

Christos (Chris) Vagionas

Date of Birth: 19th September 1984

Current Position: Visiting Lecturer, Dep. Informatics, U.O.W.M.
Post-doctoral researcher. Dep. Informatics, A.U.TH.

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❖ **Studies**

- **PhD in « Optical Communications for Computing Systems »**
March 2017, Dep. Informatics, A.U.TH.
PhD Thesis “*Optical Memories for High Performance Computing Systems Architectures using Wavelength Division Multiplexing*”
- **M.Sc. Graduate Studies «Communication Systems and Technologies»**
February 2011, Dep. Informatics A.U.TH.
MSc Thesis: “*Study and simulation of the propagation of the optical signal in a Semiconductor Optical Amplifier*”
- **Diploma of Electrical and Computer Engineering**
July 2008, Dep. ECE, A.U.TH.
Thesis: “*Study and simulation of the E/M wave wireless propagation in urban environment using the parabolic approximation*”

❖ **Research Experience:**

Mar. 2017- now : Postdoctoral Researcher, Dep. Informatics, A.U.TH.

Participation and technical coordination of research projects in the field of optical and wireless communications and systems.

Feb. 2011 – Dec. 2015: Research Assistant at Center for Research and Technology Hellas (CERTH)

Participation in research projects in the field of optical computing and communication systems

Dec. 2005 – Dec. 2007: Network Management A.U.TH., Network Management

Management of research and university computer network and fiber optical network of A.U.TH.

❖ **Distinctions :**

Graduate student fellowship of the IEEE Photonics Society (Oct. 2016)

Awarded to 10 PhD students globally working in photonics-related fields of the IEEE society

Newport Student Travel Grant of the Optical Society of America (May 2012)

For his work on an «All Optical Flip Flop with two Coupled Travelling Waveguide SOA-XGM Switches» awarded at CLEO conference, OSA/IEEE, San Jose, CA, USA, May 2012

Best student paper award at the 5th EUREKA conference, in Kastoria, Greece (Sep 2011)

For his work on "A Semiconductor Optical Amplifier (SOA) model based on the Transfer Matrix Method"

❖ **Visiting Lecturer**

University of Western Macedonia (U.O.W.M.), Dep. Informatics

Courses of Telecommunications and Wireless Communications (2021-2022)

❖ **Participation in Research Projects**

HORIZON 2020, ICT-42-2020: 5G PPP (AUTH): Oct. 2020 – now

Topic: Integration of innovative data plane technology building blocks under a flexible 5G network resource, slice and application orchestration framework, providing a complete 5G system platform for the validation of advance 5G services and IoT solutions.

1st Call for H.F.R.I. Research Projects to support Postdoctoral Researchers: Sep. 2018 – Mar. 2022

Topic: Optical Content Addressable Memories for fast look-up address operations

H2020 5G-PHOS (AUTH): Sep. 2017 – Mar. 2022

Topic: 5G integrated Fiber-Wireless networks that leverage existing photonic technologies towards implementing a high-density SDN-programmable network architecture.

FP7 IAPP-Comander (AUTH): Sep. 2011– Mar. 2015

Topic: Converged Optical-Mobile Access Networks with Dynamic and Efficient Resource allocation

FP7 ICT-RAMPLAS (CERTH): Sep. 2011 – Mar. 2015

Research Topic: Design and development of optical Random Access Memories for High Performance Computing Systems and Data Centers.

List of Scientific Publications

A) PhD Thesis

“Optical Memories for High Performance Computing Systems Architectures using Wavelength Division Multiplexing”, Thessaloniki, Dec. 2016, Ph.D Advisor: Associate Prof. Amalia Miliou

B) Three (3) Book Chapters :

[b.1] C. Vagionas, J. Bos, G.T. Kanellos, N. Pleros, A. Miliou, "Efficient and validated time domain numerical modelling of Semiconductor Optical Amplifiers (SOAs) and SOA-based circuits," in Some Advanced Functionalities of Optical Amplifiers, InTech Open, 2015, ch.1, pp. 1-26

[b.2] Ch. Mitsolidou, C. Vagionas, D. Tsiokos, N. Pleros, A. Miliou, "Digital All-Optical Physical-layer Network Coding," in the Book: Network Coding, InTech Open, 2018

