Biography

Stavros Pissadakis

Dr Stavros Pissadakis is a Director of Research in the Foundation for Research and Technology-Hellas (FORTH), Institute of Electronic Structure and Laser (IESL), Greece. Dr Pissadakis was born in Chania, Greece, in 1972, where he finished his primary and high school studies in 1989. He obtained his Ptychion degree in 1994 from the Physics Department of University of Crete, Greece and his Ph.D. degree in 2000 from Optoelectronics Research Centre (ORC), University of Southampton, UK. His Ph.D. studies (supervisor Prof. James S. Wilkinson, co-supervisors Prof. Michail Zervas and Dr Laurence Reekie) focused in the field of integrated optical devices with emphasis given in the design and fabrication of grating structures in optical waveguides using excimer laser radiation, demonstrating for the first time the use of laser surface structuring into the processing of integrated optical components. Before his current appointment in FORTH-IESL he has been employed in research and academic positions in Greece, and UK. Shortly after his Ptyhion studies he was employed as Research Assistant in the Foundation for Research and Technology-Hellas (FORTH), Institute of Electronic Structure and Laser (IESL), Greece (1995), undertaking the designing of the optical system of a night viewer camera for the Greek Army. Immediately after the completion of his PhD studies, he appointed as Research Fellow in Optoelectronics Research Centre, University of Southampton, UK (2000), personally undertaking on an industrial project sponsored by Intel USA on the development of high gain waveguide amplifiers in Er doped phosphate glasses. In addition, he has taught undergraduate and post-graduate courses as Visiting Lecturer in the Department of Computer and Electronic Engineering, Technical University of Crete, Greece (2002), Visiting Assistant Professor in the Physics Department, University of Crete (2005 and 2006); and recently as Visiting Professor at the University of Parma, Italy (2018). During his appointment at the University of Crete, he designed the syllabus and taught for the first time the course "Theory and Devices of Optical Waveguides"; while during his appointment in the University of Parma he designed the syllabus for the course.

Since January 2003 Dr Pissadakis has joined FORTH-IESL as Post-doctoral Researcher, where later he was elected Researcher Grade D (July 2003), and promoted through the different tenures to the level of Director of Research (Full Professor level) on November 2017. Shortly after his Researcher Grade D appointment in FORTH-IESL, he personally established and drawn the research agenda the Photonic Materials and Devices Laboratory (PMDL) on March 2004. PMDL focuses on the research of materials, light propagation effects, designs and fabrication methods for the development of Photonic Devices mainly in guided wave geometry, with significant effort currently invested in Photonic Crystal Fibre (PCF)/Microstructured Optical Fibre (MOF), as well as, in whispering gallery mode resonating devices. The fundamental knowledge generated on light propagation effects, as well as, on materials related problems and processes is directly transferred into the research for developing photonic devices of increased technological and scientific added-value, targeting high socio-economical impact applications. The strategic vision of the group refers to the development of hybrid photonic devices and related processes by engaging existing and emerging technologies in a 'disruptive' way, covering scientific and technology readiness levels from the basic research and the proof-of-principle study, up to the laboratory prototyping.

During his appointment at FORTH-IESL, Dr Pissadakis has directed the first demonstration of several new findings in the broader field of Photonics. These new findings include photosensitivity and grating inscription methods in optical fibres (213nm optical fibre photosensitivity, phosphate glass photosensitivity, Bragg grating inscription using 248nm femtosecond laser radiation, relief gratings inscribed in PCFs), magnetofluidics/optofluidics in microstructured optical fibers (several demonstrations of magnetometers and magneto-actuators, light driven fluid switching); and, recently in-fibre light localization devices using whispering gallery mode resonators. His research work has been frequently highlighted by OSA, SPIE, MRS and other technology scouting organisations.

