Prof. Charis MESARITAKIS

University of the Aegean – Polytechnic School

Dept. Information and Communication Systems Engineering

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1. SUMMARY

Prof. Charis Mesaritakis acquired his diplom, M.Sc and Ph.D from National and Kapodistrian Univeristy of Athens (Greece). His Ph.D thesis focused on the experimental characterization and numerical modelling of novel regimes of quantum dot mode locked lasers. He has participated as a researcher in 10 FP6-FP7 and Horizon2020 EU projects. He has been awarded a postdoctoral EU Marie-Curie Fellowship, involving high precision laser telemetry in III-V Labs (France); Followed by two competitive national research grants, PROMITHEAS from the G. Latsis foundation and HFRI-GSRT NEBULA, both focusing on the investigation of photonic neuromorphic technologies and photonic machine learning. Currently he serves as technical manager for the H2020 NEoteRIC project also focusing on photonic neuromorphic paradigms. Since 2019, he is an associate professor at the department of Information and Communication Systems Engineering at the University of the Aegean, splitting his research interest among design/implement photonic neuromorphic systems for high bandwidth applications and photonic physical layer cryptographic modules (H2020 KONFIDO, GSRT- SAFE-IT). He is author and co-author of more than 70 publications in highly cited journals and international conferences focusing on quantum-dot laser dynamics, neuromorphic schemes and physical layer security. He is a patent holder for photonic-physical unclonable functions modules for implementing physical layer security. He serves as regular reviewer for IEEE, OSA, AIP and Springer Journals whereas he serves as guest editor for MDPI's Applied Sciences journal.

2. ACADEMIC STUDIES

DOCTORAL DEGREE (PH.D)

National & Kapodistrian University of Athens
Dept. Informatics & Telecommunications

Thesis: "Experimental and Numerical Investigation of Quantum-Dot Mode-Locked Lasers for Telecomm and Medical Applications»

MASTER DEGREE (MSC.)

National & Kapodistrian University of Athens
Dept. Informatics & Telecommunications & Dept. Physics

Dissertation: " Numerical investigation of Micro-Ring Resonators and Sensitive Bio-Sensors"

BACHELOR (BS.)

National & Kapodistrian University of Athens
Dept. Informatics & Telecommunications

3. PERSONAL GRANTS & AWARDS

EU-MARIE CURIE GRANT FP7-PEOPLE-IEF **2012 (Paris-France)**

ALCATEL-THALES- III-V Labs
Principal Investigator

NOMOS Project: "Design and realization of semiconductor mode-locked lasers for space-born telemetry andLIDAR applications"

G. LATSIS FOUNDATION (NATIONAL GRANT STUDIES – 2014) **2013 (Athens-Greece)**
National & Kapodistrian University of Athens
Principal Investigator

PROMETHEUs Project: "Investigation of Photonic Reservoir Computing for Telecomm applications"

HFRI – NATIONAL ERC EQUIVALENT POST-DOCTORAL GRANT **2018 (Athens-Greece)**
University of the Aegean
Principal Investigator

NEBULA Project: "Experimental and Numeircla Investigation of Quantum-Dot based neuromorphic nodes"

4. ACADEMIC POSITIONS

UNIVERSITY OF THE AEGEAN **Samos, Greece**
Dept. Information & Communication Systems Engineering **2019-today**

- ***Associate Professor:*** Design of Integrated Photonic Systems
- **Technical Manager** of H2020 NEoteRIC Project (2020-2023)
- **Principal Investigator** NEBULA (HFRI – Project) (2018-2021).

NATIONAL & KAPODISTRIAN UNIVERSITY OF ATHENS **Athens, Greece**
Dept. Informatics & Telecommunications **2006-2018**

- ***Visiting Professor:*** integrated photonics
- ***Associate/Senior Researcher*** senior scientist on more than 7 FP6-FP7 EU funded research projects on photonics
- ***Adjunct Lecturer:*** integrated photonics
- ***Ph.D candidate*** in the context of EU – FP7 FAST DOT project

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EULAMBIA ADVANCED TECHNOLOGIES LTD. **Athens, Greece**
2017-2018

- ***Senior Researcher in the R&D department***

Chief Techical officer and WP leader in 2 H2020 research projects H2020 – KONFIDO,H2020-SMILE

