

Dr. Florian Emaury



Biography:

Florian Emaury is the CEO and co-founder of Menhir Photonics, a Swiss company focusing on manufacturing low-noise GHz ultrafast lasers for applications bringing together the field of photonics and electronics. After graduating in 2010 from the Institute d'Optique Graduate School in Paris (MSc in Photonics/Physics), his career started with engineer experiences in Fianium (UK) and Coherent (CA, USA) before joining ETH Zürich to obtain a PhD in Physics in 2015 in the group of Prof. Ursula Keller. Since then Florian is devoting to create business opportunities with femtosecond lasers. In May 2018, Florian co-founded Menhir Photonics to offer reliable and turn-key ultrafast lasers to our users.

Title of talk:

Space-grade fs modelocked lasers at GHz repetition rate and 1550 nm : Results and applications

Abstract:

Ultrafast lasers are key tools for micromachining and medical applications, but also in a growing number of domains like telecoms, aerospace and microwave photonics, which are currently limited by the lack of reliability of the lasers and the achievable repetition rate. Menhir Photonics has now successfully demonstrated and deployed real-turnkey ultrafast laser oscillators at 1.5 μm and GHz repetition rate with an unprecedented robustness. Reaching now up to 2.5 GHz of fundamental repetition rate and the lowest phase noise and timing jitter on the market, the MENHIR-1550 was already tested towards Space applications. The latest development of the MENHIR-1550 at 2.5 GHz will be presented (first commercial product of its kind) as well as the newest applications that it enabled worldwide, in the fields of green-house gases monitoring from Space, very fast dual-comb spectroscopy or photonics analog-to-digital converter.