Dr Pissadakis has been involved into several European, National and Industrial research Projects, while he has attracted and coordinated as a principal investigator a research budget of more than 1.73MEuros in total. He has been heavily involved in the activities of the European Technological Platform Photonics21, participating at the elaboration of the first Strategic Research Agenda (SRA); being also a full member in the Board of Stakeholders. He has participated in prestigious EU research projects and consortia, such as ASPICE, RespiceSME, ACTPHAST, and ACTPHAST 4.0 and recently, in the ERC-SmartPhon where soft matter, optomechanical resonators will be implemented in optical fibers. Moreover, he has helped the formation of a similar Thematic Technological Platform for Photonics in Greece (*Photonics*^{GR}), being president of its Executive Board (2008-2016). He has also assisted the formation and business plan elaboration of the first Greek Cluster of Photonics H-Phos; also providing photonic consulting services at national level. He has been frequent expert reviewer for European

and International research Projects (ie ERC) and National Research Organisations, and several high impact journals, while he was an Organizing Co-chair of the ICO-Photonics Delphi International Conference on 2009, held at Delphi, Greece; finally, being committee member in several international conferences.

His current scientific interests include design and fabrication of optical waveguide and standard fibre devices for switching and sensing applications, microstructured and photonic crystal fibre devices, optofluidics, optomechanics, bio- and chemo-photonic sensors, laser-assisted materials nano-processing, study of photosensitivity in optical fibres and materials using laser radiation and cluster formation/management for photonic enterprises. Dr Pissadakis is an author/co-author of 72 publications in refereed journals and of more than 120 in international conferences, including 40 invited contributions; he is also a co-editor of the book "Optofluidics, Sensors and Actuators in Microstructured Optical Fibres". He is a Topical Editor of Applied Optics, a Senior Member of OSA and a member of IEEE.

Stavros Pissadakis

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PERSONAL DATA:
Year of birth: 1972
ORCID: http://www.researcherid.com/rid/C-6091-2011
Google scholar: https://scholar.google.com/citations?user=6jv-SK4AAAAJ&hl=en

➢ EDUCATION

- **Jan. 1996 – Jul. 2000:** **Department of Electronics and Computer Science - Optoelectronics Research Centre (ORC), University of Southampton, UK**
  -Ph.D.-

Thesis Title: ***"Bragg Gratings in Optical Waveguides, Glasses, and Thin Films using Excimer Laser Radiation"***

- **Sept. 1989 – Jul. 1994:** **Department of Physics, University of Crete, Greece**
  -Four years Physics degree (Ptyhion)-
  Grade: 6.94/10

Specialisation**:** **«Lasers and Applications»**

➢ EMPLOYMENT HISTORY

- **March 2018-June 2018** **Information Engineering Department, University of Parma, Italy**
  Visiting Professor
  Sabbatical leave

- **Jun. 2003-** **Institute of Electronic Structure and Laser, Foundation for Research and Technology – Hellas, Heraklion, Greece**
  Director of Research
  Activity Leader:
  Photonic Materials and Devices-Laboratory
  http://www.iesl.forth.gr/users/pmdl/

- **Sept. 2005-Jan. 2006**
- **Sept. 2006-Jan. 2007** **Physics Department, University of Crete, Heraklion, Greece**
  Visiting Assistant Professor

Course: **Theory and Devices of Optical Waveguides**

- **Jan. 2003 – June 2003** **Institute of Electronic Structure and Laser, Foundation for Research and Technology – Hellas, Heraklion, Greece**
  Associate Postdoctoral Researcher

- **Feb. 2002 – Oct. 2002:** **Department of Computer and Electronic Engineering, Technical University of Crete, Chania, Greece**
  Visiting Lecturer
  Course: **Optoelectronics**

- **Mar. 2001 – Jul. 2002:** **Military Service**
  Greek Army, Artillery Division

- **Jun. 2000 – Dec. 2000:** **Optoelectronics Research Centre (ORC), University of Southampton, UK**
  Research Fellow

- **Jan. 1995 – Jan. 1996:** **Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology-Hellas (FORTH), Heraklion, Greece**
  Research Assistant
  (supported by a 12-months studentship for graduate specialisation in **"Optoelectronics"**)

➢ COORDINATION AND PARTICIPATION IN NATIONAL AND INTERNATIONAL RESEARCH PROJECTS

- **Sept. 2019-: IESL-FORTH, Heraklion, Greece**

Scientific coordinator in the FORTH Synergy Grant Project with title **"Optical Memristors, based on Photo-fluidity, Chalcogenide Whispering Gallery Mode Cavities" (OMEGA), 47kEuro**, 24 months duration.

