Objectives

This EMBO Practical Course will present docking-based computational methods and related bioinformatics approaches, aiming at predicting how proteins interact with other biomolecules or ligands. Lectures will provide the theoretical background on state-of-the-art algorithms for sampling and scoring docking models, describe the use of low- and high-resolution information, and conservation- and coevolution-based interfaces prediction methods. Further, protein-peptide and protein-ligand interaction, as well as the young field of genome structure determination from sequencing information will also be covered to broaden the scope of the course beyond traditional protein-protein interactions.

Roughly half of the EMBO Practical Course will consist of practical sessions, during which the students will run computations on interesting biological problems. Finally, to encourage interaction between instructors and students and stimulate discussions, students will be prompted to present their own research and problems during dedicated sessions.
Academic Staff

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