UNIVERSITY OF WEST ATTICA **Athens, Greece**
Dept. Computer Engineering **2015-2018**

- ***Adjunct Lecturer:*** Computer Networks and Electronics

SCHOOL FOR TELECOMMUNICATION OFFICERS — **Athens, Greece**
Hellenic Army Forces — **2012-today**

- ***Visiting Professor:*** Computer Networks and Telecommunications

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ALCATEL-THALES III-V (JOINED RESEARCH LABS) — **Paris, France**
2013-2014

- ***IEF Marie-Curie Postdoctoral Fellow:*** NOMOS project

5. PUBLICATIONS IN JOURNALS

1. G. Sarantoglou, M. Skontranis, A. Bogris, C. Mesaritakis, "Experimental study of Neuromorphic Node based on a Multi- Waveband Emitting two - section Quantum Dot Laser" **OSA Photonic Research**, doi: 10.1364/PRJ.413371 (2021) **(Impact Factor: 6.099)**

2. M. Skontranis, G. Sarantoglou, S. Deligiannidis, A. Bogris, C. Mesaritakis, "Unsupervised Image Classification Through Time-Multiplexed Photonic Multi-Layer Spiking Convolutional Neural Network" **MDPI Applied Sciences, special issue on Optical Computing**, accepted for publication (2021) **(Impact Factor: 2.471)**

3. A. Bogris, C. Mesaritakis, Stavros Deligiannidis, Pu Li "Fabry-Perot Lasers as Enablers for Parallel Reservoir Computing", **IEEE Selected Topics in Quantum Electronics**, Vol. 27, No.2 (2020) (Impact Factor: 4.681)

4. C. Mesaritakis, P. Rizomiliotis, M. Akriotou, C. Chaintoutis, A. Fragkos, D. Syvridis "Photonic Pseudo-Random Number Generator for Internet-of-Things Authentication using a Waveguide based Physical Unclonable Function" **Arxiv.org** (2020)

5. S. Deligiannidis, A. Bogris, C. Mesaritakis, Y. Kopsinis, "Compensation of Fiber Nonlinearities in Digital Coherent Systems Leveraging Long Short-Term Memory Neural Networks" **IEEE Journal of Lightwave Technology**, 38(21) 5991-5999 (2020) **(Impact Factor: 4.681)**

6. G. Sarantoglou, M. Skontranis, C. Mesaritakis, "All Optical Integrate and Fire Neuromorphic Node based on Single Section Quantum Dot Laser" **IEEE Selected Topics in Quantum Electronics**, accepted for publication (2019) **(Impact Factor: 4.681)**

7. C. Mesaritakis, D. Syvridis, "Reservoir Computing based on Transverse Modes in a Single Optical Waveguide" **OSA: Optics Letters** 44 (6) 1218-1221 (2019) **(Impact Factor: 3.179)**

8. C. Chaintoutis, M. Akriotou, C. Mesaritakis, I. Komnios, D. Karamitros, A. Fragkos, D. Syvridis, "Optical PUFs as physical root of trust for blockchain-driven applications" **IET Software** to appear (2019) **(Impact Factor: 1.04)**

9. C. Mesaritakis, M. Akriotou, A. Kapsalis, E. Grivas, C. Chaintoutis, T. Nikas, D. Syvridis, "Physical Unclonable Function based on a Multi-Mode Optical Waveguide" **Nature, Sci. Reports** 8, 9653 (2018) **(Impact Factor: 5.228)**

10. C. Mesaritakis, A. Kapsalis, A. Bogris, D. Syvridis "Artificial Neuron based on Quantum Dot Mode Locked Laser" **Nature: Scientific Reports**, 6, 39317 (2016) **(Impact Factor: 5.228)**

11. C. Mesaritakis, A. Bogris, A. Kapsalis, D. Syvridis "High-Speed All-Optical Pattern Recognition of Fourier Dispersive Images Through a Photonic Reservoir Computing Subsystem" **OSA: Optics Letters** 40(14) 3416-3419 (2015) **(Impact Factor: 3.179)**