- **Jan. 2019-: IESL-FORTH, Heraklion, Greece**

Scientific coordinator in the EU funded H2020 Integrated Project with title **"Accelerating Photonics Deployment via one Stop shop Advanced Technology Access for Researchers" (ACTPHAST 4R)**, 48 months duration.

- **Nov. 2017-: IESL-FORTH, Heraklion, Greece**

Scientific coordinator in the EU funded H2020 Integrated Project with title **"Access Center to Photonics Innovation Solutions and Technology Support" (ACTPHAST 4.0)**, 48 months duration.

- **Sept. 2016-: IESL-FORTH, Heraklion, Greece**

Co- investigator in the EU funded ERC project, with title **"Small and nanoscale soft phononics" (SmartPhon), FORTH budget 540KEuro,** 60 months duration.

- **Mar. 2016-Mar. 2018: IESL-FORTH, Heraklion, Greece**

Scientific coordinator in the IKY/DAAD funded exchange project IKYDA for bilateral collaboration with IOM-Leipzig, Germany, with title **"Laser assisted etching and growth processing of optical fibres for microfluidic applications" (LEMFOS), budget 10KEuro,** 24 months duration.

- **Jan. 2016- Dec. 2018: IESL-FORTH, Heraklion, Greece**

Scientific coordinator in the EU funded H2020 **Coordination Action** project with title **"Regional, National and European Support for Photonics Innovation Clusters enhancing SMEs Innovative Potential" (RespiceSME), budget 81KEuro,** 24 months duration.

- **Sept. 2014-Dec. 2018: IESL-FORTH, Heraklion, Greece**

National Delegate in the ESF founded COST project **MP1401** with title **"Advanced fibre laser and coherent source as tools for society, manufacturing and lifescience"**

- **Nov. 2013-April 2018: IESL-FORTH, Heraklion, Greece**

Scientific coordinator in the EU funded Integrated Project with title **"Access Center to Photonics Innovation Solutions and Technology Support" (ACTPHAST)**, nominal **budget 217KEuro**, 48 months duration.

- **Jul. 2013-Sept. 2015: IESL-FORTH, Heraklion, Greece**

Scientific contributor in the GSRT funded project with title «ΑΝΑΠΤΥΞΙΑΚΕΣ ΠΡΟΤΑΣΕΙΣ ΕΡΕΥΝΗΤΙΚΩΝ ΦΟΡΕΩΝ- ΚΡΗΠΙΣ» **(Proposals for the Development of Research Institutions-Optical Fiber Sensors for Improving Quality of Life),** budget **179 kEuro**, 16 months duration**.**

- **Sept. 2012-Sept. 2015: IESL-FORTH, Heraklion, Greece**

Scientific contributor in the «ΑΡΙΣΤΕΙΑ» GSRT funded project with title **«Manipulation of Phonons by Mesoscopic Engineering of Soft Matter» (SOPHOX),** budget **300 kEuro**, 24 months duration**.**

- **Sept. 2011-Aug. 2014: IESL-FORTH, Heraklion, Greece**

Scientific coordinator in the EU funded **Coordination Action** project with title **"Action to Support Photonic Innovation Clusters in Europe" (ASPICE),** budget **76 kEuro**, 36 months duration**.**

