

Notes from the CIBB conference and Genomewide Association Studies (GWAS) for very small and very large samples

Joanna Szyda

Department of Biomedical Engineering
Wrocław University of Science and Technology

13 October 2026

Abstract

During the lecture, I will highlight new developments in bioinformatics and medical informatics based on this year's 21st International Conference on Computational Intelligence methods for Bioinformatics and Biostatistics. First, I will describe topics that were addressed in conference tutorials that well represent the new analytic trends in the field. Then, I will give a very short summary of the highlighted presentations. Finally, I will present my contribution to the conference as an example of recent research aiming to identify genomic regions responsible for chronic fatigue syndrome diagnosed in only two patients, where a small cohort size does not allow for a formal association study.

About the presenter

Joanna is a professor in the Department of Biomedical Engineering specialising in population genetics, genomics, biostatistics, and bioinformatics. She was previously in love with linear mixed models and is currently focused on Deep Learning. Her employment history starts with a PhD at the Institute of Genetics at Hohenheim University in Germany, followed by a post-doctoral stay at the Lunenfeld Research Institute of Mount Sinai Hospital in Toronto, a long-term position at Wrocław University of Environmental and Life Sciences, and finally at the Wrocław technical University. She is also a guest professor at Charité in Berlin (Institute of Biometry).