOGY

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MINI-SYMPOSIUM PROPOSAL

Keywords: *Bioinformatics, Systems Biology, Omics*

In this session, we aim to address key topics in bioinformatics and biological data handling, including integrative analysis (semi-supervised or unsupervised methods) of multi-omics to improve the characterization of biological processes across molecular layers, or network-based approaches for analyzing high dimensional omics data sets. We also invite contributions addressing biological data handling and visualization, the development of online databases and repositories for sharing data and models, and artificial intelligence applications in healthcare and medicine.

In particular, we welcome contributions in the fields of computational and statistical RNA biology addressing topics such as RNA stability and dynamics, RNA splicing, RNA modifications (co- and post-transcriptional/translational processes), RNA-RNA and RNA-protein interactions, RNA species (circRNA, non-coding RNAs, etc.), translation and control of translation (ribosome profiling methods, small peptide discovery, etc.), post-transcriptional gene regulation, and applications of methods to relevant biological data (patient data or animal models) and RNA biomedicine.

Although our own work has mainly addressed problems in the fields of cardiac RNA biology, methods applicable to any kind of organism, tissue, disease, etc. are also accepted, including recent hot topics such as SARS-CoV-2 modeling (mutation prediction, molecular mechanisms, host immune response driving virus evolution, etc.).