



International Symposium on Physics and Applications of Laser Dynamics 2018



December 4th-6th, 2018

P4703-YEUNG

City University of Hong Kong

Hong Kong, China

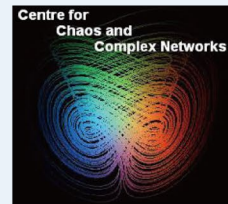
Co-sponsors:



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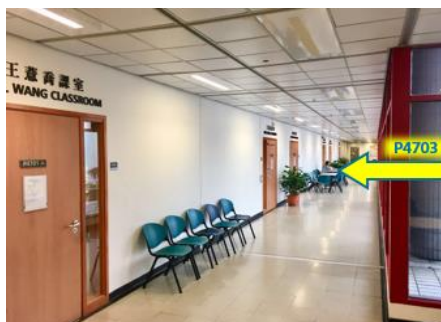
Student Chapter
City University of Hong Kong



Conference Venue: P4703-YEUNG, Floor 4 Purple Zone, Yeung Kin Man Building, City University of Hong Kong, Kowloon Tong



Yeung Kin Man Building (AC1)



Corridor to P4703-YEUNG

Direction (By MTR)

- (a) Use Exit C2 of the Kowloon Tong MTR station;
- (b) Go to Floor LG1 of the shopping mall (Festival Walk) for an escalator to CityU;
- (c) Pass through the tunnel and enter Yeung Kin Man Building (AC1);
- (d) Once entering the Red doors (Floor 3), please take the escalator to Floor 4;
- (e) Then make a sharp left turn and go to the corridor between Lift 1 and Lecture Room 16 (LT16);
- (f) Turn right at the corridor to P4703-YEUNG.



KEYNOTE SPEAKERS

Cristina Masoller, Universitat Politècnica de Catalunya

Marc Sciamanna, CentralSupelec

Atsushi Uchida, Saitama University

INVITED SPEAKERS

Stefan Breuer, Technische Universität Darmstadt

Frederic Grillot, Telecom ParisTech

Sheng-Kwang Hwang, National Cheng Kung University

Vassilios Kovanis, Nazarbayev University

Daan Lenstra, Eindhoven University of Technology

Fan-Yi Lin, National Tsing Hua University

Benjamin Lingnau, Technische Universität Berlin

Alexandre Locquet, Georgia Tech Lorraine

Damien Rontani, CentraleSupelec

Miguel Cornelles Soriano, University of the Balearic Islands IFISC

Martin Virte, Vrije Universiteit Brussel

Yunca Wang, Taiyuan University of Technology

Jiagui Wu, Southwest University

Guang-Qiong Xia, Southwest University

INTERNATIONAL ADVISORY COMMITTEE

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CONFERENCE PROGRAM

P4703, Yeung Kin Man Academic Building, City University of Hong Kong, Kowloon, HKSAR

December 4, 2018 (Tuesday)		
08:30 – 09:00		Registration
09:00 – 09:10		Opening Remark
09:10 – 10:00	P4A1	M. Sciamanna (Keynote) Uncovering the complexity of light
10:00 – 10:30		Coffee Break
<i>Laser Chaos and Bifurcation I (Prof. S.K. Hwang)</i>		
10:30 – 11:00	P4B1	F. Y. Lin (Invited) 3D pulsed chaos lidar system
11:00 – 11:30	P4B2	M. Virte (Invited) What would it take to generate chaos in any solitary VCSELs?
11:30 – 11:50	P4B3	A. Wang, D. Wang, and Y. Wang Key space enhancement in optical chaos secure communication
11:50 – 14:00		Lunch + Photo-taking <City Chinese Restaurant, Floor 8, Bank of China Complex, CityU>
<i>Laser Chaos and Bifurcation II (Prof. F. Grillot)</i>		
14:00 – 14:30	P4C1	Y. Wang (Invited) Chaotic laser application: The opportunities and challenges
14:30 – 15:00	P4C2	A. Locquet (Invited) Bifurcation scenarios in semiconductor lasers subjected to optical feedback
15:00 – 15:20	P4C3	G. R. G. Chengui, P. Woafu, and Y. K. Chembo Using the nonlinear dynamics of semiconductor lasers in optoelectronic oscillators
15:20 – 15:40	P4C4	P. Li, W. Li, K. Li, Q. Cai, J. Zhao, and Y. Wang Real-time and fast random number generation based on fully photonics technology
15:40 – 16:00	P4D	Coffee Break
<i>Photonic Microwave Dynamics (Prof. D Lenstra)</i>		
16:00 – 16:30	P4D1	S. K. Hwang (Invited) Optically injected semiconductor lasers for photonic microwave signal processing
16:30 – 17:00	P4D2	G. Q. Xia (Invited) Generation of microwave signal based on a semiconductor laser under current modulation and optical injection
17:00 – 17:20	P4D3	M. AlMulla Small-signal fluctuation-independent period-one (P1) dynamics in optically injected semiconductor lasers
17:20 – 17:40	P4D4	G. Chen, D. Lu, L. Guo, W. Zhao, H. Wang, Y. Huang, and L. Zhao Frequency doubling of P1-oscillation-based optoelectronic oscillator
17:40 – 18:00	P4D5	C. P. Xue, Y. H. Hong, S. K. Ji, N. Jiang, and K. Qiu Numerical investigation of the characteristics of photonic microwave in a semiconductor laser with optical injection and filtered optical feedback
18:30 ~ 20:00		Welcome Reception <City Top Restaurant, Floor 9, Bank of China Complex, CityU>

