Curriculum Vitae
December 2023

Dr. Dimitrios C. Zografopoulos

1. GENERAL INFORMATION

1.1 Personal Details

Home address	Via Pio Molajoni 48, 00159, Rome, Italy
Date of birth	05/07/1980
Work address	Consiglio Nazionale delle Ricerche, Istituto per la Microelettronica e Microsistemi (CNR-IMM), Via del fosso del cavaliere 100, 00133, Rome, Italy
Position	Senior Researcher
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1.2 Academic Qualifications

11/2003 – 04/2009 **Ph.D. in Electrical and Computer Engineering (with honors)**, Aristotle University of Thessaloniki (AUTH), Department of Electrical and Computer Engineering (DECE). PhD dissertation title: "*Photonic crystal optical fibers with tunable polarization properties*".

10/1998 – 10/2003 **Diploma in Electrical and Computer Engineering**, DECE-AUTH, (5-year curriculum, Beng+Integrated Master). Grade: **8.25 (**14th/224 in ranking).

10/2006 – 11/2010 **BA in History & Archaeology**, AUTH, School of History and Archaeology (4-year curriculum, specialization in History). Grade: **8.78** (excellent).

1.3 Professional Experience

01/2023 – ... **Senior Researcher**, Consiglio Nazionale delle Ricerche, Istituto per la Microelettronica e Microsistemi (Italian National Research Council, Institute for Microelectronics and Microsystems).

09/2011 – 12/2022 **Researcher**, CNR-IMM. The first two years (09/2011-08/2013) in the frame of a Marie-Curie Intra-European Fellowship. Permanent position since 27/12/2018.

02/2011 – 08/2011 **Visiting Professor**, Department of Electronic Technology, Carlos III University of Madrid (Leganés, Spain). Fixed-term contract in the frame of the program "Talent Human Resources" for young researchers.

10/2010 – 01/2011 **Lab Assistant Professor**, (ex) Informatics and Communications Department, Technological Educational Institute of Central Macedonia (Serres, Greece).

1.4 Awards and Distinctions

09/2011 – 08/2013 **Postdoctoral Marie-Curie Intra-European Fellowship** awarded by the European Commission. Project: "Tunable liquid-crystal long-range surface plasmon polariton components" (Project Number: FP7-PEOPLE-2010-IEF-273528). Principal Investigator (PI): Dr. R. Beccherelli, budget: 180.084€.

07/2011 – 01/2012	**Postdoctoral research fellowship** awarded by the States Scholarship Foundation of Greece. Project title: "Design and analysis of optimized non-linear components in integrated silicon pho- tonics technology". PI: Prof. E. E. Kriezis, budget: 7.200€.
01/2010 – 12/2010	**Postdoctoral research fellowship of excellence** awarded by the Research Committee of the Aristotle University of Thessaloniki. Project title: "Design and analysis of optimized photonic crystal fibers for dispersion compensation applications". PI: Prof. E. E. Kriezis, budget: 6.000€.
10/2006 – 10/2008	**Doctoral Fellowship** awarded by General Secretariat of Research and Technology, Ministry of Education and Religious Affairs of Greece, in the frame of the project PENED'2003 "Design and development of novel devices for microwave and optical communications". PI: Prof. T. D. Tsiboukis, total budget: 132.790€, fellowship budget: 27.000€.
2007	**Scholarship** awarded by the States Scholarship Foundation of Greece for the first year of my studied in the School of History and Archaeology (AUTH).
1999	**Scholarship** awarded by the States Scholarship Foundation of Greece for my enrollment in the School of Electrical and Computer Engineering through nationwide entry level exams (4th in ranking).

1.5 Executive Summary

Publications:

- Articles published in international peer-reviewed journals: **103**
- Proceedings in international conferences: **92**
- Proceedings in national conferences: **16**
- Book chapters: **3**
- Impact Factor/published article: **3.67**

Citations:

- Total citations [Google Scholar/Scopus/WoS]: **2967/2511/2259**
- Third-party citations [Scopus/WoS]: **1710/1744**
- Total third-party citations: **1814**
- h-index [Google Scholar/Scopus/WoS]: **32/29/26**

2. TEACHING EXPERIENCE

2.1 Teaching of Undergraduate Courses

02/2011 – 07/2011 Teaching of the undergraduate course «**Optical devices and transmission media**» part of the "Telematic Engineering" curriculum of the Department of Electronic Technology, Carlos III University of Madrid (DET-CIIIM). The course content covered optical sources and detectors, transmission media of optical signals, common photonic components in optical communication networks and design of optical communication links.

10/2004 – 06/2008 Teaching assistant for the undergraduate courses "**Electromagnetic Field Theory I, II, III, IV**" at DECE-AUTH. The course content covered electrostatic fields, systems of conductors and capacitors, fields due to steady currents, magnetostatic fields, electromagnetic induction, magnetic circuits, forces on particles, Maxwell's equations, boundary value problems, plane electromagnetic waves, guided waves and metallic waveguides, transmission lines, antennas and radiation and planewave reflection and refraction.

2.2 Teaching of Postgraduate Courses

02/2011 – 07/2011 Teaching of the undergraduate course «**Optical devices and transmission media**» part of the "Advanced Electronic Systems" curriculum of (DET-CIIIM). The course content covered optical fiber properties, cabling and links, couplers and wavelength multiplexing devices and sensor network applications.

