

Title: "In silico immunology: developing tools and methods for characterizing and predicting viral immune responses"

Abstract: "Theoretical approaches can address some key questions in immunology, regarding for instance identification of differentiation pathways or molecular targets, or the optimization of vaccine design. By focusing on the modeling of the CD8 T cell immune response, both at the cellular scale and at the molecular scale, I will discuss *in silico* approaches of immunology and show that they can help immunologists better understand the complexity of the immune system and provide complementary tools to wet experiments."