

Workshop in Bioinformatics and Computational Modeling within the RESIST project:

Supervised machine learning approaches for gene regulatory network reconstruction



May 19, 2021

Summary

CPSBB, together with the University of Potsdam, is organizing a Workshop in Bioinformatics and Computational Modeling within the [RESIST project](#). The event is dedicated to supervised machine learning approaches for gene regulatory network reconstruction. It will provide an introduction of supervised machine learning approaches for reconstruction of gene regulatory networks (GRNs) using large-scale transcriptomics data. In the first part of the event, we will provide an overview of supervised machine learning approaches, namely support vector machines and random forests. We will then summarize how these approaches are used in addressing the problem of GRN reconstruction when transcriptomics data are available. We will also cover aspects related to assessing the performance of reconstructions. The second part of the workshop will be dedicated to showcasing the applications of these approaches to reconstructing GRNs in model plants and crops, with emphasis on *Arabidopsis thaliana* and maize. We will also present packages and tools developed in-house that can be used in addressing this problem in future applications.

Lecturers:

Dr. Zahra (Mona) Razaghi, Bioinformatics, University of Potsdam

Prof. Dr. Zoran Nikoloski, Bioinformatics, University of Potsdam

There is no charge for this workshop, which is being organized as a part of the training activities of project [RESIST](#).

Sign up for Workshop: Bioinformatics and computational modeling: Supervised machine learning approaches for gene regulatory network reconstruction [here](#), by **May 17, 2021**