12. C. Weber, L. Dzewietzki, M.Rosseti, T. Xu, P. Bardella, H.Simos, C. Mesaritakis, M. Ruiz, I. Krestnikov, D. Livshits, M. Krakowski, D. Syvridis, I. Montrosset, E. U. Rafailov, W. Elsasser, S. Breuer, "Picosecond pulse amplification up to a peak power of 42 W by a quantum-dot tapered optical amplifier and a mode-locked laser emitting at 1.26 μm" **OSA: Optics Letters**, Vol. 2 pp-395-398 (2015) **(Impact Factor: 3.179)**

13. H. Simos, C. Simos, C. Mesaritakis, D. Syvridis, "Amplitude and Timing Noise in a Noncolliding Passively Mode-Locked Quantum Dot Laser" **IEEE Photon. Technol. Lett**. 27,(5), 506-509 (2015) **(Impact Factor: 1.945)**

14. C. Simos, H. Simos, C. Mesaritakis, A. Kapsalis, "Pulse and noise properties of a two section passively mode-locked quantum dot laser under long delay feedback" **Elsevier Optics Communication** 313, pp.248-255 (2014) **(Impact Factor: 1.45)**

15. C. Mesaritakis, A. Kapsalis, M. Krakowski, I. Krestnikov, D. Syvridis "Tapered InAs/InGaAs Quantum-dot Semiconductor Optical Amplifier Design for Enhanced Gain and Beam Quality" **OSA Optics Letters,** Vol. 38, No. 14, pp. 2404-2406 (2013) **(Impact Factor: 3.179)**

16. C. Mesaritakis, V. Papataksiarhis, D. Syvridis "Micro Ring Resonators as Building Blocks for an All-Optical High-Speed Reservoir Computing Bit-Pattern Recognition System" **OSA JOSA-B** Vol. 30 No. 11 pp. 3048-3055 (2013) **(Impact Factor: 1.731)**

17. H. Simos, M. Rossetti, C. Simos, C. Mesaritakis, T. Xu, P. Bardella, I. Montrosset, D. Syvridis, "Numerical analysis of passively mode-locked quantum-dot lasers with absorber section at the low-reflectivity output facet" **IEEE Journal of Quantum Electronics**, Vol.49 No. 1, pp. 3-10, (2013) **(Impact Factor: 1.843)**

18. N. V. Kryzhanovskaya, A. E. Zhukov, A. M. Nadtochy, M. V. Maximov, E. I. Moiseev, M. M. Kulagina, A. V. Savelev, E. M. Arakcheeva, A. A. Lipovskii, F. I. Zubov, A. Kapsalis, C. Mesaritakis, D. Syvridis, A. Mintairov, D. Livshits, "Room-temperature lasing in microring cavities with an InAs/InGaAs quantum-dot active region" **Elsevier Semiconductors** Volume 47, Issue 10, pp 1387-1390 (2013) **(Impact Factor: 2.264)**

19. C. Mesaritakis, C. Simos, H. Simos, I. Krestnikov, D. Syvridis "External Optical Feedback-Induced Wavelength Selection and Q-switching Elimination in an InAs/InGaAs Passively Mode Locked Quantum Dot Laser" **OSA Journal of Optical Society of America - B** Vol. 29, No. 5, pp. 1071-1077 (2012) **(Impact Factor: 1.731)**

20. C. Mesaritakis, C. Simos, H. Simos, A. Kapsalis, E. Roditi, D. Syvridis, I. Krestnikov, "Effect of the Number of Quantum Dot Layers and Dual State Emission on the Performance of InAs/InGaAs Passively Mode-Locked Lasers", **AIP Applied Physics Letters** Vol.101, 25 pp. 251115 (2012) **(Impact Factor: 3.142)**

21. A. Kapsalis, I. Stamataki, C. Mesaritakis, D. Syvridis, M. Hamacher, H. Heidrich, "Design and Experimental Evaluation of Active-Passive Integrated Micro-Ring Lasers: Noise Properties", **IEEE Journal of Quantum Electronics**, Vol. 48 No. 2 pp. 99-106 (2012) **(Impact Factor: 1.843)**