[b.3] E. Ruggeri, A. Tsakyridis, C. Vagionas, A. Miliou, S. Malekzai, G. Agapiou, G. Datseris, G. Stavroulakis, "Optical Wireless System Performance, Deployment, and Optimization," in "Enabling 6G Mobile Networks" book, ISBN: 978-3-030-74647-6, 2022

C) Forty-two (42) peer reviewer journals :

[J.1] D. Fitsios, C. Vagionas, G.Kanellos, A. Miliou, N. Pleros, "Dual-Wavelength Bit Input Optical RAM With Three SOA-XGM Switches," IEEE Photonics Technology Let., vol. 24, is. 13, pp. 1142-1144, Jul. 2012

[J.2] C. Vagionas, D. Fitsios, G.T.Kanellos, N. Pleros, A. Miliou, "Optical RAM and Flip-Flops Using Bit-Input Wavelength Diversity and SOA-XGM Switches," IEEE Journal of Lightwave Technology, vol. 30, no. 18, pp. 3003-3009, Sep. 15, 2012

[J.3] D. Fitsios, C. Vagionas, G. T. Kanellos, A. Miliou, N. Pleros, "Memory speed analysis of an optical Flip-Flop employing a SOA-MZI and a feedback loop" IEEE Journal of Quantum Electronics, vol.49, no.2, pp.169-178, Feb. 2013 .

[J.4] G.T. Kanellos, D. Fitsios, T. Alexoudi, C. Vagionas, A. Miliou, N. Pleros, "Bringing WDM into optical static RAM architectures," IEEE Jour. of Lightwave Technology, vol.31, no.6, pp.988-995, Mar. 2013.

[J.5] C. Vagionas, S. Markou, G. Dabos, T. Alexoudi, D. Tsiokos, A. Miliou, N. Pleros, G.T. Kanellos, "Column Address Selection in Optical RAMs With Positive and Negative Logic Row Access," IEEE Photonics Journal, vol. 5, no. 6, p.7800410, Dec. 2013

[J.6] C. Vagionas, D. Fitsios, K. Vyrsoinos, G.T. Kanellos, A. Miliou, N. Pleros, "XPM- and XGM-based Optical RAM memories: Frequency and Time domain theoretical analysis", IEEE Journal of Quantum Electronics, vol. 50, no. 8, pp. 683-697, Aug. 2014

[J.7] C. Vagionas, S. Pitris, C. Mitsolidou, J. Bos, P. Maniotis, D. Tsiokos, N. Pleros, "All-Optical Tag Comparison for Hit/Miss Decision in Optical Cache Memories," IEEE Photonics Technology Letters, vol. 28, no. 07, pp. 713 - 716, Dec. 2015

[J.8] S. Pitris, C. Vagionas, T. Tekin, R. Broeke, G.T. Kanellos, N. Pleros, "WDM-enabled Optical RAM at 5 Gb/s using a monolithic InP Flip-Flop chip", IEEE Photonics Journal, vol. 08, no. 02, a.ID 0600207, Feb. 2016

[J.9] C. Vagionas, C. Mitsolidou, D. Tsiokos, K. Ramantas, A. Miliou, N. Pleros, "Optical Physical-Layer Digital Network Coding for 2.5 Gb/s Fiber-Wireless Networks", IEEE Photonics Technology Letters, vol. 28, no. 13, pp. 1442-1445, Apr. 2016

[J.10] S. Pitris, C. Vagionas, P. Maniotis, G.T. Kanellos, N. Pleros, "An Optical Content Addressable Memory (CAM) Cell for Address Look-up at 10 Gb/s" IEEE Photonics Technology Letters, vol. 28, no. 16, pp. 1790-1793, Feb. 2016

[J.11] C. Mitsolidou, C. Vagionas, K. Ramantas, D. Tsiokos, A. Miliou, N. Pleros, "Digital Optical Physical-Layer Network Coding for mm-wave Radio-over-Fiber signals in Fiber-Wireless Networks", IEEE J. Lightwave Technology, vol. 34, no. 20, pp. 4765-4771, Oct. 2016

[J.12] C. Vagionas, P. Maniotis, S. Pitris, A. Miliou, N. Pleros, "Integrated Optical Content Addressable Memories (CAM) and Optical Random Access Memories (RAM) for Ultra-Fast Address Look-Up Operations", Applied Sciences, vol. 7, no. 7, July 2017 (Invited Paper).

