

TUoE: Postdeadline Session

Chaired by Andy Clarkson, University of Southampton, Southampton, United Kingdom

Time: Tuesday 19:00–20:00

Location: Amphi A

TUoE.1 Tue 19:00

1.3-1.47 μm Bismuth Fiber Lasers and Amplifiers — ●IGOR BUFETOV¹, SERGEY FIRSTOV¹, VLADIMIR KHOPIN², OLEG MEDVEDKOV¹, ALEXEY GURYANOV², and EVGENY DIANOV¹ — ¹Fiber Optics Research Center, Russian Academy of Sciences, Moscow, Russia — ²Institute of Chemistry of High-Purity Substances, Russian Academy of Sciences, Nizhy Novgorod, Russia

Bi-doped alumina-free fiber lasers operating within a wavelengthband of 1300-1470 nm have been demonstrated for the first time.

TUoE.2 Tue 19:15

Coherent Beam Combining by Digital Holography — ●CINDY BELLANGER, ARNAUD BRIGNON, JOSEPH COLINEAU, and JEAN PIERRE HUIGNARD — Thales Research and Technology, Route départementale 128, 91767 Palaiseau cedex, France

We present an original technique for coherent beam combining of fibre amplifiers based on self adaptive digital holography. The proposed method is compatible with a large number of fibers and simply implemented with a CCD detector matrix and a spatial light modulator. This concept is analysed and experimentally demonstrated.

TUoE.3 Tue 19:30

Mode-controlling in a diode-side-pumped, short-cavity Nd:YVO₄ laser with 74% slope efficiency — ●NIKLAUS WETTER and FABIOLA CAMARGO — Centro de Lasers e Aplicacoes, IPEN/SP Av. Prof. Lineu Prestes, 2242, 05508-000, Sao Paulo, SP, Brasil

A novel cavity design is presented that uses a very short, three mirror cavity to generate two intracavity beams inside the gain media at grazing incidence. The adjustment of the overlap between both beams permits to control the gain competition and obtain easily TEM₀₀ mode.

TUoE.4 Tue 19:45

Demonstration of Net Gain at 1060 nm in a Nd-complex-doped, Photo-defined Polymer Channel Waveguide — JING YANG, MART DIEMEER, DIMITRI GESKUS, GABRIËL SENGO, ●MARKUS POLLNAU, and ALFRED DRIESSEN — Integrated Optical Micro Systems, MESA+ Institute for Nanotechnology, University of Twente, P.O. Box 217, Enschede, the Netherlands

6-FDA/epoxy waveguides doped with a Nd(TTA)₃phen complex are fabricated and characterized. A long luminescence lifetime is measured and a net gain of 8.0 dB at 1060 nm is demonstrated in a 5.6-cm-long channel waveguide amplifier.