2.3 Teaching of Laboratory Courses

10/2010 – 01/2011 Teaching of the laboratory course "**Communications I**" at the (ex) Informatics and Communications Department, Technological Educational Institute of Central Macedonia (ICD-TEICM). The course content covered the use of digital oscilloscope, measurements of sinusoidal signals, amplifiers, filters, oscillators, and amplitude and frequency modulation.

10/2010 – 01/2011 Teaching of the laboratory course "**Calculus I, Linear Algebra**" at the (ex) Informatics and Communications Department, Technological Educational Institute of Central Macedonia (ICD-TEICM). The course content covered an introduction to the use of MATLAB for the resolution of differential calculus problems, matrix algebra and differential equations.

2.4 Seminars

03/2011 Educational seminar of 6-hour duration on the topic «**Photonic Crystal Fibers: Physics and Applications**» in the frame of the postgraduate curriculum of (DET-CIIIM).

2.5 Diploma Thesis Supervision

- Supervision of one bachelor thesis entitled «Simulation study of optical fiber communication», C. Ttofalis, ICD-TEICM (01/2011).

- Co-supervision of two diploma thesis (5th year project) during my Ph.D. studies at DECE-AUTH:
  - E. Psara, «Investigation of index-guiding photonic crystal fibers by means of the multipole expansion method» (06/2008), supervisor: Prof. E. E. Kriezis.
  - D. Sarri, «Investigation of index-guiding photonic crystal fibers by means of the finite-element method» (06/2008), supervisor: Prof. E. E. Kriezis.

2.6 Accreditations

- Accredited for the position of Associate Professor in the Scientific Sector 09/F1 “Electromagnetic Fields” by the Italian Ministry of University and Research valid from 2021 to 2032 (Abilitazione Nazionale Scientifica).

3. RESEARCH ACTIVITY

3.1 Research Experience and Research Agenda

- Metasurfaces with strong Mie-type, toroidal or bound states in the continuum resonances.
- Tunable metamaterials and metasurfaces by means of liquid crystals and semiconductors.
- Components for the control of guided waves at millimeter and THz frequencies, e.g., polarizers, filters, leaky-wave antennas, beam-steerers, and lenses.
- Characterization of electromagnetic properties of dielectric and 2D materials through THz spectroscopy.
- Tunable lenses, diffraction gratings and other planar photonic devices by means of liquid crystals in the visible and near-infrared spectrum.
- Computational methods in the time domain for the simulation of electromagnetic wave propagation in dispersive and/or anisotropic media.
- Plasmonic traveling-wave of resonant switching elements by means of liquid crystals and electro-optic polymers.
- Silicon photonics linear and non-linear components.
- Tunable photonic crystal fibers for single-polarization or high-birefringence guidance and polarization-control components.

3.2 Research Project Leading

09/2023 – 08/2025 **All-dielectric resonant metasurfaces enhancing photon emission phenomena**, Italian Ministry of University and Research, Relevant National Interest Projects (Progetti di Rilevante Interesse Nazionale, PRIN), 2022 call. I participate as co-PI with budget for CNR-IMM: 84.800€. Total budget: 200.000€, PI: Prof. Francesco Dell'Olio (Politecnico di Bari). The project targets the design and experimental demonstration of strongly resonant dielectric metasurfaces for the enhancement of light generation applications in the visible spectrum, e.g. fluorescence microscopy and electron photoemission.

01/2023 – 12/2025 **Two-dimensional nanomaterials toward terahertz optoelectronic applications**, Italian National Research Council, Bilateral Projects with the Bulgarian Academy of Sciences (BAS). Budget for CNR-IMM: 6.000€, PI for BAS: Prof. Vera Marinova (Institute of Optical Materials and Technologies, BAS). Bilateral collaboration project aiming at the experimental study of 2D transition metal dichalcogenide materials by means of THz spectroscopy, μRaman, X-ray diffraction.

01/2022 – 12/2023 **Strongly resonant all-dielectric metasurfaces based on quasi-dark and toroidal modes** Italian National Research Council, Bilateral Projects with the São Paulo Research Foundation (FAPESP). Budget for the CNR-IMM: 44.000€, PI for FAPESP: Prof. Hugo Hernández-Figueroa (School of Electrical and Computer Engineering, University of Campinas – UNICAMP). Bilateral collaboration project aiming at the theoretical investigation of novel strongly resonant dielectric metasurfaces for narrowband filtering, sensing and the enhancement of non-linear processes. Experimental demonstration at millimeter, THz, and near-infrared frequencies.

04/2021 – 03/2023 **Design of anti-reflection coatings**, commercial contract with the company MBDA Italy S.p.A. (25.000€+VAT) for the design and development of a demonstator of an ultrawideband absorber at microwave frequencies.

01/2019 – 12/2022 **Transparent electrodes for advanced liquid-crystal tunable devices**, Italian National Research Council, Bilateral Projects with the Bulgarian Academy of Sciences (BAA). Budget for CNR-IMM: 11.500€, PI for BAS: Prof. Vera Marinova (IOMT-BAS). Bilateral collaboration project aiming at the development and experimental study of 2D or thin-film materials (graphene, ITO, AZO) as transparent electrodes for electro-optic components.