[J.13] N. Terzenidis, M. Moralis-Pegios, C. Vagionas, S.Pitris, E. Chatzianagnostou, P. Maniotis, D. Syrivelis, L. Tassioulas, A. Miliou, N. Pleros, K. Vyrsoinos, "Optically-enabled Bloom Filter Label Forwarding using a Silicon Photonic switching matrix", IEEE J. Lightwave Technology, vol. 35, no. 21, pp. 4758-4765, Nov. 2017

- [J.14] G. Mourgias-Alexandris, C. Vagionas, A. Tsakyridis, P. Maniotis, N. Pleros, “*Optical Content Addressable Memory (CAM) Matchline for 2-bit Address Look-Up at 10Gb/s*” IEEE Photonics Technology Letters, vol. 30, no. 9, pp. 809-812, Mar. 2018
- [J.15] G. Mourgias-Alexandris, C. Vagionas, A. Tsakyridis, P. Maniotis, N. Pleros, “*All-Optical 10Gb/s Ternary-CAM Cell for Routing Look-up Table Applications*” OSA Optics Express, vol. 26, no. 6, pp. 7555-7562, Mar. 2018
- [J.16] A. Tsakyridis, T. Alexoudi, A. Miliou, N. Pleros, C. Vagionas, “*A 10Gb/s Optical Random Access Memory (RAM) cell*,” Optics Letters, vol. 44, no. 7, pp. 1821-1824, Apr. 2019
- [J.17] T. Alexoudi, N. Terzenidis, S. Pitris, M. Moralis-Pegios, P. Maniotis, C. Vagionas, C. Mitsolidou, G. Mourgias-Alexandris, G.T. Kanellos, A. Miliou, N. Pleros, “*Optics in Computing: from Photonic Network on-Chip to Chip-to-Chip Interconnects and Disintegrated Architectures*,” IEEE J. Lightwave Technology, vol. 37, no. 2, pp. 363-379, Jan. 2019 (Invited)
- [J.18] G. Kalfas, C. Vagionas, A. Antonopoulos, E. Kartsakli, A. Mesodiakaki, S. Papaioannou, P. Maniotis, J. S. Vardakas, C. Verikoukis, Nikos Pleros, “*Next Generation Fiber-Wireless Fronthaul for 5G mmWave Networks*,” IEEE Communication Magazine, vol. 57, no. 3, pp. 138-144, Mar. 2019
- [J.19] N. Argyris, G. Giannoulis, K. Kanta, N. Iliadis, C. Vagionas, S. Papaioannou, G. Kalfas, D. Apostolopoulos, C. Caillaud, H. Debrégeas, N. Pleros, H. Avramopoulos, “*A 5G mmWave Fiber-Wireless IFoF Analog Mobile Fronthaul link with up to 24Gb/s Multi-band Wireless Capacity*,” IEEE J. Lightwave Communication, vol. 37, no. 12, pp. 2883-2891, June 2019
- [J.20] C. Mitsolidou, C. Vagionas, A. Mesodiakaki, P. Maniotis, G. Kalfas, Chris. G. H. Roeloffzen, P. W. L. van Dijk, R. M. Oldenbeuving, A. Miliou, N. Pleros, “*A 5G C-RAN Optical Fronthaul Architecture for Hotspot Areas Using OFDM-Based Analog IFoF Waveforms*,” Applied Sciences, vol. 9, no. 19, 4059, Sep. 2019
- [J.21] A. Tsakyridis, M. Moralis Pegios, C. Vagionas, E. Ruggeri, G. Kalfas, A. Miliou, N. Pleros, “*A Deeply Saturated Differentially-Biased SOA-MZI for 20 Gb/s Burst-Mode NRZ Traffic*,” Applied Sciences, vol. 9, no. 15, 2971, July 2019
- [J.22] C. Vagionas, A. Tsakyridis, G. Mourgias-Alexandris, S. Pitris, P. Maniotis, N. Pleros, Th. Alexoudi, “*Optical Memory Architectures for fast routing Address Look-Up (AL) table operation*,” IOP JPhys Photonics, vol. 1, 44005, Oct. 2019
