



18th November 2020 - 2:00 p.m.

Virtual meeting room in ZOOM (ID: 958 5369 1074 / PW: 631287)

Filipe R. N. C. Maia

Department of Cell and Molecular Biology, Uppsala University, Sweden

Single-particle imaging of proteins and the curious case of the missing photons

The dream of imaging single molecules was instrumental to the construction of X-ray free-electron lasers (XFELs). The European XFEL marks the beginning of the high-intensity, high-repetition-rate and high data-rate era of XFELs, bringing the dream closer to reality.

In this talk, I will present the evolution of X-ray diffraction imaging and in particular highlight the latest results from the European XFEL. I will also discuss what new techniques might be over the horizon and what is still required to achieve the dream of ultrafast X-ray diffractive imaging of single proteins. Finally, I will present some observations we did on the number of scattered photons for different experiments and different samples with possible connections to radiation damage.

Host: Robin Santra – CFEL-DESY Theory Division