01/2019 – 06/2021 **Ultra-broadband spectroscopy for the detection of emerging contaminants in Boka Kotorska Bay**, Italian National Research Council, Bilateral Projects with the Ministry of Science of Montenegro (MSM). Budget for the CNR-IMM: 5.000€, PI for MSM: Dr. Danijela Joksimović (Institute of Marine Biology, University of Montenegro). Bilateral collaboration project aiming at the spectroscopic study of microplastics in biological samples from the Bay of Kotor.

01/2014 – 12/2015 **Liquid-crystal tunable nanoplasmonic structures based on periodic metallic films**, Italian Ministry of Foreign Affairs and International Cooperation, Bilateral Projects with the Ministry of Education, Science, and Technological Development (MEST) of the Republic of Serbia. Budget for the CNR-IMM: 27.731€, PI for MEST: Prof. Dr. Goran Isić (Institute of Physics, University of Belgrade). "Great Relevance" Bilateral Project for the development of electro-optic modulators tunable via liquid crystals based on metal-insulator-metal resonant cavities.

3.3 Συμμετοχή σε Ερευνητικά Προγράμματα

07/2022 – 06/2025 **Rome Technopole, Innovation Ecosystem.** Innovation Ecosystem with the participation of universities, research bodies and companies of the Lazio Region financed by the Italian National Recovery and Resilience Plan (PNRR), Project ECS00000024, call n. 327, PNRR-Mission 4, Comp. 2, Inv. 1.5. Budget for the CNR-IMM: 991.359€, personal budget: 129.232€. The project aims at the development of novel materials and devices for THz communications.

01/2020 – 06/2023 **Graphene-enhanced on-chip nanophotonics for switching and lasing applications**, Hellenic Foundation for Research & Innovation (Project Number: HFRI-FM17-2086), 2019-2022. Budget: 187.927€, PI: Prof. Emmanouil E. Kriezis. Participation as External Collaborator. Research on high-confinement silicon waveguides and resonant cavities loaded with graphene and exploitation of graphene saturable absorption for the demonstration of all-optical switching components and on-chip light sources.

02/2016 – 06/2019 **AMC/Metamaterial Antennas for Broadband Connectivity**, European Space Agency (ESA), TRP project (ESA ITT AO/1-7992/14/NL/MH), PI: Ingegneria dei Sistemi S.p.A. Budget for the CNR-IMM: 101.000€, PI for CNR-IMM: Dr. Romeo Beccherelli. The project aimed at the design and experimental demonstration of a leaky-wave metasurface antenna for the Ka-band with electrically tunable radiation angle through the use of nematic liquid crystals.

01/2015 – 12/2018 **On-chip novel optical modulator**, Qatar National Research Fund (National Priority Research Program: NPRP 7-456-1-985), PI: Prof. Lamees Shahada (Qatar University), budget for the CNR-IMM: 91.740$. PI for the CNR-IMM: Dr. Romeo Beccherelli. The project targeted the development of plasmonic modulators and switching components in traveling-wave or resonator configurations through the use of electro-optic polymers.

01/2014 – 12/2016 **THz lenses with electro-optically tunable focal length**, Italian Ministry of Foreign Affairs and International Cooperation, Bilateral Projects with the Ministry of International Relations and Commerce (MIRC) of the Government of Québec (Canada). Budget for the CNR-IMM: 35.000€, PI Dr. R. Beccherelli. PI for MIRC: Prof. R. Morandotti (Institut National de la Recherche Scientifique – Centre Énergie Matériaux Télécommunications). Bilateral project for the development of electro-optically tunable lenses for THz applications.

01/2013 – 12/2015 **Functional metamaterials for spatial light modulators at THz spectrum**, Italian Ministry of Foreign Affairs and International Cooperation, Bilateral Projects with the Polish Ministry of Science and Higher Education (MSHE). Budget for the CNR-IMM: 55.000€, PI: Dr. R. Beccherelli. PI for MSHE: Prof. R. Dąbrowski (Warsaw Military University of Technology). Bilateral project for the development of electro-optically tunable components via the use of nematic liquid crystals for beam steering at THz frequencies.

01/2006 – 12/2008 **Photonic crystals for optical communications based on silicon and liquid crystals**, Italian Ministry of Foreign Affairs and International Cooperation, Bilateral Projects with the Hellenic General Secretariat for Research and Technology (GSRT). Budget: 220.000€, PI for CNR-IMM: Dr. R. Beccherelli (CNR-IMM). PI for GSRT: Prof. Emmanouil. E. Kriezis. Project aiming at the investigation of planar photonic crystal cavities infiltrated with liquid crystals, emphasizing on structures based on anisotropic etching of silicon-on-insulator wafers.

01/2006 – 12/2008 **Nouveaux nanomatériaux cristaux liquides cholestériques à gradient de fonction: études expérimentales et théoriques,** Bilateral Cooperation Greece-France, GSRT, 2006-2008. Budget: 11.600€, PI: Prof. Emmanouil E. Κριεζής. EY for the French part: Dr. M. Mitov (Centre d'Elaboration de Matériaux et d'Etudes Structurales, Centre National de la Recherche Scientifique, Toulouse). Theoretical investigation of novel cholesteric liquid crystals with gradient helical pitch for bandgap broadening and reflectance enhancement through polymer-stabilization and helicity inversion.