- [J.23] A. Zanzi, C. Vagionas, A. Griol, A. Rosa, S. Lechago, M. Moralis-Pegios, K. Vyrsokinos, N. Pleros, J. Kraft, V. Sidorov, B. Sirbu, T. Tekin, P. Sanchis, A. Brimont, “*Alignment tolerant, low voltage, 0.23 V. cm, push-pull silicon photonic switches based on a vertical pn junction*”, Optics Express, vol. 27, no. 22, pp. 32409-32426, Oct. 2019
- [J.24] E. Ruggeri, A. Tsakyridis, C. Vagionas, G. Kalfas, Y. Leiba, N. Pleros, A. Miliou, “*Multi-user V-band uplink using a massive MIMO antenna and a fiber-wireless IFoF fronthaul for 5G mmWave small-cells*,” IEEE J. Lightwave Technology, vol. 38, no. 19, pp. 5368-5374, Apr. 2020
- [J.25] A. Tsakyridis, M. Moralis-Pegios, C. Vagionas, E. Ruggeri, G. Mourgias-Alexandris, A. Miliou and N. Pleros, “*Theoretical and experimental analysis of Burst-mode Wavelength Conversion via a Differentially-biased SOA-MZI*,” IEEE J. Lightwave Technology, vol. 28, no. 17, pp. 4607-4617, May. 2020
- [J.26] K. Kanta, A. Pagano, E. Ruggeri, M. Agus, I. Stratakos, R. Mercinelli, C. Vagionas, P. Toumasis, G. Kalfas, G. Giannoulis, A. Miliou, G. Lentaris, D. Apostolopoulos, N. Pleros, D. Soudris, H. Avramopoulos, “*Analog Fiber-Wireless transmission of IFoF/mmWave over in field deployed legacy PON infrastructure for 5G fronthauling*,” Journal of Optical Communications and Networking (JOCN), Special Issue on Future PON Architectures Enabled By Advanced Technology, vol. 12, no. 10, D57-D65, Oct. 2020
- [J.27] C. Vagionas, E. Ruggeri, A. Tsakyridis, G. Kalfas, Y. Leiba, A. Miliou, N. Pleros, “*Linearity Measurements on a 5G mmWave Fiber Wireless IFoF Fronthaul Link with analog RF beamforming and 120 degrees steering*,” vol. 24, no. 12, pp.2839-2843, Dec. 2020
- [J.28] E. Ruggeri, A. Tsakyridis, C. Vagionas, G. Kalfas, R. M. Oldenbeuving, P. W. L. van Dijk, C. G.H. Roeloffzen, Y. Leiba, N. Pleros, A. Miliou, “*A 5G Fiber Wireless 4Gb/s WDM Fronthaul for Flexible 360 Coverage in V-Band massive MIMO Small Cells*,” IEEE J. Lightwave Technology, vol. 39, no. 4, pp. 1081 - 1088, Feb. 2021
- [J.29] A. Mesodiakaki, P. Maniotis, M. Gatzianas, C. Vagionas, N. Pleros, G. Kalfas, “*A Gated Service MAC Protocol for sub-ms Latency 5G Fiber-Wireless MmWave C-RANs*,” IEEE Transactions on Wireless Communications, vol. 20, no. 4, pp. 2502 - 2515, Apr. 2021
- [J.30] A. Tsakyridis, E. Ruggeri, G. Kalfas, R. Oldenbeuving, P. v. Dijk, C. Roeloffzen, Y. Leiba, A. Miliou, N. Pleros, C. Vagionas, “*Reconfigurable Fiber Wireless IFoF Fronthaul with 60 GHz Phased Array Antenna and Silicon Photonic ROADMs for 5G mmWave C-RANs*,” IEEE J. Selected Areas in Communications, article in press
- [J.31] Th. R. Raddo, S. Rommel, B. Cimoli, C. Vagionas, D. Perez-Galacho, E. Pikasis, E. Grivas, K. Ntontin, M. Katsikis, D. Kritharidis, E. Ruggeri, I. Spaleniak, M. Dubov, D. Klondis, G. Kalfas, S. Sales, N. Pleros, I.