22. A. Kapsalis, I. Stamataki, C. Mesaritakis, D. Syvridis, M. Hamacher, H. Heidrich, "Design and Experimental Evaluation of Active-Passive Integrated Micro-Ring Lasers: Threshold Current and Spectral Properties", **IEEE Journal of Quantum Electronics**, Vol. 48 No. 2 pp. 99-106 (2012) **(Impact Factor: 1.843)**

23. Y. Ding, R. Aviles-Espinosa, M. A. Cataluna, D. Nikitichev, M. Ruiz, M. Tran, Y. Robert, A. Kapsalis, H. Simos, C. Mesaritakis, T. Xu, P. Bardella, M. Rossetti, I. Krestnikov, D. Livshits, Ivo Montrosset, D. Syvridis, M. Krakowski, P. Loza-Alvarez, and E. Rafailov, "High peak-power picosecond pulse generation at 1.26 μm using a quantum-dot-based external-cavity mode-locked laser and tapered optical amplifier" **OSA Optics Express** Vol. 20 No. 13, pp. 14308-14320 (2012) **(Impact Factor: 3.148)**

24. Y. Ding, A. Alhazime, D. Nikitichev, K. Fedorova, M. Ruiz, M. Tran, Y. Robert, A. Kapsalis, H. Simos, C. Mesaritakis, T. Xu, P. Bardella, M. Rossetti, I. Krestnikov, D. Livshits, I. Montrosset, D. Syvridis, M. A. Cataluna, M. Krakowski, E. Rafailov, "Tunable master-oscillator power-amplifier based on chirped quantum-dot structures" **IEEE Photon. Technol. Lett**. Vol. 24, No. 20, pp. 1841-1844 (2012) **(Impact Factor: 1.945)**

25. H. Simos, C. Simos, C. Mesaritakis, D. Syvridis, "Two Section Quantum Dot Mode-Locked Lasers under Optical Feedback: Pulse Broadening and Harmonic Operation" **IEEE Journal of Quantum Electronics** vol.48, no.7, pp.872-877, (2012) **(Impact Factor: 1.843)**

26. C. Mesaritakis, A. Argyris, C. Simos, H. Simos, A. Kapsalis, D. Syvridis "Chaotic emission and tunable self-sustained pulsations in a two-section Fabry–Perot quantum dot laser" **AIP: Applied Physics Letters** Vol. 98, 051104 (2011) **(Impact Factor: 3.142)**

27. C. Mesaritakis, C. Simos, H. Simos, D. Syvridis, "Dual ground-state pulse generation from a passively mode-locked InAs/InGaAs quantum dot laser" **AIP: Applied Physics Letters** Vol. 99, 141109 (2011) **(Impact Factor: 3.142)**

28. C. Mesaritakis, A. Argyris, E. Grivas, D. Syvridis "Adaptive Interrogation for Fast Optical Sensing Based on Cascaded Micro-Ring Resonators" **IEEE Sensors Journal**, Vol. 11, No.7 pp.1595-1601 (2011) **(Impact Factor: 1.889)**

29. C. Mesaritakis, C. Simos, H. Simos, S. Mikroulis, I. Krestnikov, D. Syvridis "Pulse Width Narrowing due to Dual Ground State Emission in Quantum Dot Mode Locked Lasers**" AIP: Applied Physics Letters** Vol. 96 May (2010) **(Impact Factor: 3.142)**
30. C. Mesaritakis, C. Simos, H. Simos, S. Mikroulis, I. Krestnikov, E. Roditi, D. Syvridis "Effect of feedback to the Ground and Excited State of a Quantum dot passively mode locked Laser" **AIP: Applied Physics Letters** Vol. 97 August (2010) **(Impact Factor: 3.142)**
31. M. A. Cataluna, D. I. Nikitichev, S. Mikroulis, H. Simos, C. Simos, C. Mesaritakis, D. Syvridis, I. Krestnikov, D. Livshits, and E. U. Rafailov, "Dual-wavelength mode-locked quantum-dot laser, via ground and excited state transitions: experimental and theoretical investigation", **OSA Optics Express**, vol. 18, pages 12832-12838, (2010) **(Impact Factor: 3.148)**
32. C. Mesaritakis, H. Simos, A. Kapsalis and D. Syvridis, "Optical microring based interrogation method for phase detecting elements", **IEEE Sensors Journal**, vol. 9, December (2009) **(Impact Factor: 1.889)**
33. H. Simos, C. Mesaritakis, D. Alexandropoulos, and D. Syvridis, "Dynamic analysis of crosstalk performance in microring based add/drop filters", **IEEE/OSA Journal of Lightwave Technology**, vol. 27, pages 2027-2034, (2009). **(Impact Factor: 2.862)**
34. H. Simos, C. Mesaritakis, D. Alexandropoulos, and D. Syvridis, "Intra-band Crosstalk Properties of Add/Drop Filters Based on Active Microring Resonators", **IEEE Photon. Technol. Letters**, vol. 19, pages 1649-1651, (2007). **(Impact Factor: 1.945)**