3.4 Research Mobility Projects

- Funding acquisition for the following research mobility projects (CNR short-term mobility grant):

CNR-STM-2021 Dr. Odysseas Tsilipakos, Institute of Electronic Structure and Laser, Foundation of Research and Technology.

CNR-STM-2015 Prof. Emmanouil Kriezis, Department of Electrical and Computer Engineering, AUTH.

3.5 Ph.D. Examination Panels

- Member of the examination committee for the defense of the following Ph.D. dissertations:

12/2023 Dr. Juan Sebastian Betancourt, “Development of systems based on visible light communications for high added value applications,” Carlos III Universidad de Madrid.

04/2022 Dr. Silvio Domingos Silva Santos: “All-dielectric metasurfaces based on toroidal dipole mode trimers,” University of Campinas (Brazil).

11/2021 Dr. Eleni Perivolari: “Liquid crystal nano-photonic devices for efficient light manipulation from visible to THz regime,” University of Southampton (UK).

06/2015 Dr. Francisco Algorri: “Adaptive micro-optical phase modulators based on liquid crystal technology,” Carlos III Universidad de Madrid.

- Active participation in the co-supervision of the following Ph.D. dissertations:

02/2018 Dr. Silvia Tofani: “Static and reconfigurable devices for near-field and far-field terahertz applications,” Sapienza University of Rome (Italy). Co-supervisors: Prof. A. Galli, Dr. R. Beccherelli

05/2017 Dr. Antonio Ferraro: “From basic to advanced: design, fabrication and characterization of functional terahertz devices,” University of Calabria (Italy). Co-supervisors: Prof. R. Caputo, Dr. R. Beccherelli.

- Supervisor of Dr. Mahboubeh Moghadam during her research stay at CNR-IMM (07/2018-09/2018) in the frame of her Ph.D. «Analytical investigation of propagation characteristics and confinement of modes in hybrid waveguides», Arak University (Iran).

4. SCIENTIFIC ACTIVITY

4.1 Reviewer for International Journals

01/2007 - ...	Reviewer of more than **260** submitted for publication in international scientific journals.
Distinctions	Among the **25** worldwide distinguished reviewers for the year 2018 the Optical Society of America (OSA's Outstanding Reviewers).
	Among the **20** distinguished reviewers for the year 2018 of the journal «Journal of Optics», Institute of Physics (IoP Outstanding Reviewers).
Journal list	ACS Applied Nano Materials, ACS Nano, ACS Photonics, Advanced Optical Materials, Advanced Theory and Simulations, Advances in Optoelectronics, Applied Optics, Applied Physics B, Applied Physics Express, Applied Physics Letters, Applied Sciences, Biomedical Optics Express, Chinese Optics Letters, Crystals, Coatings, Current Nanoscience, Electronics, Electronics Letters, IEEE Access, IEEE Electronic Device Letters, IEEE Photonics Journal, IEEE Photonics Technology Letters, IEEE Journal of Selected Topics in Quantum Electronics, IEEE Microwave and Wireless Components Letters, IEEE Transactions on Antennas and Propagation, IEEE Transactions on Microwave Theory and Techniques, IEEE Transactions on Terahertz Science and Technology, IEEE Transactions on Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, IEEE/OSA Journal of Lightwave Technology, IET Microwave, Antennas & Propagation, Infrared Physics and Technology, International Journal of Nanomedicine, International Journal of Engineering Science and Technology, Journal of Applied Physics, Journal of Chemical Physics, Journal of Materials Science, Journal of Modern Optics, Journal of Nanophotonics, Journal of Optics, Journal of Optics and Laser Technology, Journal of Physics Communications, Journal of Physics D, Journal of the Optical Society of America B, Journal of Vacuum Science and Technology B, Lab on a Chip, Materials, Materials and Design Measurements, Microelectronics Engineering, Nano Letters, Nano-Micro Letters, Nanomaterials, Nanotechnology, New Journal of Physics, Optical and Quantum Electronics, Optical Engineering, Optical Materials, Optical Materials Express, Optical Materials Express, Optics and Laser Technology, Optics Communications, Optics Express, Optics Letters, Optik, Opto-electronics Review, OSA Continuum, Photonics, Photonics and Nanostructures: Fundamentals and Applications, Photonics Research, Physica Status Solidi A, Physics Letters A, Plasmonics, Results in Physics, Royal Society Open Science, Sensors, Sensors and Actuators B.

4.2 Journal Editorial Boards

2020 - …	Editorial Board Member of the journal **Magnetism**, Multidisciplinary Digital Publishing Institute.
2019 - ...	Editorial Board Member of the journal **Applied Sciences**, Multidisciplinary Digital Publishing Institute.
2016 - …	Editorial Board Member in the sector "Condensed Matter Physics" of the journal **Scientific Reports**, Nature Publishing Group. Guest Editor of the Special Issue "Waveguides" (2023).