Tafur Monroy, "Transition technologies towards 6G networks", EURASIP Journal on Wireless Communications and Networking, 100 (2021)

[J.32] R. Stabile, G. Dabos, *C. Vagionas*, B. Shi, N. Calabretta, N. Pleros, "Neuromorphic Photonics: 2D or not 2D?", AIP J. of Applied Physics, 129, 200901 (2021)

[J.33] N. Terzenidis, G. Giamougiannis, A. Tsakyridis, D. Spasopoulos, F. Yan, N. Calabretta, *C. Vagionas*, N. Pleros, "Performance Analysis of a 1024-port Hipolaos OPS in DCN, HPC and 5G Fronthauling Ethernet Applications," OSA Journal of Optical Communications and Networking, vol. 13, no. 7, pp. 182-192, 2021

[J.34] T. Chrysostomidis, J. Mu, I. Roumpos, K. Fotiadis, A. Manolis, *C. Vagionas*, M. Dijkstra, S.M. Garcia-Blanco, T. Alexoudi, and K. Vysokinos, "8×40 Gbps WDM Amplification in a Monolithically Integrated Al₂O₃:Er³⁺-Si₃N₄ Waveguide Amplifier," IEEE Photonics Technology Letters, article in press

[J.35] T. Alexoudi, C. Pappas, T. Moschos, K. Fotiadis, G. Mourgias-Alexandris, N. Pleros, *C. Vagionas*, "20 Gb/s Optical RAM Row Access with WDM-formatted data words," IEEE J. Lightwave Technology, article in press

[J.36] T. Chrysostomidis, I. Roumpos, K. Fotiadis, J. Mu, A. Manolis, *C. Vagionas*, M. Dijkstra, S.M. Garcia Blanco, T. Alexoudi, and K. Vysokinos, "480 Gbps WDM Transmission Through an Al₂O₃:Er³⁺ waveguide amplifier," IEEE J. Lightwave Technology, under review

[J.37] *C. Vagionas*, A. Tsakyridis, T. Chrysostomidis, I. Roumpos, K. Fotiadis, A. Manolis, J. Mu, M. Dijkstra, SM Garcia Blanco, R. M. Oldenbeuving, P. W. L. van Dijk, C. G.H. Roeloffzen, K. Vysokinos, N. Pleros, T. Alexoudi, "Lossless 1×4 Silicon Photonic ROADM based on a Monolithic Integrated Erbium Doped Waveguide Amplifier on a Si₃N₄ platform," IEEE J. Lightwave Technology, under review

[J.38] T. Moschos, C. Pappas, G. Mourgias-Alexandris, T. Alexoudi, *C. Vagionas*, A. Miliou and N. Pleros, "Monolithically Integrated InP bistable photonic waveguide memory," IEEE Photonics Technology Letters, article in press

[J.39] M. Gatzianas, G. Kalfas, A. Mesodiakaki, *C. Vagionas*, N. Pleros, "Traffic-Aware Coordinated Beamforming Policies for mmWave X-hauling of 5G Dense Networks," IEEE Transactions on Wireless Communications, article in press

[J.40] C. Lian, *C. Vagionas*, T. Alexoudi, N. Pleros, N. Youngblood, C. Ríos, "Photonic (computational) memories: tunable nanophotonics for data storage and computing", De Gruyter Nanophotonics, article in press

[J.41] E. Ruggeri, *C. Vagionas*, R. Maximidis, G. Kalfas, D. Spasopoulos, N. Terzenidis, R. M. Oldenbeuving, P. W. L. van Dijk, C. G.H. Roeloffzen, N. Pleros, A. Miliou, "Reconfigurable Fiber Wireless fronthaul with A-RoF and D-RoF co-existence through a Si₃N₄ ROADM for Heterogeneous mmWave 5G C-RANs," IEEE J. Lightwave Technology, article in press

[J.42] H. Han, T. Alexoudi, *C. Vagionas*, N. Pleros, N. Hardavellas, "A Practical Shared Optical Cache With Hybrid MWSR/R-SWMM NoC for Multicore Processors," ACM Journal on Emerging Technologies in Computing Systems, article in press

D) Seventy –nine (79) international conference proceedings:

[C.1] D. Fitsios, *C. Vagionas*, G.T. Kanellos, A.Miliou, N.Pleros, "Optical RAM cell with Dual-Wavelength Bit Input and three SOA XGM switches" OFC 2012, Los Angeles, CA, USA

