

## Dr. Jonas Heidrich

### Topic:

Femtosecond seeders at 1.0  $\mu\text{m}$ : Combining ultra-low noise, flexibility, and reliability

### Abstract:

Menhir Photonics' robust and reliable ultra-low noise ultrafast seeders are now a reference at 1.5  $\mu\text{m}$ . At 1030 nm, we present a flexible concept using our new MENHIR-1030 at 160 MHz together with nearly lossless resonant EOM pulse-picking to serve as ultra-low noise seeder for amplifier systems requiring 80 MHz or 40 MHz repetition rate. We provide  $>1$  nJ of pulse energy while maintaining the high robustness and compactness of a high repetition rate system, combined with state-of-the-art low jitter. The passively stable MENHIR-1030 can be actively stabilized for utmost stability in amplifier applications. We will review the laser's key parameters with our innovative concept and details on key applications from our customers such as enhancement cavity pumping and high-power amplification.

### Bio:

Jonas Heidrich born in Karlsruhe, Germany, in 1992. He received the B.Sc. and M.Sc. degrees in physics from the Karlsruhe Institute of Technology, Karlsruhe, in 2015 and 2018, respectively. He graduated with research projects on x-ray interferometry and thermoelectric effects of superconducting nanostructures. Jonas joined Prof. Ursula Keller's Ultrafast Lasers Physics group at ETH Zürich where he graduated with a PhD on the development of dual-comb ultrafast lasers for spectroscopy in 2022. Afterwards, he joined Menhir Photonics as a Product Line Manager for 1  $\mu\text{m}$  femtosecond lasers. There he strives to push the boundaries of ultra-low noise sources with excellent quality and robustness.