

## **The all E. coli TXTL: from gene circuits to synthetic cells in test tubes**

I will present some updates about the all E. coli cell-free TXTL. This experimental platform was specifically developed to construct and characterize quantitatively biomolecular systems programmed with gene circuits executed in vitro, such as test tube reactions, well plates, microfluidics and liposomes. This in vitro TXTL system is used for applications ranging from prototyping single regulatory elements to the complete synthesis of phages and the assembly of synthetic cell analogs. I will present new TXTL applications such as CRISPR, used for engineering biological controllers, and the latest performance of the platform for phage synthesis.