



International Photonics Conference

IPC 2011

國際光電科技研討會暨國科會光電學門研究成果發表會

Dec. 8-10, NCKU, Tainan, Taiwan

- International Symposium on Physics and Applications of Laser Dynamics 2011 (IS-PALD2011) Dec. 7-8
- International Symposium on Organic and Dye-Sensitized Solar Cells 2011 (IS-OPVDS2011) Dec. 7-8

International Symposium on Physics and Applications of Laser Dynamics 2011 (IS-PALD2011) Symposium Program

Date Symposiums: December 7-8, 2011

Venue National Cheng Kung University
Building of Electrical Engineering
國立成功大學 自強校區電機系館

Hosted



國立成功大學
光電科學與工程學系



國立成功大學八十週年



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SPIE Taiwan Chapter



**International Symposium on Physics and Applications of Laser
Dynamics 2011 (IS-PALD 2011)
Program**

December 7	Venue: A.T.I. Room (Room 92119, 1st Floor)
08:30 -- 09:00	Symposium Registration
09:00 -- 09:20	Symposium Opening Remark
09:20 -- 10:20	Jia-Ming Liu Laser Dynamics: Science, Engineering, and Beyond
10:20 -- 10:40	Coffee Break
10:40 -- 11:20	Kenji Ohmori Single molecule can calculate 1000 times faster than supercomputers
11:20 -- 12:00	Jau Tang Photoinduced ultrafast structural dynamics and photoluminescence of nanostructured materials
12:00 -- 13:20	Lunch
13:20 -- 14:00	Chao-Kuei Lee Measurement of octave-spanning ultrafast pulses
14:00 -- 14:40	Takayoshi Kobayashi Development of ultrashort ultraviolet laser, deep ultraviolet laser and CEP stabilized near infrared-visible near monocycle pulse laser
14:40 -- 15:20	Jyhpyng Wang Ultrafast particle and photon sources driven by high-intensity laser-plasma interaction
15:20 -- 15:40	Coffee Break
15:40 -- 16:20	Silvano Donati Self-mixing interferometry: a universal yardstick to measure almost everything
16:20 -- 17:00	Atsushi Uchida Ultra-fast random number generation with chaotic lasers
17:00 -- 17:40	Junji Ohtsubo Chaos in semiconductor lasers and recent topics in new device structures
17:40 -- 18:40	Symposium Welcome Reception / Poster Session

December 8	Venue: A.T.I. Room (Room 92119, 1st Floor)
08:30 -- 09:10	Frederic Grillot External control in semiconductor quantum nanostructure lasers for future integrated photonics devices
09:10 -- 09:50	Krassimir Panajotov VCSELs with coupled cavities and with liquid crystal overlay
09:50 -- 10:30	Kenju Otsuka Self-mixing solid-state laser metrology
10:30 -- 10:40	Symposium Concluding Remark

Organizing Committee & Sponsors

Organizing Committee:

Chairs (in alphabetical order):

Sheng-Kwang Hwang (National Cheng Kung University, Taiwan)

Ming-Dar Wei (National Cheng Kung University, Taiwan)

Members (in alphabetical order):

How-Foo Chen (National Yang Ming University, Taiwan)

Wen-Feng Hsieh (National Chiao Tung University, Taiwan)

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Jia-Ming Liu (University of California at Los Angeles, USA)

Ci-Ling Pan (National Tsing Hua University, Taiwan)

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National Science Council, Taiwan

Optical Society of America

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Taiwan Photonics Society, Taiwan

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General Information

Objective and Scope:

The Symposium provides an opportunity to learn advances in physics and applications of laser dynamics through invited talks by renowned scholars and through contributed poster presentations by active researchers. Meanwhile, the Symposium creates an environment for extensive discussion and potential collaboration with researchers worldwide. The Symposium in 2011 is arranged as a satellite meeting of the International Photonics Conference (from December 8 to December 10, 2011) which is the largest academic annual gathering of photonics community in Taiwan.

Two areas of laser dynamics are covered in the Symposium:

Ultrafast Laser Dynamics, the topics of which include but are not limited to

- (1) Physics and engineering of ultra-short and/or high-energy pulsed lasers
- (2) Generation, shaping, and processing of ultra-short and/or high-energy laser pulses
- (3) Detection and characterization of ultra-short and/or high-energy laser pulses
- (4) Applications of ultra-short and/or high-energy laser pulses

Nonlinear Laser Dynamics, the topics of which include but are not limited to

- (1) Physics and engineering of nonlinear laser dynamics, including stability, bistability, periodic and aperiodic dynamics, and chaos
- (2) Generation, measurement, shaping, and processing of diverse waveforms based on nonlinear laser dynamics
- (3) Characterization, control, and synchronization of nonlinear laser dynamics
- (4) Applications of nonlinear laser dynamics and their waveforms

Time and Location:

The Symposium will be held at the National Cheng Kung University, Tainan, Taiwan in the Electrical Engineering Building A.T.I. Room (Room 92119, 1st Floor) from December 7 to December 8, 2011.

Symposium Contacts:

Symposium Website: <http://ipc2011.ncku.edu.tw/>

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Speakers

Plenary Talk

Speaker	Talk Title
Jia-Ming Liu University of California at Los Angeles Los Angeles, USA	Laser Dynamics: Science, Engineering, and Beyond

Invited Talks on Ultrafast Laser Dynamics (*in alphabetical order*)

Speaker	Talk Title
Takayoshi Kobayashi National Chiao Tung University, Taiwan / The University of Electro-Communications, Japan	Development of ultrashort ultraviolet laser, deep ultraviolet laser and CEP stabilized near infrared-visible near monocycle pulse laser
Chao-Kuei Lee National Sun Yat-Sen University, Taiwan	Measurement of octave-spanning ultrafast pulses
Kenji Ohmori Institute for Molecular Sciences, Japan	Single molecule can calculate 1000 times faster than supercomputers
Jau Tang National Chiao Tung University, Taiwan / Academia Sinica, Taiwan	Photoinduced ultrafast structural dynamics and photoluminescence of nanostructured materials
Jyhpyng Wang National Taiwan University, Taiwan / Academia Sinica, Taiwan	Ultrafast particle and photon sources driven by high-intensity laser-plasma interaction

Invited Talks on Nonlinear Laser Dynamics (*in alphabetical order*)

Speaker	Talk Title
Silvano Donati University of Pavia, Italy	Self-mixing interferometry: a universal yardstick to measure almost everything
Frederic Grillot Institute National des Sceinces Appliquees, France	External control in semiconductor quantum nanostructure lasers for future integrated photonics devices
Junji Ohtsubo Shizuoka University, Japan	Chaos in semiconductor lasers and recent topics in new device structures
Kenju Otsuka Tokai University, Japan	Self-mixing solid-state laser metrology
Krassimir Panajotov Vrije Universiteit Brussel, Belgium	VCSELs with coupled cavities and with liquid crystal overlay
Atsushi Uchida Saitama University, Japan	Ultra-fast random number generation with chaotic lasers