6. CHAPTERS IN SCIENTIFIC BOOKS

1. C. Mesaritakis, D. Syvridis, "Spectral Splitting Effects and Their Influence on the Performance of Quantum Dot Mode-Locked Lasers", **Springer**, "Quantum Dot Devices - Lecture Notes in Nanoscale Science and Technology", Vol. 13 (2012)

2. M. Akriotou, C. Mesaritakis, A. Kapsalis, E. Grivas, C. Chaintoutis, A. Fragkos, D. Syvridis, "Random Number Generation from a Secure Unclonable Hardware Module" **Springer**, Communications in Computer and Information Science Vol. 821, (2018)

3. C. Mesaritakis etal, "Secure Cross-Border Exchange of Health Related Data: The KONFIDO Approach" **Springer,** Internet and Distributed Computing Systems, DOI: 10.1007/978-3-030-34914-1_30 (2019)

7. PATENTS

1. C. Mesaritakis, D. Syvridis " Photonic Physical Unclonable Function based on Multi-Mode Optical Waveguides" **GR patent** submitted on 26/7/2017 **Granted Ref. Number: 2017- 02623**

2. C. Mesaritakis, D. Syvridis " Photonic Physical Unclonable Function based on Multi-Mode Optical Waveguides" **PTC patent pending** submitted on 24/7/2018 **Ref. Number: PCT/IB2018/055546**

8. PUBLICATIONS IN CONFERENCES

1. G. Sarantoglou, M. Skontranis, A. Bogris, C. Mesaritakis, "Resonate and Fire Neuromorphic Node based on two - section Quantum Dot Laser with multi-waveband dynamics" **ECOC-CLEO**, Brussels (2020)

2. M. Skontranis, G. Sarantoglou, S. Deligiannidis, A. Bogris, C. Mesaritaki, "Unsupervised Image Classification Through Time-Multiplexed Photonic Multi-Layer Spiking Convolutional Neural Network" **ECOC-CLEO**, Brussels (2020)

3. Stavros Deligiannidis, Charis Mesaritakis, Adonis Bogris, "Performance and Complexity Evaluation of Recurrent Neural Network Models for Fibre Nonlinear Equalization in Digital Coherent Systems" **ECOC-CLEO**, Brussels (2020)

4. C. Mesaritakis, M. Skontranis, G. Sarantoglou, A. Bogris, "Micro-Ring-Resonator Based Passive Photonic Spike-Time- Dependent-Plasticity Scheme for Unsupervised Learning in Optical Neural Networks" **OFC USA** – San Diego, March (2020)

5. G. Sarantoglou, M. Skontranis, A. Bogris, C. Mesaritakis, "Temporal Resolution Enhancement in Quantum-Dot Laser Neurons due to Ground State Quenching Effects" **OFC USA** – San Diego, March (2020)

6. C. Mesaritakis "Passive Photonic Components as Building Blocks for Ultra-Fast Reservoir Computing and as Photonic Spike Dependent Plasticity Enabling Structures" **ERC International Workshop – Invited -** Photonic Reservoir Computing and Information Processing in Complex Networks, Trento-Italy (2019)

7. C. Mesaritakis, "Photonic Reservoir Computing based on the Random-Interaction of Transverse Optical Modes in Large-Cross Section Waveguides" **CLEO/EQEC Europe**, Munich-Germany (2019)

8. M. Skontranis, G. Sarantoglou, C. Mesaritakis, "Inhibitory Integrate and Fire Neuron based on Quantum-Dot Intra-Band Transitions in a Semiconductor Laser" **CLEO/EQEC Europe**, Munich-Germany (2019)

