

Technical Program

Advanced High Power Lasers



26th Annual Solid State and Diode
Laser Technology Review

6-8 May 2014
Baltimore, Maryland

TUESDAY MORNING

High Energy Lasers I (Limited Distribution/Open)

Chair: *David Mordaunt*, Raytheon

Session is Limited Distribution D

0815 **Welcome**

Tim Newell, Air Force Research Laboratory

0830 **Robust Electric Laser Initiative (RELI) Program Changes, Status and Results (D)**

Don Seeley, HEL JTO

0915 **High Energy Laser Weapon System Development: Lessons Learned (C)**

Kip Kendrick, USASMDC/ARSTRAT

Session is now Open

1000 **High Energy Lasers (A)**

Martin Richardson, U of Central Florida

1025 **Break**

High Energy Lasers II (Limited Distribution/Open)

Chair: *LeAnn Brasure*, Schafer Corporation

Session is Limited Distribution D

1045 **High Power Adaptive Optic Testing of Planar Waveguide Lasers at Raytheon (D)**

Dave Mordaunt, Raytheon

1110 **Coherently Combinable Multi-Kilowatt All-Fiber Amplifier (C)**

Peter Thielen, Northrop Grumman

1135 **High Efficiency and High Brightness Fiber Laser Power Scaling by Spectral Beam Combining (D)**

Eric Honea, Lockheed Martin

Session is now Open

1200 **Current Status and Most Recent Developments of Industrial Thin Disk Lasers (A)**

Jochen Diele, TRUMPF Inc

1230 **Lunch**

DE Systems Symposium

25-29 August 2014, Monterey, CA

Beam Control Conference

Counter DEW Conference

Employment of DEW Conference

DE Modeling & Simulation Conference

HEL Lethality Conference

DE T&E Conference

DE Weapons Workshop

TUESDAY AFTERNOON

Diode Laser Technology I (Open)

Chair: *Greg Quarles*, Opto-Electronics Management Network

- 1330 **kW-Class, Line-Narrowed, Diode Laser Pump Source for DPAL Applications (A)**
Rajiv Pandey, DILAS Diode Laser Inc.
- 1355 **High-Power, High-Brightness Diode Laser Technology for Pumping Applications in Mass Production (A)**
Greg Charache, TRUMPF Photonics
- 1420 **Lightweight, Compact, High-Power, High-Brightness, Fiber-Laser Pump Module Based on a Scalable and Modular Architecture (A)**
Rajiv Pandey, DILAS Diode Laser Inc.
- 1445 **Break**

Diode Laser Technology II (Limited Distribution/Open)

Chair: *Jun Zhang*, Army Research Laboratory

Session is Limited Distribution D

- 1515 **Coherent Semiconductor Laser Array (C)**
Chris Corcoran, Corcoran Engineering
- 1540 **High-Power, High-Brightness Diode Laser Pump (C)**
Chris Corcoran, Corcoran Engineering

Session is now Open

- 1605 **Thin Format, Scalable, High Performance Microchannel Coolers for High Power Laser Diode Arrays (A)**
Henry Eppich, Science Research Laboratory, Inc.

Optics Course

Online Distance Learning
2 September - 4 November 2014

Lead Instructor: *Dr. Jack McCrae*, AFIT



This course provides a basic introduction to the theoretical foundations of applied optics. The course is offered by the Center for Directed Energy (CDE) at the Air Force Institute of Technology. Students earn 3.2 CEUs from DEPS for successful completion of the course. Student performance is assessed by a series of pass/fail written exercises. **Unclassified, Limited Distribution C**

WEDNESDAY MORNING

Solid State Lasers I (Open)

Chair: *Tim Newell*, Air Force Research Laboratory

0825 **Welcome**

Tim Newell, Air Force Research Laboratory

0830 **Study of Beam Combining Techniques for VECSELs or Fiber Lasers using VBGs (A)**

Chunte Lu (Tim Newell), Air Force Research Laboratory

0855 **Comparison of Power Scaling in 2 μ m Fiber MOPA Architectures for Mid-IR OPO Pumping (A)**

Joshua Bradford, LPL CREOL

0920 **High Power, Large Core Ytterbium-Doped Photonic Bandgap Fiber Laser (A)**

Guancheng Gu, Clemson University

0945 **Break**

Solid State Lasers II (Limited Distribution/Open)

Chair: *Jeffry White*, Army Research Laboratory

Session is Limited Distribution D

1015 **Super-High Efficiency Fiber-Coupled Sources: Breaking the 50% Ex-Fiber Power-Conversion Efficiency Barrier (C)**

Aland Chin, Somerville Laser Technology

1040 **Multi-kilowatt All Fiber Coherent Combiner (C)**

Gregory Goodno, Northrop Grumman

Session is now Open

1105 **Design Approaches for Several Low-Cost High-Power Diffraction-Limited Lasers at Near Infrared (A)**

Santanu Basu, Air Force Institute of Technology

1130 **Lunch**

WEDNESDAY AFTERNOON

Review of Laser Weapons System Design (Open)

1300 **Short Course**

Andy Motes, Schafer Corporation