4.3 Project Evaluation Panels

2016 - …	**European Commission (Research Executive Agency)**. *Ex-ante* proposal evaluation in the frame of the calls H2020-FETOPEN, Field Emerging Technologies; H2020-MSCA-IF, Marie-Skłodowska Curie Individual Fellowships; HORIZON-MSCA-PF, Marie-Skłodowska Curie Personal Fellowships, HORIZON-EIC-PATHFINDER, European Innovation Council Pathfinder Open. *In itinere* evaluation of project implementation in the frame of the call H2020-FETOPEN.
2023	**Institute of Physics of the Czech Academy of Sciences (FZU)** *Ex-ante* proposal evaluation in the frame of the call Physics for the Future (P4F) MSCA COFUND.
2021	**The Polish National Center for Research and Development** *Ex-ante* proposal evaluation in the frame of the call "Applied Research", Norway Grants 2014-2021.
2020	**Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI) of Romania** *Ex-ante* proposal evaluation in the frame of the call "PNCDI III - Competitiveness by research, development and innovation Experimental – Demonstration project (PED 2019)".
2019	**The Research Agency of the Slovak Republic** *Ex-ante* proposal evaluation in the frame of the call Operational Programme Research and Innovation (OPRI) 2014-2020.
2019 – 2020	**The Central Finance and Contracting Agency of the Republic of Latvia** Evaluation of mid-term and final reports for "Industry Driven Research" projects in the frame of the section "Research, development of technologies and innovation" of the program "Growth and Employment" of the European Cohesion Fund 2014-2020.
2019	**European Commission - EUREKA** *Ex-ante* proposal evaluation in the frame of the call INNOWWIDE "Viability Assessment Projects in International Markets".
2019 – 2023	**Science Fund of the Republic of Serbia** *Ex-ante* proposal evaluation in the frame of the calls PROMIS "Program for excellent projects of young researchers", IDEAS, METIS.
2015 – 2017	**The Polish National Science Center** *Ex-ante* proposal evaluation in the frame of the calls OPUS (2015 – 2016), SONATA (2016), POLONEZ (2017).

4.4 Conference Organizing Committees

- Co-organizer of the Special Session "THz metamaterials, devices, and systems" in the conference Progress in Electromagnetic Research Symposium, PIERS 2019 (Rome, Italy).

4.5 Professional Bodies and Organizations

- Member of the Technical Chamber of Greece (TEE).
- Member of Optica (ex Optical Society of America).

5. Administrative Positions and Delegations

5.1 Italian National Research Council (CNR)

- Responsible for the Rome Unit of CNR-IMM for the following program aiming at the development of initiatives, collaboration networks and joint projects among the Institute Units:

01/2023 – …	Workgroup AR3 “Photonics and Energy Devices”
10/2020 – 10/2022	Workgroup GdL9 “Optoelectronic devices”
03/2018 – 09/2022	Workgroup GdL10 “Plasmonics and Nanophotonics”

5.2 Italian Ministry of University and Research (MUR)

- Substitute National Delegate and Management Committee Member for the following COST actions:

11/2019 – 11/2021	COST Action CA18223 “Future communications with higher-symmetric engineered artificial materials” (2019-2021).
10/2017 – 10/2021	COST Action CA16220 “European Network for High Performance Integrated Microwave Photonics” (2017-2021).

6. Publications

6.1 Ph.D. Dissertation

«Photonic crystal optical fibers with tunable polarization properties», Department of Electrical and Computer Engineering, Aristotle University of Thessaloniki, 2009. Supervisor: Prof. T. D. Tsimboukis.

6.2 Book Chapters

[b.03] **D. C. Zografopoulos** and A. Ferraro, "Anapole states and toroidal multipole excitations in photonic metastructures," Chapter 4 in *Hybrid Flatland Metastructures*, edited by R. Caputo and G. E. Lio, American Institute of Physics Publishing (USA), Melville, New York, pp. 4.1-4.22, ISBN 978-0-7354-2287-2, 2021.

[b.02] **D. C. Zografopoulos** and R. Beccherelli, "Tunability of plasmonic devices," Chapter 7 in *NATO Science for Peace and Security Series B: Physics and Biophysics 2015*, edited by B. di Bartollo, J. Collins, and L. Silvestri, pp. 187-207, Springer, ISBN 978-94-024-0848-5, 2015.

[b.01] **D. C. Zografopoulos**, A. K. Pitilakis, and E. E. Kriezis, "Liquid crystal infiltrated photonic crystal fibers for switching applications," Chapter 3 in *Optofluidics, Sensors and Actuators in Microstructured Optical Fibers*, edited by S. Pissadakis and S. Selleri, Woodhead Publishing, Cambridge (UK), Elsevier Ltd., ISBN:978-1-78242-329-4, June 2015.

6.3 Publications in International Peer-Reviewed Journals

[a.109] G. Isić, **D. C. Zografopoulos**, B. Vasić, and M. Belić, "Temporal coupled-mode theory for light transmission through mirror-symmetric metal-insulator-metal microcavity arrays," *Optical and Quantum Electronics*, under preparation, 2024.

[a.108] **D. C. Zografopoulos**, I. Dionisiev, N. Minev, G. Petrone, F. Maita, L. Maiolo, D. Dimitrov, V. Marinova, A. Liscio, V. Mussi, R. Beccherelli, and W. Fuscaldo, "Terahertz time-domain characterization of thin conducting films in reflection mode," under preparation, 2024.