9. M. Skontranis, G. Sarantoglou, C. Mesaritakis, "All-optical Inhibitory Integrate and Fire Neuron based on a Single-Section Quantum-Dot Semiconductor Laser" **CLEO USA**, San-Diego California USA (2019)

10. C. Mesaritakis, M. Akriotou, D. Syvridis, "Laser Induced Speckle as a Foundation for Physical Security and Optical Computing" **IEEE PSC2018** Photonics in Switching and Computing, Limassol Cyprus (2018)

11. D. Syvridis, C. Mesaritakis, "Quantum-Dot Laser Assisted Spiking Neural Networks" **IEEE International Conference in Laser Optics (ICLO)**, - Invited – St. Petersburg Russia (2018).

12. C. Mesaritakis, M. Akriotou, A. Kapsalis, E. Grivas, C. Chaintoutis, A. Fragkos, D. Syvridis, "Random Number Generation from a Secure Unclonable Hardware Module" **ISCIS Security** Workshop, 26-27th February, Imperial College London (2018)

13. J. Rasmussen, P. Natsiavas, K. Votis, K. Moschou, P. Campegiani, L. Coppolino, I. Cano, D. Marí, G. Faiella, O. Stan, O. Abdelrahman, M. Nalin, I. Baroni, M. Voss-Knude, V.A. Vella, E. Grivas, C. Mesaritakis, J. Dumortier, J. Petersen, D. Tzovaras, L. Romano, I. Komnios and V. Koutkias, "Gap Analysis for Information Security in Interoperable Solutions at a Systemic Level: The KONFIDO Approach", in IFMBE Proceedings of the Int. Conf. on Biomedical and Health Informatics, Thessaloniki, Greece, November 18-21, 2017, **Springer**-Verlag Berlin Heidelberg, 2017 (in press)

14. D. Syvridis, C. Mesaritakis, "Neuromorphic Photonics based on Quantum-Dot Devices", **Control of Self-Organizing Nonlinear Systems**, Wittenberg-Germany - Invited - (2017)

15. C. Mesaritakis, "All-Optical Excitability of an Inhibitory Neuron based on Two-Section InAs/InGaAs Quantum Dot Mode-Locked Laser" **CLEO Europe/EQEC 2017** Munich-Germany (2017)

16. C. Mesaritakis, M. Akriotou, E. Grivas, D. Syvridis "Cryptographic Key Generation from a Photonic Physical Unclonable Function based on High-Order Transverse Modes" **KES-IIMSS** Algarve-Portugal (2017).

17. C. Mesaritakis, A. Kapsalis, M. Akriotou, D. Syvridis "Physical Unclonable Functions as Key Generator for Cryptographic Applications", **3rd International Conference on Cyber Security** CryCybIW Athens-Greece (2016)

18. C. Mesaritakis, A. Kapsalis, D. Syvridis "All-Optical Reservoir Computing system based on InGaAsP Ring Resonators for High-Speed Identification and Optical Routing in Optical Networks" **SPIE Photonics West**, San Francisco USA, (2015)

19. A. Kapsalis, C. Mesaritakis, D. Syvridis "Converting mid-infrared signals to near-infrared through optomechanical transduction" **SPIE Photonics West**, San Francisco USA, (2015)

20. C. Mesaritakis, A. Bogris, D. Syvridis, "All optical Dual-Wavelength Switching and Injection Locking of InAs/InGaAs Passively Mode-Locked Quantum Dot Fabry-Perot Lasers" **CLEO CB-P** Munich Germany (2015)

21. C. Mesaritakis, D. Syvridis "Optical Pattern Recognition System based on Reservoir Computing Scheme Using Micro-Ring Resonators as Building Blocks" **EUROPTRODE XII**, Athens Greece April (2014)

22. C. Mesaritakis, A. Kapsalis, D. Syvridis, "Silicon-on-Insulator Microring Resonator All-Optical Reservoir Computing Scheme for High-Speed Applications" Conference: **IEEE International Conference on group IV Photonics**, At Cité Internationale Universitaire de Paris, Paris France (2014)