- **Nov. 2010-Oct. 2014: IESL-FORTH, Heraklion, Greece**

National Delegate in the ESF founded COST project TD1001 with title **"Novel and Reliable Optical Fibre Sensor Systems for Future Security and Safety Applications" (OFSeSa)**

- **Nov. 2009- Dec.2012: IESL-FORTH, Heraklion, Greece**

Scientific coordinator in the EU funded **CAPACITY** project **"Intelligent Adaptable Surface with Optical Fiber Sensing for Pressure-Tension Relief",** budget **430 kEuro**, 30 months duration**.**

- **Dec. 2006-Mar. 2010: IESL-FORTH, Heraklion, Greece**

National delegate in the ESF founded COST project 299 with title **"Optical Fibres for New Challenges Facing the Information Society" (FIDES)**

- **Jan. 2006-Jun. 2008: IESL-FORTH, Heraklion, Greece**

Scientific coordinator in the EU funded **Coordination Action** project **"European Network of Optical Clusters - ENOC",** budget **134 kEuro**, 30 months duration**.**

- **Jun. 2005-Jun. 2007: IESL-FORTH, Heraklion, Greece**

Scientific coordinator in the EU funded **INTERREG** project **"Réseau Optique Méditerranée - ROM",** budget **217 kEuro**, 30 months duration**.**

- **Oct. 2003-Dec. 2007: IESL-FORTH, Heraklion, Greece**

National delegate in the ESF founded COST project P11 with title **"Physics of linear, non-linear and active photonic crystals"**

- **Oct. 2002 and Mar. 2001: Ultraviolet Laser Facility (ULF), IESL-FORTH, Heraklion, Greece**

Personal research in the short-term EU funded project for the **"Patterning of photosensitive and relief gratings in Ag^+ ion-exchanged waveguides in phosphate glasses and Ta_2O_5 overlaid waveguides"**

- **Aug. 2000 – Dec. 2000: ORC-University of Southampton, UK**

Personal research in an **Intel-USA** sponsored project for the development of **"Optical Waveguide Amplifiers and Lasers in Ion-Exchanged Phosphate Glasses"**

- **Jun. 2000 – Sept. 2000: ORC-University of Southampton, UK**

Joint research with collaborators from the **Physics Department** and the **Southampton Oceanography Centre** on the **Paul Instrument Fund** project **"Pulsed Laser Photoablation Microscope"**

- **Mar. 1996 – Dec. 1997: ORC-University of Southampton, UK**

Joint research in the European Project **ACTS 028 "Towards Broadband Access Systems for CATV Optical Network - TOBASCO"**, for the development of integrated optical gain-flattening filters embedded on optical amplifiers

- **Jan. 1995 – Jan. 1996: IESL-FORTH, Heraklion, Greece**

Personal research in the Greek Ministry for Research and Technology Project **GSRT EPET II "National Optoelectronic Vision Sensor Systems"**, for the development of the optical and scanning modules of an infrared night vision system for the Greek Army

- **Sep. 1992 – Jul. 1994: IESL-FORTH, Heraklion, Greece**

Participation in the European Project **CEC ESPRIT 6863 "Parallel Optical Processors and Memories - POPAM"**, for the patterning of computer generated holograms on a variety of materials using excimer laser micromachining

➢ ACADEMIC ACTIVITIES

- **Member of the Board of Stakeholder,** *Photonics21 Platform, Nov. 2018*
- **Senior Member, OSA,** *May 2017*
- **Topical Editor, Applied Optics,** *June 2019*
- **Member of the Scientific Council of FORTH-IESL** *(Nov. 2013-Jul. 2016)*
- **Representative of Researchers at the Board of Directors of FORTH** *(March 2013-Dec. 2014)*
- **Executive Board President:** *Greek National Platform for Photonics, Photonics*^{GR}
- **FORTH representative in the Networking Board, LaserLab Europe**
- **Invited Professor, Excellent Courses,** *Politecnico di Torino, Department of Electronics and Telecommunications, Italy (2014)*