[a.107] V. Marinova, N. Minev, B. Napoleonov, D. Karashanova, P. Rafailov, D. Kovacheva, V. Strijkova, B. Ranguelov, V. Mussi, W. Fuscaldo, **D. C. Zografopoulos**, and D. Dimitrov, "$PdSe_2$ single crystals synthesized by the self-flux method," submitted, 2024.

[a.106] T. Jankowski, N. Bennis, P. Morawiak, **D. C. Zografopoulos**, A. Pakuła, M. Filipiak, M. Słowinowski, J. M. López-Higuera, and J. F. Algorri, "Optical vortices by an adaptive spiral phase plate," submitted, 2024. [arXiv: 2311.10842]

[a.105] B. Vasić, G. Isić, and **D. C. Zografopoulos**, "Electrically tunable terahertz transmission modulators using metal-insulator-metal metasurfaces infiltrated with liquid crystals," submitted, 2024.

[a.104] W. Fuscaldo, F. Maita, L. Maiolo, R. Beccherelli, and **D. C. Zografopoulos**, "Terahertz fishnet-like metasurfaces: design, experiment, and applications," revisions, 2024.

[a.103] J. F. Algorri, V. Dmitriev, H. E. Hernández-Figueroa, L. Rodríguez-Cobo, F. Dell'Olio, A. Cusano, J. M. López-Higuera, and **D. C. Zografopoulos**, "Polarization-independent hollow nanocuboid metasurfaces with robust quasi-bound states in the continuum," *Optical Materials*, vol. 147, art. no. 114631, 2024.

[a.102] J. F. Algorri, V. Dmitriev, J. M. López-Higuera, and **D. C. Zografopoulos**, "Enhanced light-matter interaction at infrared by delocalized quasi-BIC modes in a hollow cuboid metasurface," *Nanomaterials*, vol. 13, art. no. 2771, 2023.

[a.101] W. Fuscaldo, E. Torabi, **D. C. Zografopoulos**, D. Erricolo, and R. Beccherelli, "Reconfigurable THz fixed-frequency beamscanning through a liquid-crystal-loaded leaky waveguide operating in its fundamental TE mode," *IEEE Access*, vol. 11, pp. 91831-91841, 2023.

[a.100] O. Tsilipakos, Z. Viskadourakis, A. C. Tasolamprou, **D. C. Zografopoulos**, M. Kafesaki, G. Kenanakis, and E. N. Economou, "Meta-atoms with toroidal topology for strongly-resonant response," *Micromachines*, vol. 14, art. no. 468, 2023.

[a.99] V. Dmitriev, **D. C. Zografopoulos**, and L. P. V. Matos, "Analysis of symmetric electromagnetic components using magnetic group theory," *Symmetry*, vol. 15, art. no. 415, 2023.

[a.98] J. F. Algorri, F. Dell'Olio, Y. Ding, V. Dmitriev, J. M. López-Higuera, J. M. Sánchez-Pena, L. C. Andreani, M. Galli, and **D. C. Zografopoulos**, "Experimental demonstration of a silicon-slot near-infrared quasi-bound state in the continuum in resonant dielectric metasurfaces," *Optics and Laser Technology*, vol. 161, art. no. 109199, 2023.

[a.97] **D. C. Zografopoulos** and O. Tsilipakos, "Recent advances in gradient and strongly resonant all-dielectric metasurfaces," *Materials Advances*, vol. 4, pp. 11–34, 2023.

[a.96] W. Fuscaldo, **D. C. Zografopoulos**, F. Imperato, P. Burghignoli, R. Beccherelli, and A. Galli, "Analysis and design of tunable THz 1-D leaky-wave antennas based on nematic liquid crystals," *Applied Sciences*, vol. 12, art. no. 11770, 2022.

[a.95] N. Bennis, T. Jankowski, O. Strzezysz, A. Pakuła, **D. C. Zografopoulos**, P. Perkowski, J. M. Sánchez-Pena, J. M. López-Higuera, and J. F. Algorri, "A high birefringence liquid crystal for lenses with large aperture," *Scientific Reports*, vol. 12, art. no. 14603, 2022.

[a.94] W. Fuscaldo, F. Maita, L. Maiolo, R. Beccherelli, and **D. C. Zografopoulos**, "Broadband dielectric characterization of high-permittivity Rogers substrates via terahertz time-domain spectroscopy in reflection mode," *Applied Sciences*, vol. 12, art. no. 8259, 2022.

[a.93] **D. C. Zografopoulos**, J. F. Algorri, J. M. López-Higuera, H. E. Hernandez-Figueroa, and V. Dmitriev, "Quasi-dark resonances with antiferromagnetic order in silicon metasurfaces," *Scientific Reports*, vol. 12, art. no. 12975, 2022.

[a.92] D. Chatzidimitriou, **D. C. Zografopoulos**, and E. E. Kriezis, "Graphene saturable absorber mirrors for silicon photonic platforms," *IEEE Photonics Journal*, vol. 14, art. no. 2239908, 2022.

[a.91] R. Kowerdziej, A. Ferraro, **D. C. Zografopoulos**, and R. Caputo, "Soft-matter-based hybrid and active metamaterials," *Advanced Optical Materials*, vol. 10, art. no. 2200750, 2022.