23. C. Mesaritakis, A. Kapsalis, C. Simos, H. Simos, M. Krakowski, and D. Syvridis "Optimized InAs/AlGaAs Quantum Dot Semicon- ductor Optical Amplifier Tapered Geometry For Enhanced Beam Quality and Optical Gain" **CLEO** 2013 May – Munich Germany

24. L. Drzewietzki, S. Breuer, M. Rossetti, T. Xu, P. Bardella, H. Simos, C. Mesaritakis, M. Ruiz, I. Krestnikov, D. Livshits, M. Krakowski, D. Syvridis, I. Montrosset, E. Rafailov, and W. Elsa¨ßer, "Picosecond pulse generation with 34W peak power using a monolithic quantum-dot tapered mode-locked laser and tapered optical amplifier" **CLEO** 2013 May – Munich Germany

25. H. Simos, C. Simos, C. Mesaritakis, D. Syvridis "Numerical Investigation of Timing Jitter in Passively Mode Locked Quantum Dot Lasers with Anti-Colliding Design" **IS-PALD**, Paris-France (2013)

26. C. Simos, H. Simos, C. Mesaritakis, D. Syvridis "Two Section Quantum Dot Mode Locked Lasers under Long Optical Feedback: Pulse Noise and Jitter Dynamics" **IS-PALD,** Paris – France (2013)

27. Y. Ding, M. A. Cataluna, D. Nikitichev, M. Ruiz, M. Tran, Y. Robert, A. Kapsalis, H. Simos, C. Mesaritakis, T. Xu, P. Bardella, M. Rossetti, I. Krestnikov, D. Livshits, I. Montrosset, D. Syvridis, M. Krakowski, E. Rafailov "Tunable Master-Oscillator Power Amplifier Using All Chirped Quantum-Dot Structures" **CLEO** 2012 San Jose, USA

28. Y. Ding, M. A. Cataluna, D. Nikitichev, M. Ruiz, M. Tran, Y. Robert, A. Kapsalis, H. Simos, C. Mesaritakis, T. Xu, P. Bardella, M. Rossetti, I. Krestnikov, D. Livshits, I. Montrosset, D. Syvridis, M.

Krakowski, E. Rafailov "30-W Peak Power Generated from All-quantum-dot Master-oscillator Power-amplifier System for Nonlinear Bio-imaging Applications" **CLEO** 2012 San Jose, USA

29. A. E. Zhukov, N. V. Kryzhanovskaya, A. V. Savelyev, A. M. Nadtochiy, E. M. Arakcheeva, F. I. Zubov, V. V. Korenev, M. V. Maximov, Y. M. Shernyakov, M. M. Kulagina, I. A. Slovinskiy, D. A. Livshits, A. Kapsalis, C. Mesaritakis, D. Syvridis, A. M. Mintairov, "Quantum dot lasers and relevant nanoheterostructures" **SPIE, Semiconductor Lasers and Applications** V, Beijing, China, November 05, (2012)

30. A. E. Zhukov, N. V. Kryzhanovskaya, A. V. Savelyev, A. M. Nadtochiy, E. M. Arakcheeva, F. I. Zubov, V. V. Korenev, M. V. Maximov, Y. M. Shernyakov, M. M. Kulagina, I. A. Slovinskiy, D. A. Livshits, A. Kapsalis, C. Mesaritakis, D. Syvridis, A. M. Mintairov, "Quantum dot lasers and relevant nanoheterostructures" **SPIE, Progress in Biophotonic**s, Beijing, China, November 05, (2012)

31. A. Kapsalis, H. Simos, C. Mesaritakis and D. Syvridis, "Optical Microring resonators for telecom sensing and metrology applications: Theory, Design and Experimental Results**", 5th International Conference on Micro-Nanoelectronics, Nanotechnologies and MEMS** (Micro & Nano 2012), Heraklion, Crete, October (2012).

32. A. Kapsalis, C. Mesaritakis and D. Syvridis "Active-Passive Integrated Microring Lasers", **ECLW** September, Lausanne Switzerland. (2011)

33. C. Mesaritakis, H. Simos, A. Kapsalis, D. Syvridis " Micro Ring Biochemical Sensor Based on Fano Resonances and Nanoslot Waveguides" **EOS annual meeting TOM1 Biophotonics** Paris France September (2008).