- **Member of the board of the International Doctorate School in Information and Communication Technologies,** *University of Modena and Reggio Emilia, Italy*

- **Associate Editor,** *Journal of Sensors, Hindawi*

- **Member of the Advisory Board:** *Journal of Optoelectronics and Advanced Materials*

- **Journal Guest Co-Editor**

  - *Laser Chemistry, Special Issue on* ***"Chemical and Physical Changes Induced in Optical Materials under High-Intensity Laser Irradiation"***
  - *Photonics and Nanostructures - Fundamentals and Applications*
  - *Materials, MDPI, Special Issue on "****New Materials and Processing Methods for Microstructured Optical Fibres"***
  - *Journal of Nanomaterials, Hindawi, Special Issue on* ***"Magnetooptical Properties and Photonic Applications of Magnetic Nanomaterials"***
  - *Optical Engineering, Special Issue on* ***"Optical Fiber Sensor Technology"***

- **Co-Editor:** *AIP Conference Proceedings Volume 1288, International Commission for Optics Topical Meeting on* ***"Emerging Trends And Novel Materials In Photonics"***

- **Conference co-Chair:** *ICO Topical Meeting on "Emerging Trends and Novel Materials in Photonics", Oct. 2009. Delphi, Greece*

- **Member of Program/Technical Organising Committee:**

  - *1st International Conference on Optical Complex Systems, Marseille, 2005*
  - *1st TCM, Heraklion 2006*
  - *SPIE, Photonics Europe, Brussels 2010*
  - *IEEE, Biophotonics Parma 2011*
  - *EOS, PSDM, Tunis 2012*
  - *OSA, BGPP, Colorado, 2012*
  - *OSA, WSOF, Sigtuna, 2013*
  - *3rd Mediterranean Photonics Conference, Trani, 2014*
  - *IEEE, Biophotonics Florence 2015*
  - *OSA, WSOF, Hong-Kong 2015*
  - *BGPP, OSA, Sydney 2016*
  - *6th EWOFS, Limerick, 2016*
  - *CLEO Europe, Munich 2017*
  - *OSA, WSOF, Cyprus 2017*
  - *BGPP, OSA, Switzerland 2018*
  - *PIERS, Rome 2019*
  - *CLEO Europe, Munich 2019*
  - *ICOCN, Huangshan 2019*
  - *EWOFS, Limassol 2019*
  - *PHOTOPTICS 2020, Valletta 2020*
  - *CLEO Europe, Munich 2021*

- **Conference Session Charing**
  - **4th LAMP,** *Kyoto, Japan, May 2006*
  - **Photonics Europe,** *Strasbourg, France, April 2008*
  - **Photonics Europe,** *Brussels, Belgium, April 2010*
  - **IEEE Biophotonics Parma,** *Parma, Italy June 2011*
  - **CLEO Europe,** *Munich, Germany, May 2013*
  - **Spatio-Temporal Complexity in Optical Fibers,** *Como, Italy, September 2013*
  - **DPG 2017,** *Mainz, Germany, March 2017*

- **Organisation of Meetings/Short-courses/Workshops**
  - *Short-course "Advanced Laser Processing in Photonics: State-of-the-art and Prospects", October 2006*

- **Reviewing activities**
  - ***Journals:*** *Nature Communications, Science Advances, ACS Photonics, Light: Science & Applications, Applied Physics Letters, Optics Letters, Optics Express, IEEE/OSA Journal of Lightwave Technology, APL Photonics, RCS Lab on a Chip, Applied Optics, Applied Physics A, IEEE Photonic Technology Letters, Journal of the Optical Society of America B, Thin Solid Films, Applied Surface Science, Electronics Letters, Photonics and Nanostructures, Glass Science and Technology, Nanotechnology, MDPI Sensors, Laser Chemistry, Journal of Sensors, Journal of Physics D, Medical Physics, Optical Materials, Optical Engineering, Optics & Laser Technology, Measurement Science and Technology, European Journal of Physics D, Optics Communications, International Journal of Applied Glass Science, IEEE Photonics, IEEE Sensors, Review of Scientific Instruments, Journal of Optics, Journal of Visualized Experiments, Journal of Micromechanics and Microengineering, Journal of Magnetism and Magnetic Materials, MDPI Applied Sciences, MDPI Inventions, MDPI Fibers, Journal of non-Crystalline Solids, Advanced Optical Technologies, Opto-Electronic Advances*
  - ***Publishers:*** *CRC-Press, Elsevier*

