PerMedCoE

HPC/Exascale
Centre of
Excellence in
Personalised
Medicine

EMBO WORKSHOP

Computational models of life: From molecular biology to digital twins

Interview with the PerMedCoE grant recipient Romina Wild

Romina Wild is a biochemist at SISSA in Italy who works with many different types of data sets and develops algorithms for feature selection. One use case she is working on is to find the optimal collective variables for enhanced molecular simulations.

What is your main professional interest?

I develop statistics and data scientific methods to subselect biological and medical data. I worked with COVID-19 patient data and molecular dynamics simulations, always with the aim to analyse the data manifold, and find the maximal informative small set of features for a certain purpose. In the case of patient information, this often means to find out which clinical data is most informative about the outcome of the disease.

What were your expectations from the EMBO Workshop "Computational models of life: From molecular biology to digital twins"?

Given its interdisciplinary nature, I hoped to understand related fields on a deeper level. As such, molecular, metabolic, cell, and systems modelling are all applications which potentially use feature selection and other data scientific methods for data preprocessing or model tuning. I hoped to get inspirations for new applications and possibly find new collaborations.

Have these expectations been met?

Luckily, I could talk with two speakers about using the Information Imbalance statistic to refine their model parameters. On top of this, I learned much about the current state of biological and medical modelling and which algorithms and methods are used, as well as which platforms, packages and initiatives exist, of which I aim to test out several. The other participants and speakers were a delight to speak to, and truly inspirational.

What is your feedback regarding gender balance and equality in this workshop?

Even before you asked this question, I positively noted the balance in the speakers and attendees: almost half of the speakers and attendees were women, and the group was very international and inclusive for people with disabilities.