



NETLAS NEWSLETTER 2

This newsletter marks the recruitment of the first ESR to our ITN, on 3rd February 2020.

PhD3: Philipp Tatar-Mathes

Host: **Tampere University**

Secondment: **OCTLight**



PhD Project: Broadband gain blocks for amplified swept source
In optically pumped membrane external-cavity surface emitting lasers (MECSELs), power scalability in to the WATT level is given while providing a high beam quality ($M^2 \approx 1.0$). Also, yet uncovered wavelength ranges can be reached with this approach. The gain can be



designed via choosing a constellation of different quantum well or quantum dot layers to cover a wide spectral range. Modern Fourier-domain OCT needs broadband coherent light sources with fast sweepable emission. MECSELS could provide these demands.

Previous education: B.Sc. and M.Sc. theses at the Institute for Semiconductor Optics and Functional Interfaces (IHFG) at the University of Stuttgart, deep insight and understanding of the full fabrication procedure of semiconductor disk laser structures with different designs. Learned the complete experimental characterization methods. Currently PhD-student in Mircea Guina's group at the Optoelectronics research centre (ORC), at the University of Tampere, Finland.

From now on we invite all partners to communicate events and ideas to place in our newsletter

Please send any piece of news, on NETLAS activities or anything else happening that may be of interest to the NETLAS community, to Ramona Cernat: R.Cernat@kent.ac.uk and to Adrian Podoleanu: ap11@kent.ac.uk