- **Expert Reviewer/Evaluator**
  - ***Organisations:*** *NSER-Canada (2008, 2011 and 2013), FCT I.P. - Fundação para a Ciência e Tecnologia (2012), Technology Foundation STW, The Netherlands (2013), FWO Belgium (2014, 2016), Czech Science Foundation (2015), Deutsche Forschungsgemeinschaft (2015, 2016), SEV-Greece (2015), Russian Science Foundation (2015, 2017), National Science Centre, Poland (2015, 2016, 2018, 2020), MITACS-Canada (2017), RPF-Cyprus (2018, 2019), MIUR-Italy (2018)*
  - ***Projects:*** *EU-FETOPEN (2019), EU-ERC (2018), EU ERA.NET (2011, 2014), EURASIA (2013)*

- **Seminars, Schools and Colloquia**

  - **Heriot Watt, Scotland,** Jan. 2003
  - **EPFL, Switzerland,** July 2003
  - **IOM, University of Leipzig, Germany,** September 2005
  - **Departamento de Física Aplicada, University of Valencia, Spain,** November 2005
  - **Summer School, Physics Department, University of Crete,** July 2006
  - **Shortcourse** "Advanced Laser Processing in Photonics: State of the Art and Prospects" **IESL, FORTH,** October 2006
  - **Department of Electrical and Computer Engineering, University of Toronto,** September 2007
  - **Department of Electronic Engineering & Applied Physics, Aston University,** September 2007
  - **Department of Electronics, Technical School of Crete,** July 2008
  - **Concertation meeting on Photonics Enabled Applications, Athens**, Sept 2009
  - **IIT, Lecce,** May 2010
  - **Dipartimento di Ingegneria dell'Informazione, Univ. Parma,** July 2010
  - **Dublin Institute of Technology,** September 2011
  - **Fast-Dot Workshop/School, Heraklion,** September 2011
  - **CEIT, San Sebastian, Spain,** July 2013
  - **Lab-in-Fiber Summer School, Harbin, China** June 2015
  - **IOM, University of Leipzig, Germany,** June 2016
  - **ORC, University of Southampton, UK,** June 2016
  - **Dipartimento di Ingegneria dell'Informazione, Univ. Parma, Italy** December 2016
  - **CNST, IIT, Milan, Italy,** April 2018
  - **International Day of Light, Univ. Parma, Italy,** May 2018
  - **IIT, Genova, Italy,** May 2018
  - **Hellas-CH Workshop, Ioannina, Greece,** August 2019

➢ AWARDS

- Top-10 shortlisted in the 2nd round of the **"Greece Innovates"** Applied Research and Innovation Competition for "A photonic sensor for monitoring shear stress between human skin and artificial surfaces of limbs and wheelchairs"