[C.2] *C. Vagionas*, D. Fitsios, G.T. Kanellos, N. Pleros, A. Miliou, "All Optical Flip Flop with two Coupled Travelling Waveguide SOA-XGM Switches," CLEO 2012, San Jose, CA, USA (Newport Travel Grant by OSA)

[C.3] G.T. Kanellos, T. Alexoudi, D. Fitsios, *C. Vagionas*, P. Maniotis, S. Papaioannou, A. Miliou, N. Pleros, "WDM-enabled optical RAM architectures for ultra-fast, low-power optical cache memories", ICTON 2013, Cartagena, Spain (Invited Paper)

[C.4] D. Fitsios, *C. Vagionas*, A. Miliou, G.T. Kanellos, N. Pleros, "Memory Speed analysis of Optical T-Flip-Flop circuits based on an SOA-MZI and a feedback loop", Photonics in Switching 2012, Corsica, France

[C.5] G.T. Kanellos, *C. Vagionas*, T. Alexoudi, D. Fitsios, A. Miliou, N. Pleros, "Optical RAM Devices and architectures: a way to Solve the "Memory Wall" Problem?" Photonics in Switching 2012, Ajaccio Corsica, France (Invited Paper)

[C.6] D. Fitsios, T. Alexoudi, *C. Vagionas*, A. Miliou, G. T. Kanellos, N. Pleros, "Multi-wavelength Access Gate for WDM-formatted words in Optical RAM row architecture", SPIE Photonics West 2013, San Francisco, CA, USA

[C.7] *C. Vagionas*, S. Markou, G. Dabos, T. Alexoudi, D. Tsiokos, A. Miliou, N.Pleros, G.T.Kanellos, "Optical RAM Row Access and Column Decoding for WDM-formatted optical words", OFC/ NOFC 2013, Anaheim, CA, USA

[C.8] F. Lopez-Royo, A. Brimont, *C. Vagionas*, G. Dabos, N. Pleros, K. Vysokinos, A. Griol, J. Hurtado, L. Bellieres, N. S. Losilla, P. Sanchis, L. Sanchez, J. Marti, "Fabrication of modulators and 2x2 switches in SOI

based on the carrier depletion mechanism for optical interconnects", SPIE Photonics West 2014, San Francisco, CA, USA (Invited Paper)

[C.9] N. Pleros, P. Maniotis, T. Alexoudi, D. Fitsios, C. Vagionas, S. Papaioannou, K. Vyrsokinos, and G. T. Kanellos, "*Optical RAM-enabled cache memory and optical routing for Chip Multiprocessors: technologies and architectures*", SPIE Photonics West 2014, San Francisco, CA, USA

[C.10] C. Vagionas, J. Boss, "*An adaptive stepsize controlled solver for the dynamic WDM semiconductor optical amplifier response*", SPIE Photonics Europe 2014, Brussels, Belgium

[C.11] K. Vyrsokinos, C. Vagionas, D. Fitsios, A. Miliou, "*Frequency and Time Domain Analysis of All Optical Memories based on SOA and SOA-MZI switches*", Optical Interconnects 2014, San Diego, USA

[C.12] K. Vyrsokinos, C. Vagionas, D. Fitsios, A. Miliou, "*System level evaluation of optical RAM circuits based on cross coupled SOAs and SOA-MZIs in the time and frequency domain*", ICTON 2014, Graz, Austria

[C.13] J. Boss, C. Vagionas, "*A Multigrid Solver with Adaptive Time-Stepping for the WDM SOA response*", OWTNM 2014, Nice, France

[C.14] A. Brimont, C. Vagionas, N. Pleros, C. Vyrsokinos, A. Griol, P. Sanchis, L. Sanchez, G. Dabos, J. Hurtado, L. Bellieres, N. S. Losilla, F. Lopez-Royo, J. Marti, "*Compact and Efficient Silicon 2x2 Switches Based on a Reverse Biased Vertical pn Junction*", GFP 2014, Paris, France

