

Ultrafast and Nanoscale Optics at

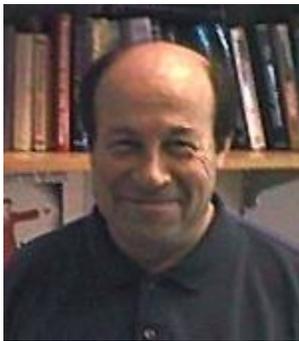
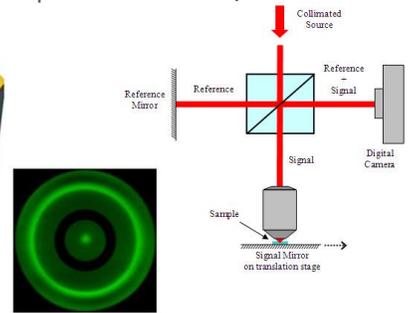
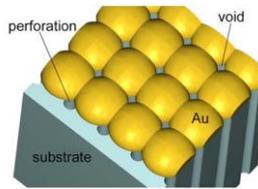
Prof. Yeshaiahu 'Shaya' Fainman



Abstract:

The Ultrafast and Nanoscale Optics Group is an integral part of the Applied Optics-Photonics and Nanoscale Devices and Systems Programs of the Electrical and Computer Engineering Department at the University of California, San Diego. The Group's focus is on basic and applied research in nanophotonics, metamaterials, near-field optical science and ultrafast optics with special emphasis on nonlinear and resonant phenomena. This presentation will provide an overview of the Group's current research areas which include:

- Metallo-dielectric laser nanoresonators
- On-chip silicon photonic devices and phenomena
- Biosensing using nanostructured plasmonic devices
- Nanoscale optical field localization
- Nanoscale optical resonant phenomena
- Heterodyne near-field scanning optical microscopy (NSOM)
- 3D quantitative imaging
- Optical forces in photonic devices
- Optofluidic devices



About the Speaker: Professor Fainman joined the faculty at UCSD in July 1990 following a faculty appointment at the University of Michigan. Current research interests in his group include the investigation of artificial dielectric properties of nanostructures; polarization selective computer generated holograms and their applications for image processing, transparent photonic switching fabric and networks, and packaging optoelectronic devices and systems; programmable diffractive optical elements; 3-D holographic optical storage; diffractive optics with multifunctionality; optical information processing with femtosecond laser pulses; nonconventional 3-D imaging and displays; quantum cryptography for photonic network security and privacy.

Honors and Distinctions

- 2006 Brown Award for Quantum Computing
- 2006 Faculty Advisor for SPIE Student Chapter Recognition
- 2006 Lady Davis Fellowship
- 2004 Fellow of SPIE
- 2003 Fellow of the IEEE
- 1995 Fellow of the Optical Society of America
- 1995 Topical Editor of Optical Signal Processing and Imaging Science for JOSA:A
- 1982 Miriam and Aharon Gutvirt Prize, Technion, Haifa, Israel
- 1970 Honors Diploma, Lvov Polytechnic Institute, USSR



Meeting Details:

Date: Wed. April 27th, 2011

Times: 6:00 p.m. Reception & Pizza, Pasta, Salad & Drinks
7:00 p.m. Speaker Presentation
8:00 p.m. Lab Tours

Location: visit www.oss.org for room location

Directions: UC San Diego is near the 5 Fwy & Genesee
<http://emerald.ucsd.edu/contact.html>

Cost: \$15 for Pizza, Pasta, Salad & Drinks
OSA Student Chapter Members 'Free'

Parking:
<http://www.cse.ucsd.edu/about-cse/directions-and-parking.html>

RSVP: By Apr. 25, on the OSSC Website

Please visit www.oss.org for directions & updates.

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