➢ COLLABORATIONS

- *Recently initiated*
  - *Politecnico di Torino, Italy*
  - *CNR-IMEM, Italy*
  - *CEIT, Spain*
  - *Universidad Pública de Navarra, Spain*
- *Active*
  - *VUB, Brussels, Belgium*
  - *Leibniz-Institute for Surface Modification, Leipzig, Germany*
  - *ACREO AB, Stockholm, Sweden*
  - *Institute of Photonic Technology Jena, Jena, Germany*
  - *Dipartimento di Ingegneria dell'Informazione, Università degli Studi di Parma, Italy*
  - *Dr. M. Farsari, FORTH-IESL*
  - *Prof. G. Fytas, FORTH-IESL & Department of Materials Science, UoC & Max Planck Mainz, Germany*
- *Past*
  - *Prof. D. Anglos, FORTH-IESL & Department of Chemistry, UoC*
  - *Dr. A. Lappas, FUN, FORTH-IESL*
  - *Univ. Adelaide, Australia*
  - *University of Strathclyde, Glasgow, UK*
  - *Univ. of Sydney, Sydney, Australia*
  - *Optoelectronics Research Centre, University of Southampton, UK*
  - *Department of Informatics, AUTH, Greece*
  - *Electronic and Communications Engineering, Dublin Institute of Technology, Ireland*
  - *Departamento de Física Aplicada, Universidad de Valencia, Valencia, Spain*
  - *Dr. U. Jonas, Bio-organic Materials Chemistry, FORTH-IESL*
  - *Lichttechnisches Institut, Universität Karlsruhe, Karlsruhe, Germany*
  - *Department of Electronics, Carleton University, Ottawa, Canada*
  - *NHRF, Athens, Greece*

➢ SUPERVISING ACTIVITIES

- *Post-docs*
  - C. Elosua (ES), G. Violakis (GR), K. Milenko (PL), K. Kosma (GR), G. Konidakis (GR), G. Zito (IT), P. Childs (AU), A. Rahman (IN), J. Vanda (CZ), G. Tsibidis (GR)
- *PhD students*
  - N. Korakas (active), D. Vurro (IT, visiting 3 months), V. Melissinaki, M. Sozzi (IT, visiting 12 months), A. Candiani (IT, visiting 18 months), S. Torres (ES, visiting 6 months)
- *Ms.c. students*
  - M.G. Konstantinou, S. Timotheatos, I. Tagoudi, C. Spitieri, I. Michelekaki, M. Livitziis, G. Violakis, C. Pappas, E. Vagiartakis, A. Candiani (IT)
- *Undergraduate students, summer-practices/diplomas*
  - K. Vardakis, C. Mourikis, W. Deibel (DE), G. Pahis, M. Klontzas, T. Bournelis
- *Industrial Internships*

- S. Fedele (ES), N. Korakas (GR), A. Couvert (FR)

- *PhD thesis external examiner*
  - Univ. Macquarie (AU), Univ. San Sebastian (ES), Valencia Polytechnic University (ES), VUB Brussels (BE), Univ. Sannio (IT), CUT (CY), Univ. Parma (IT), 5x Univ. Crete (GR)

➢ RESEARCH INTERESTS

- Photonic Crystal Fibre and Microstructured Optical Fibre sensing and actuating devices. Development of Lab-in-fibre devices exhibiting new functionalities, utilising disruptive approaches and material implementations.

- Optofluidic and Magnetofluidic Optical Fibre Devices

- Light localisation utilising symmetrical, periodic and random shape resonating structures, with emphasis in optical fibre geometries; Whispering Gallery Mode resonators; Optomechanical optical fibre devices.

- Study of photosensitivity and surface-, volume-damage processes in optical materials using laser radiation.

- Photonic and fluidic devices processing using laser ablation, selective chemical etching and 3-D non-linear photo-polymerisation techniques.

➢ PUBLICATIONS

- **BOOKS**

1. "Optofluidics, Sensors and Actuators in Microstructured Optical Fibres" Editors, S. Pissadakis and S. Selleri, Woodhead Publishing Ltd (2015)

- **BOOK CHAPTERS**

2. "Laser processing of optical fibres: new photosensitivity findings, refractive index engineering and surface structuring," in Laser growth and processing of photonic devices, Editor N.A.Vainos, Woodhead Publishing Ltd (2012)

3. "Fiber Optic–based Pressure Sensing Surface for Skin Health Management in Prosthetic and Rehabilitation Interventions" in Biomedical Engineering, Editor R.Hudak, InTech Press (2012)

