

SUNY Polytechnic Institute Spring Colloquium Series

Jan 31st (Friday), 2019: 11:30 am – 12:30 pm, NFS Auditorium

“Harnessing Single Molecule Detection for Ultra-high Throughput Molecular Diagnostics”

by: Yann Astier, Ph.D.

*(Director of Research for System Technology,
Roche Sequencing Solutions Inc, Pleasanton, CA)*

Abstract: Molecular and genetic diagnostics are becoming an integral part of personalized medicine. With this new reality, unprecedented needs face the diagnostic industry. After we review the state of the art solutions available to date, and scope the new trends, we will look at the evolution of single molecule technologies over the last decade, and how they could become mainstream to provide solutions for a new generation of highly dynamic diagnostics systems.

His visit to SUNY Polytechnic Institute is hosted by Prof. Scott Tanenbaum.

Biography: Yann Astier is the Director of Research for System Technology at Roche Sequencing Solutions (part of the Roche Group). His responsibilities include directing the improvement of clinical sequencing workflows in all aspects. He obtained his Master’s degree in Biochemistry and Chemistry from University of Rennes I, France; and his Ph.D from the University of Southampton, UK, advised by Prof. Phil Bartlett. Prior to joining Roche Sequencing Solutions, he led the Bio-Nanotechnology research team at the IBM T.J. Watson Research Center in Yorktown Heights, NY, focusing on single molecule sorting on nano-DLD arrays and fixed electrode electron tunneling. Previously, he was a Professor at the Universidade NOVA de Lisboa (Lisbon, Portugal) leading the Single Molecule Processes Research Group. He held two post-doctoral fellowships at the University of Oxford (Oxford, United Kingdom), working with Professors



Allen Hill and Hagan Bayley. While at Oxford in the Bayley group, he published the first example of single nucleotide recognition using the hemolysis nanopore.