

Monday, February 21 5:30 PM – 7:00 PM Esplanade, Room 157 Elements srl

The World's First Commercial 10 MHz Bandwidth and Low-Noise Amplifier For Nanopore Applications

Ultra-portable and cost-effective amplifier technology is now a reality, accessible to any research laboratory thanks to Elements miniaturized products based on custom CMOS microchips. Our flagship products are the eNPR, a handheld nanopore kit for nanoparticle detection using disposable glass nanopore chips and the new 10 MHz bandwidth amplifier for nanopore applications. The 10 MHz amplifier can boast an exceptional low-noise on the whole spectrum up to 10 MHz, a stunning time resolution of 25 ns without nanopore chips and excellent EMI shielding thanks to the integrated faraday cage.

In this presentation, current collaborators and customers from the US and Europe will be featuring our latest products through their own experiences, ranging from nanopore and nanopipettes experiments at high bandwidth. Also, you will learn how to measure translocations through nanopores of environmental samples and the application of nanopipettes in analytical science.

Presentation agenda:

- Company overview, Federico Thei
- "The NASA project sequel, is there life on other bodies of our solar system? Detecting life in Ocean Worlds with lowcapacitance solid-state nanopores", David Niedzwiecki
- 10 MHz Bandwidth amplifier product launch, Federico Thei
- "Preliminary results and comparison to previous translocation data at 10 MHz", David Niedzwiecki, Marija Drndić
- "Nanopipettes high bandwidth experiments", Samuel Confederat

About Elements:

Elements provides versatile solutions to measure electric currents in the picoampere (10^{-12} pA) range, with bandwidths up to hundreds of kHz, featuring very low noise recordings, signal digitization thanks to the integrated Analog-to-Digital converter, signal generator, digital data elaboration, and USB powered, all in a tiny form factor, about the size of a point-and-shoot digital camera!

Complimentary Italian hors d'oeuvres and drinks will be served! Seating is limited!

Speakers

Federico Thei, CEO Elements srl David Niedzwiecki, Goeppert LLC Marija Drndić, Professors of Physics, University of Pennsylvania Samuel Confederat, University of Leeds