- **JOURNAL PUBLICATIONS**

1. N.A. Vainos, S. Mailis, S. Pissadakis, L. Boutsikaris, P.J.M. Parmiter, P. Dainty, and T.J. Hall, Excimer laser use for microetching computer-generated holographic structures, Appl. Opt. **35**, pp. 6304-6319 (1996)

2. S. Pissadakis, S. Mailis, L. Reekie, J.S. Wilkinson, R.W. Eason, N.A. Vainos, K. Moschovis, G. Kiriakidis, Permanent holographic recording in indium oxide thin films using 193nm excimer laser radiation, Appl. Phys. A **69**, pp.333-336 (1999)

3. S. Pissadakis, L. Reekie, M. Hempstead, M.N. Zervas, J.S. Wilkinson, Ablated gratings on borosilicate glass by 193nm excimer laser radiation, Appl. Phys. A **69**, pp. S739-S741 (1999)

4. S. Mailis, L. Reekie, S. Pissadakis, S.J. Barrington, R.W. Eason, N.A. Vainos, C. Grivas, Large photo-induced refractive index changes in pulsed laser deposited lead germanate glass waveguides with controllable refractive index sign change, Appl. Phys. A **69**, pp. S671-S674 (1999)

5. S. Pissadakis, L. Reekie, M. Hempstead, M.N. Zervas, J.S. Wilkinson, Relief gratings on Er/Yb-doped borosilicate glasses and waveguides by excimer laser ablation, Appl. Surf. Sc. **153**, pp. 200-210 (2000)

6. S. Pissadakis, L. Reekie, M.N. Zervas, J.S. Wilkinson, G. Kiriakidis, Gratings in indium oxide film overlayers on ion-exchanged waveguides by excimer laser micromachining, Appl. Phys. Lett. **78**, pp. 694-696 (2001)

7. S.Pissadakis, M.N.Zervas, D.A.Sager, J.S.Wilkinson, Superstrate index control of waveguide grating reflectivity, Opt. Lett. **27**, pp. 327-329 (2002)

8. S.Pissadakis, L.Reekie, M.N.Zervas, J.S.Wilkinson, Sub-micron period relief gratings in InO_x thin films and waveguides, patterned using 248nm excimer laser ablation, J. Appl. Phys. **95**, pp.1634-1641 (2004)

9. S.Pissadakis, A.Ikiades, C.Y.Tai, N.P.Sessions, J.S.Wilkinson, Sub-micron period grating structures in Ta_2O_5 thin oxide films patterned using UV laser post-exposure chemically assisted selective etching, Thin Solid Films **453-454C**, pp. 458-461 (2004)

10. S.Pissadakis, A.Ikiades, P.Hua, A.K.Sheridan, J.S.Wilkinson, Photosensitivity of ion-exchanged Er-doped phosphate glasses using 248nm excimer laser radiation, Opt. Express **12**, pp. 3131-3136 (2004)

11. S.Pissadakis, M.N.Zervas, L.Reekie, J.S.Wilkinson, High reflectivity Bragg gratings fabricated by 248nm excimer laser holographic ablation in thin Ta_2O_5 films overlaid on glass waveguides, Appl. Phys. A **79**, pp. 1093-1096 (2004)

12. S.Pissadakis, M.Konstantaki, Photosensitivity of Ge-doped silica fibres under 213nm, picosecond Nd:YAG irradiation, Opt. Express **13**, pp. 2605-2610 (2005)

13. S.Pissadakis, L.Reekie, An elliptical Talbot interferometer for fiber Bragg grating fabrication, Rev. Sci. Instr. **76** , pp. 066101-066103 (2005)

14. S.Pissadakis, A.Ikiades, P.Hua, A.K.Sheridan, J.S.Wilkinson, Strong refractive index changes induced in Ag^+ ion-exchanged Er-doped phosphate glass using 248nm excimer laser radiation, Glass Technol. **46**, pp. 76-79 (2005)

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