

The **2010 Industrial Physics Forum (IPF)** brings together scientists and engineers from industry, government labs, and academia to engage on a topic of high impact in industry – one in which optical science and its practitioners play critical roles in R&D, technology, and ultimate success in the marketplace.

In celebrating the 50 years of the laser, IPF 2010 will be a unique opportunity to explore lasers in the context of commercial applications and the landscape for future contributions from the optics community.



Both IPF and FiO/LS registrants are welcome to participate in IPF sessions



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Applications of Laser Technology

Join us for the
2010 Industrial Physics Forum
at

**Frontiers in Optics 2010/
Laser Science XXVI**

October 25–26, 2010
Rochester, NY

Presented by the



Corporate Associates



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2010 Industrial Physics Forum

Rochester Riverside Convention Center, HIGHLAND J

MONDAY, OCTOBER 25

BIOMEDICAL APPLICATIONS OF LASERS

Session SMB, 1:30 – 3:30 pm

Moderator: Michael Stanley, Chroma Technologies

Laser Refractive Cataract Surgery with the LenSx Laser

Michael Karavitas, Lens X

Applications of Table Top Lasers Developed from the FEL

David Piston, Vanderbilt University

From Photonics to Genomics: Lasers and Imaging Technology Enables Next-Generation DNA Sequencing

Suzanne Wakelin, Illumina

Biomedical Imaging with Optical Coherence Tomography

James Fujimoto, Massachusetts Institute of Technology

ENVIRONMENTAL APPLICATIONS OF LASERS

Session SMD, 4:00 – 6:00 pm

Moderator: Herwig Kogelnik, Alcatel-Lucent

NASA's Space Lidar Measurements of Earth and Planetary Surfaces

Jim Abshire, Solar System Exploration Division, NASA

The Physics and Technology of Quantum Cascade Lasers

Federico Capasso, Harvard University

Tunable Infrared Laser Measurements of Industrial Process and Product Emissions

Charles Kolb, Aerodyne Research

Laser Remote Sensing of the Earth: Calipso and Beyond

Carl Weimer, Ball Aerospace

TUESDAY, OCTOBER 26

LASER APPLICATIONS IN METROLOGY

Session STuA, 8:00 – 10:00 am

Moderator: Georg Nadorff, CVI Melles Griot

Use of Lasers in Time and Frequency Applications (or Metrology)

Scott Diddams, NIST

Laser Fuse Processing for Advanced Memory Designs

Joochan Lee, GSI Laser Systems

Dynamic Interferometry for on-Machine Metrology

Michael North Morris, 4D Technology

The Electronic Kilogram and Lasers

Richard Steiner, NIST

FRONTIERS IN PHYSICS

Session STuB, 10:30 am – 12:30 pm

Moderator: Benjamin Snavely, AIP

Epitaxial Graphene: Designing a New Electronic Material

Walter de Heer, Georgia Tech

The Status of the CERN Large Hadron Collider (LHC)

Dan Green, Fermilab

Viewing the High-Energy Universe with the Fermi Gamma-Ray Space Telescope

Peter Michelson, SLAC

Quantum Entanglement and Information

Chris Monroe, University of Maryland

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