10th Workshop on Computational Advances for Next Generation Sequencing (CANGS)

in conjunction with

10th International Conference on Computational Advances in Bio and Medical Sciences (ICCABS)
Dec. 10-12, 2020, virtual conference

Workshop Co-Chairs:
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Massively parallel DNA and RNA sequencing technologies have become widely available, reducing the cost of sequencing by several orders of magnitude and placing the capacity to generate gigabases to terabases of sequence data into the hands of individual investigators. These technologies have the potential to dramatically accelerate biological and biomedical research by enabling the comprehensive analysis of genomes and transcriptomes to become inexpensive, routine and widespread. The exploding volume of data has spurred the development of novel algorithmic approaches for primary analyses of sequence data in such areas as error correction, de novo genome assembly, novel transcript discovery, virus quasispecies assembly, etc. The CANGS workshop will bring together specialists in the field to discuss new directions of research and exchange ideas on the many mathematical and computational challenges presented by next-generation sequencing data analysis.

Workshop topics of interest include but are not limited to:

- Cloud-based NGS analysis
- Long single molecule read analysis
- Cancer sequencing
- 3D genome architecture
- NGS error correction
- Read mapping
- Variant detection and genotyping
- Characterization of structural variants
- De novo genome and transcriptome assembly
- Haplotype assembly
- Genome-assisted transcriptome reconstruction
- Transcriptome quantification
- Small RNA analysis
- Scaffolding and genome finishing
- Epigenomics
- Metagenomics and metatranscriptomics
- Population genomics
- **NEW: Special session devoted to COVID-19 genomics**

The meeting is by invitation only. If you would like to inquire about the possibility of being invited, please contact the workshop chairs as soon as possible, but no later than **November 15, 2020**. As in previous years, following the workshop invited speakers will be invited to submit full length articles to special issues of ***BMC Bioinformatics*** and ***BMC Genomics***.

Workshop Registration Fees

- Regular Registration (Early): $200

- Regular Registration (Late): $250

- Student Registration (Early): $125

- Student Registration (Late): $175