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[c.05] **D. C. Zografopoulos**, E. E. Kriezis, B. Bellini, and R. Beccherelli, "Tunable one-dimensional photonic crystal slabs," SPIE Microtechnologies for the New Millennium 2007 (Gran Canaria, Spain), 2007. Proceedings of SPIE Vol. 6593 Photonic Materials, Devices, and Applications II, (Edited by A. Serpengüzel, G. Badenes, G. Righini) 659314 2007 [invited]

[c.04] **D. C. Zografopoulos**, E. E. Kriezis, and T. D. Tsiboukis, "Optical Fiber Polarization Elements based on Long-Period-Gratings in Photonic Crystal Fibers," 15th International Workshop on Optical Waveguide Theory and Numerical Modelling OWTNM 2007 (Copenhagen, Denmark), pp. 24, 2007.

[c.03] M. Mitov, **D. C. Zografopoulos**, E. E. Kriezis, and C. Binet, "Theoretical and experimental analysis of cholesteric broadband reflectors with thermally induced pitch gradients," 21st International Liquid Crystal Conference ILCC'2006 (Colorado, USA), OPTIP-4, 2006.

[c.02] **D. C. Zografopoulos** and E. E. Kriezis, "Polarisation-maintaining and highly-birefringent liquid-crystal photonic crystal fibers," International Conference on Transparent Optical Networks (Nottingham, UK), We.P.13, Vol. IV, p. 255, 2006.

[c.01] **D. C. Zografopoulos**, E. E. Kriezis, and T. D. Tsiboukis, "Single-polarization and controllable birefringence guidance in liquid-crystal microstructured fibers," 14th International Workshop

on Optical Waveguide Theory and Numerical Modelling OWTNM 2006 (Varese, Italy), p. 58, 2006.

6.5 Publications in National Conferences

[n.16] A. Ferraro, A. Tanga, **D. C. Zografopoulos**, G. Messina, M. Ortolani, and R. Beccherelli, "Terahertz filter with flat-top transmission response," Plasmonica 2019 - Workshop Nazionale di Plasmonica e Applicazioni, (Rome, Italy), 2019.

[n.15] A. Ferraro, **D. C. Zografopoulos**, M. A. Verschuuren, D. K. G. de Boer, F. Kong, H. P. Urbach, R. Beccherelli, and R. Caputo "Photoluminescent nanograting for lighting application," Plasmonica 2019 – Workshop Nazionale di Plasmonica e Applicazioni, (Rome, Italy), p. XX, 2019.

[n.14] A. Ferraro, **D. C. Zografopoulos**, R. Caputo, and R. Beccherelli, "Terahertz guided-mode resonant filtering components," Fotonica – 20o Convegno Italiano delle Tecnologie Fotoniche, (Lecce, Italy) 2018.

[n.13] W. Fuscaldo, S. Tofani, P. Burghignoli, P. Baccarelli, **D. C. Zografopoulos**, R. Beccherelli, and A. Galli, "Reconfigurable Fabry-Perót cavity leaky-wave antennas based on nematic liquid crystals for THz applications," XXI Riunione Nazionale di Elettromagnetismo, (Parma, Italy), 2016.

[n.12] A. Ferraro, **D. C. Zografopoulos**, M. Missori, M. Peccianti, R. Caputo, and R. Beccherelli, "Flexible terahertz wire grid polarizers with high extinction ratio and low loss," Fotonica – 18o Convegno Italiano delle Tecnologie Fotoniche, (Rome, Italy) 2016.

[n.11] **D. C. Zografopoulos**, G. Isić, B. Vasić, R. Gajić, and R. Beccherelli, "Tunable terahertz metamaterials based on nematic liquid crystals," Fotonica – 18o Convegno Italiano delle Tecnologie Fotoniche, (Rome, Italy) 2016.

[n.10] S. M. Sherif, L. Shahada, **D. C. Zografopoulos**, R. Beccherelli, and M. Swillam, "On-chip novel optical modulator," Qatar University Annual Research Forum, 2015.

[n.09] **D. C. Zografopoulos** and R. Beccherelli, "Liquid-crystal tuneable plasmonic devices," SICL 2014 – 11o Congresso Nazionale Società Italiana Cristalli Liquidi, (Ravena, Italy), 2014.

[n.08] **D. C. Zografopoulos** and R. Beccherelli, "Gap plasmon waveguides and filters tuned by nematic liquid crystals," Plasmonica 2014 – Workshop Nazionale di Plasmonica e Applicazioni, (Rome, Italy), p. XX, 2014.

[n.07] **D. C. Zografopoulos** and R. Beccherelli, "Liquid-crystal tunable plasmonic switches," Plasmonica 2014 – Workshop azionale di Plasmonica e Applicazioni, (Rome, Italy), 2014.

[n.06] **D. C. Zografopoulos** and R. Beccherelli, "Liquid-crystal tunable fishnet terahertz metamaterials," Fotonica – 16o Convegno Italiano delle Tecnologie Fotoniche, (Napoli, Italy), 2014.

[n.05] **D. C. Zografopoulos** and R. Beccherelli, "Liquid-crystal tunable plasmonic switches," Fotonica – 16o Convegno Italiano delle Tecnologie Fotoniche, (Napoli, Italy), p. XX, 2014.