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December 5, 2018 (Wednesday)		
09:10 – 10:00	P5A1	C. Masoller (Keynote) Experimental characterization of dynamical regimes and entrainment phenomena in a semiconductor laser with optical feedback
10:00 – 10:30		Coffee Break
<i>Quantum-dot Laser Dynamics I (Session Chair: Prof. M. Virte)</i>		
10:30 – 11:00	P5B1	F. Grillot (Invited) Dynamic properties of InAs/GaAs quantum dot semiconductor lasers directly grown on silicon substrate
11:00 – 11:30	P5B2	B. Lingnau (Invited) Quantum-dot laser dynamics: An overview
11:30 – 11:50	P5B3	X. B. Su, Y. Ding, and H. Q. Ni Material epitaxy of 1.3- μm InAs/GaAs quantum dot lasers
11:50 – 12:10	P5B4	O. Spitz, J. Wu, M. Carras, C. W. Wong, and F. Grillot Low frequency fluctuations and optical bursts induced by external optical feedback and low frequency modulation in a quantum cascade laser at 9 μm
12:10 – 14:10		Lunch <City Chinese Restaurant, Floor 8, Bank of China Complex, CityU>
14:10 – 15:00	P5C1	A. Uchida (Keynote) Applications of complex photonics: From information security to artificial intelligence
<i>Novel Photonic Dynamics I (Session Chair: Prof. F.Y. Lin)</i>		
15:00 – 15:20	P5C2	T. S. Rasmussen and J. Mork Nonlinear dynamics of Fano lasers with optical feedback
15:20 – 15:40	P5C3	X. Qi, T. Taimre, G. Agnew, I. Kundu, Y. L. Lim, K. Bertling, P. Dean, D. Indjin, and A. D. Rakić Optical feedback effects in coupled-cavity terahertz quantum cascade lasers
15:40 – 16:00	P5C4	Y. Y. Lin and J. H. Tu Periodic and aperiodic oscillation bifurcation in Q-switched optical vortex lasers
16:00 – 16:30		Coffee Break
<i>Quantum-dot Laser Dynamics II (Session Chair: Prof. M. Soriano)</i>		
16:30 – 17:00	P5D1	S. Breuer (Invited) Ultrafast quantum dot lasers
17:00 – 17:20	P5D2	X. G. Wang and C. Wang Noise of quantum cascade lasers with optical feedback
17:20 – 17:40	P5D3	Y. Y. Lin and C. K. Lee Instability and pulse formation in lasers with low-saturation 2D material absorber
17:40 – 18:00	P5D4	L. Zhang and S. C. Chan Period-One Oscillation with Cascaded Locking for Photonic Microwave Generation Based on Three Semiconductor Lasers
18:30 – 21:00		Conference Banquet <Jasmine Restaurant, G-25, Festival Walk Mall, Kowloon Tong>

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December 6, 2018 (Thursday)		
<i>Novel Photonic Dynamics II (Session Chair: Prof. D. Rontani)</i>		
09:10 – 09:40	P6A1	V. Kovanis (Invited) Optical meta-molecules in non-Hermitian photonics
09:40 – 10:10	P6A2	M. C. Soriano (Invited) Recent advances in photonic reservoir computers
10:00 – 10:20		Coffee Break
<i>Integrated Photonic Dynamics (Session Chair: Prof. S. Breuer)</i>		
10:20 – 10:50	P6B1	D. Rontani (Invited) Toward smart photonics systems: Scalability, integration and agility
10:50 – 11:20	P6B2	D. Lenstra (Invited) Towards an integrated feedback-insensitive semiconductor laser
11:20 – 11:50	P6B3	J. Wu (Invited) Waveform dynamics in monolithic silicon optomechanical cavities
11:50 – 12:10	P6B4	A. Argyris, J. Bueno, M. C. Soriano, and I. Fischer Photonic reservoir computing post-processing for optical communication signals with multilevel encoding
12:10 – 12:30	P6B5	J. X. Dong and S. C. Chan State Switching Phase-Space Trajectory of a Semiconductor Laser with Optical Feedback
12:30 – 12:40		Concluding Remarks