[C.15] K. Vyrsokinos, C. Vagionas, C. Mitsolidou, M. Cherchi, M. Harjanne, S. Ylinen, M. Kapulainen, T. Aalto, A. Miliou, "*DPSK Demodulation based on Ultra Compact micron scale SOI platform*", OFC/ NOFC 2015, Los Angeles, CA, USA

[C.16] T. Alexoudi, D. Fitsios, P. Maniotis, C. Vagionas, S. Papaioannou, A. Miliou, G. T. Kanellos, N. Pleros, "*WDM enabled Optical RAM and Optical Cache memory architectures for Chip Multiprocessors*" ICTON 2015, Budapest, Hungary (Invited Paper)

[C.17] S. Pitris, C. Vagionas, G. T. Kanellos, R. Kisacik, T. Tekin, R. Broeke, N. Pleros, "*Monolithically integrated all-optical SOA-based SR Flip-Flop on InP platform*", Photonics in Switching 2015, Florence, Italy

[C.18] C. Vagionas, C. Mitsolidou, D. Tsiokos, A. Miliou, N. Pleros, K. Ramantas, "*First Demonstration of All-Optical Digital Network Coding in Radio over Fiber Networks*", IEEE International Topical Meeting on Microwave Photonics, 2015, Paphos, Cyprus

[C.19] S. Pitris, C. Vagionas, G. T. Kanellos, R. Kisacik, T. Tekin, R. Broeke, N. Pleros, "*All-optical SR Flip-Flop based on SOA-MZI switches monolithically integrated on a generic InP platform*", SPIE Opto, Photonics West, 2016, San Francisco, CA, USA

[C.20] G. T. Kanellos, T. Alexoudi, D. Fitsios, P. Maniotis, C. Vagionas, N. Pleros, "*Optical RAM-enabled cache memory and optical routing for chip multiprocessors*," IEEE MOC, 2015, Fukuoka, Japan

[C.21] S. Pitris, C. Vagionas, G. T. Kanellos, R. Kisacik, T. Tekin, R. Broeke, N. Pleros, "*Optical Static RAM Cell Using a Monolithically Integrated InP Flip-Flop and Wavelength-Encoded Signals*", OFC, 2016, Anaheim, CA, USA

[C.22] S. Pitris, C. Vagionas, P. Maniotis, G. T. Kanellos, N. Pleros, "*First Demonstration of an Optical Content Addressable Memory (CAM) Cell at 10 Gb/s*", OFC, 2016, Anaheim, CA, USA

[C.23] C. Mitsolidou, C. Vagionas, S. Pitris, J. Bos, P. Maniotis, D. Tsiokos, N. Pleros, "*All-Optical Tag Comparator for 10Gb/s WDM-enabled Optical Cache Memory Architectures*," OFC, 2016, Anaheim, CA, USA

[C.24] C. Mitsolidou, C. Vagionas, Tsiokos, K. Ramantas, A. Miliou, N. Pleros, "*All-Optical Digital Network Coding for Very High-Throughput mm-wave Fiber-Wireless Networks*", OFC, 2016, Anaheim, CA, USA

[C.25] N. Pleros, S. Pitris, C. Vagionas , P. Maniotis, T. Alexoudi, A. Miliou, G. T. Kanellos, "*Optical Interconnect and Memory technologies for Next Generation Computing*", ICTON, 2016, Trento, Italy (Invited Paper)

[C.26] D. Tsiokos, C. Mitsolidou, C. Vagionas , G. Kalfas, A. Miliou, N. Pleros, "*Converged Optical-Wireless Access Networks enabling fixed and 60 GHz connectivity in WDM-PONs*", ICTON, 2016, Trento, Italy (Invited Paper)

[C.27] K. Vyrsokinos, M. Moralis-Pegios, C. Vagionas, A. Brimont, A. Zanzi, P. Sanchis, J. Marti, J. Kraft, K. Rohrer, S. Dorrestein(5), M. Bogdan, N. Pleros, "*Single Mode Optical Interconnects for future Data Centers*", ICTON, 2016, Trento, Italy (Invited Paper)

[C.28] N. Pleros, G. Kalfas, C. Mitsolidou, C. Vagionas, D. Tsiokos and A. Miliou, "*High-Throughput and Low-Latency 60GHz small-cell network architectures over Radio-over-Fiber technologies*", SPIE Photonics West, 2017, San Francisco, CA, USA, (Invited Paper)

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