[n.04] **D. C. Zografopoulos** and R. Beccherelli, "Liquid-crystal tunable long-range surface plasmon polariton components," SICL 2012 – 10o Congresso Nazionale Società Italiana Cristalli Liquidi, (Rome, Italy), p. 29, 2012.

[n.03] **D. C. Zografopoulos** and C. Vázquez, "Dual-core photonic crystal fibers for tunable polarization mode dispersion compensation," OPTOEL11 – VII Reunión Española de Optoelectrónica, (Santander, Spain), S1-5, 2011.

[n.02] R. Beccherelli, B. Bellini, **D. C. Zografopoulos**, A. C. Tasolamprou, and E. E. Kriezis, "Sensore fotonico ultracompatto basato su cristallo fotonico di silicio," Elettroottica 2008 – 10o Convegno Nazionale Strumentazione e metodi di misura elettroottici, (Milan, Italy), 2008.

[n.01] R. Beccherelli, B. Bellini, **D. C. Zografopoulos**, A. C. Tasolamprou, and E. E. Kriezis, "Lamina a band gap fotonico unidimensionale sintonizzabile basata su microlavorazione del silicio," Fotonica – 10o Convegno Nazionale sulle Tecniche Fotoniche nelle Telecomunicazioni, (Mantova, Italy), pp. 437–441, 2007.

6.6 Other Presentations and Lectures

[t.07] **D. C. Zografopoulos**, "Bound states in the continuum in dielectric metasurfaces," Applied and Computational Electromagnetics Laboratory School of Electrical and Computer Engineer, University of Campinas, 1st December 2022.

[t.06] A. Ferraro, **D. C. Zografopoulos**, R. Caputo, and R. Beccherelli, "Narrowband terahertz transmission filters based on guided mode resonant gratings," COST Action IC1208, 9th Management Committee Meeting, University of Luxembourg, 17th March 2017.

[t.05] **D. C. Zografopoulos**, B. Vasić, G. Isić, R. Gajić, and R. Beccherelli, "Design of liquid-crystal tunable metamaterial polarization rotators for terahertz applications," COST Action IC1208, 8th Management Committee Meeting, Warsaw Military University, 9th September 2016.

[t.04] A. Ferraro, **D. C. Zografopoulos**, M. Missori, M. Peccianti, R. Caputo, and R. Beccherelli, "Low-loss flexible terahertz polarizers with high extinction ratio," COST Action IC1208, 7th Management Committee Meeting, Vilnius University, 15th April 2016.

[t.03] **D. C. Zografopoulos**, "Liquid-crystal tunable devices: from fiber optics to terahertz metamaterials," Institute of Electronic Structure and Lasers, Foundation for Research and Technology - Hellas, February 2016.

[t.02] **D. C. Zografopoulos**, R. Beccherelli, and E. E. Kriezis, "Zenithal bistable liquid-crystal gratings as tunable beam splitters," COST Action IC1208, 5th Management Committee Meeting, Bilkent University, 27th March 2015.

[t.01] **D. C. Zografopoulos**, "Liquid-crystal tunable photonic components," University of Belgrade, Institute for Physics, June 2014.

7. Other Skills and Experience

7.1 Professional Experience

05/2009 – 01/2010	**Operator of digital terminal devices**, during my compulsory military service in the Signal Corps of the Hellenic Army.
10/2003 – 05/2004	**Technical and sales assistant**, LCF International, Wholesale Security Systems, Ioustinianou 4, 55134, Thessaloniki (Greece).
10/2000 – 05/2001 10/2002 – 05/2003	**Language teacher** (Spanish) in courses for adults at the Young Women Christian Association (YWCA), Mitropoleos 18, 54624, Thessaloniki (Greece).
07/2000 – 08/2000	**Intern Engineer**, in the frame of the student exchange program I.A.E.S.T.E. at *LG New Vision Factory, Sahab, Amman (Jordan)*.

7.2 Computer and Software Skills

Operating Systems	Windows, MacOS.
Scientific Software	MATLAB, Comsol Multiphysics, CST Microwave Studio, FlexPDE, LaTeX.
CAD Software	Fusion 360.
Web development	Joomla.

7.3 Foreign Languages

English (C2)	Certificate of Proficiency in English, University of Cambridge.
Italian (C2)	Certificato di Conoscenza della Lingua Italiana (CELI 5), Università di Perugia
Spanish (C2)	Diploma Superior de Español, Universidad de Salamanca
Portuguese (B2)	Diploma Intermédio de Português Língua Estrangeira, Universidade de Lisboa
French (B2)	Diplôme d'Études en Langue Française, Ministère de l'Éducation Nationale
Serbian (B2)	Ispit srpskog kao stranog jezika, Filološki Fakultet u Beogradu
Russian (B2)	Русский язык повседневного общения. Постпороговый уровень, Государственный институт русского языка им. А. С. Пушкина
German (B1)	Zertifikat Deutsch, Goethe Institut Inter Nationes
Bulgarian (B1)	-

7.4 Other Skills

- Diploma in Paleography, issued by the Center for Hagiological Studies of the Holy Metropolis of Thessaloniki.
- Driving license (Category B vehicle).