

Biography

Stavros Pissadakis



Dr Stavros Pissadakis is a Director of Research and founder/leader of the Photonic Materials and Devices Laboratory (PMDL), 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. He obtained his Ptychion degree in 1994 from the Physics Department, University of Crete, Greece, his Ph.D. degree in 2000 from Optoelectronics Research Centre (ORC), University of Southampton, UK, in the field of integrated optics; also, he has gained Specialisation in Business Strategy, from the Harvard Business School, USA (2022).

Before his current appointment in FORTH, Dr Pissadakis employed in research and academic positions in Greece, UK and Italy, including a Research Fellowship in the University of Southampton, personally undertaking an industrial project sponsored by Intel USA. He has taught undergraduate and post-graduate courses as Visiting Lecturer in the Department of Computer and Electronic Engineering, Technical University of Crete, Greece, as Visiting Assistant Professor in the Physics Department, University of Crete, while has been invited as Visiting Professor at the University of Parma, Italy. In year 2014, he taught as an Excellent Professor in the Politecnico di Torino, Italy. He has supervised more than 45 staff and postdoctoral researchers, PhD, MSc and undergraduate students, and industrial internships, with many of those continuing their career in prestigious international research institutions and companies.

Dr Pissadakis was elected Researcher Grade D at FORTH-IESL (2003), and then promoted through different tenures to the level of Director of Research (Full Professor level), on 2017. He personally established and drawn the research agenda of the PMDL, which focuses on the research of materials, light propagation effects, designs and fabrication methods for the development of Photonic Devices, covering major parts of the relevant value chains. Within PMDL the fundamental knowledge generated on light propagation and optical materials/processes is directly transferred into the research for developing functional 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 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 level, up to device demonstration in relevant environment (TRL5).

Dr Pissadakis has directed several first demonstrations in Photonics. These include new types of optical fiber sensors for the fields of energy, health and instrumentation, and contributions in applied physics/engineering in materials photosensitivity, periodic structures, magnetofluidics/optofluidics; and, whispering gallery mode devices. His research work is frequently highlighted by OSA, SPIE, IEEE, MRS and other technology scouting organisations; also he was shortlisted in the “Greece Innovates” competition, presenting a laboratory prototype of an optical fiber sensor for the early monitoring of pressure ulcers for rehabilitation/intensive care units.

Dr Pissadakis has been involved into several European, National, and Industrial research projects, while he has attracted and coordinated a total research budget of ~2.7 MEuros, as a principal investigator. He has participated in prestigious EU research consortia, such as ACTPHAST 4.0 and 4R, PhotonHub Europe and PHACTORY. He has successfully transferred targeted Photonic know-how to several Greek and European companies and institutes, for speeding up commercialization activities, through a number of bilateral activities and projects (ie ACTPHAST).

Dr Pissadakis has actively participated in research policy drawing in European, National, and Foundation level. Notably, he has been heavily involved in the activities of the European Technological Platform Photonics²¹ since 2005, being a full member in the Board of Stakeholders. He is a Member of the National Council for Research and Innovation, for Technology Transfer and Intellectual Property (2020-2025); he has also been a member of the Scientific Board of IESL (2013-2016/2024-), and Representative of Researchers in the Board of Directors of FORTH (2013-2014). Moreover, he has triggered the formation of Thematic Technological Platform for Photonics in Greece (*Photonics^{GR}*), chairing its Executive Board (2008-2016); he has assisted the business plan of the Greek Photonic Cluster, H-Phos. He is frequent expert reviewer for European and International research Organisations/Projects (ie ERC, H2020) and high impact journals, while he was Co-chair of the ICO-Photonics Delphi Conference (2009); committing and chairing many other international conferences.

His scientific interests include optical fiber sensors, nanoscale sensing, microstructured optical fibers, optofluidics, and optical resonators. Dr Pissadakis is an author/co-author of 88 journal and 160 in international conference publications, including 53 invited contributions; he is a co-editor of the book “Optofluidics, Sensors and Actuators in Microstructured Optical Fibres”. He is an Associate Editor of IEEE/Optica J. Lightwave Technology, a Feature Editor of Applied Optics, and a Senior Member of both OSA and IEEE. Dr Pissadakis is also a registered farmer, professionally cultivating olive and avocado trees, while adopting Precision Agriculture practices.

Stavros Pissadakis

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Foundation for Research and Technology – Hellas (FORTH),
N. Plastira 100, Vasilika Vouton, Heraklion 70013, Crete, GREECE*

E-mail: *pissas@iesl.forth.gr*

PERSONAL DATA:

Year of birth: 1972

Institutional webpage: <https://www.iesl.forth.gr/en/people/pissadakis-stavros>

LinkedIn: <https://www.linkedin.com/in/stavros-pissadakis-14038612/>

ORCID: <http://www.researcherid.com/rid/C-6091-2011>

Google scholar: <https://scholar.google.com/citations?user=6jv-SK4AAAAJ&hl=en>

➤ **EDUCATION**

- Jul. 2021-Dec. 2022 Harvard Business School, USA
Certification in Business Strategy
- 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, Invited Professorship
- 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
<https://pmdl.iesl.forth.gr/>
- Sept. 2005-Jan. 2006 Physics Department, University of Crete, Heraklion,
Greece
- Sept. 2006-Jan. 2007 Visiting Professor

- Sept. 2020-Jan. 2021
- 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

- Jan. 2025- : IESL-FORTH, Heraklion, Greece

Scientific coordinator in the EU funded Horizon Europe Project “PhotonHub Factory for Next-Generation Photonics Innovation Support: Boosting European Industrial Competitiveness and securing Technological Sovereignty” (PHACTORY), 48 months duration

- May 2022-July 2025: IESL-FORTH, Heraklion, Greece

Project coordinator in the GSRT funded ΕΡΕΥΝΩ-ΚΑΙΝΟΤΟΜΩ-ΔΗΜΙΟΥΡΓΩ Project “Photonic sensors in ophthalmological sutures” (PHAETHON), FORTH budget 465kEuro, 38 months duration

- Jan. 2021-April 2026: IESL-FORTH, Heraklion, Greece

Scientific coordinator in the EU funded H2020 Innovation Action Project “One-Stop-Shop Open Access to Photonics Innovation Support for a Digital Europe” (PhotonHub Europe), 52 months duration.

- Alite Srl, Italy (2025-2026)

- Sept. 2019-Dec. 2024: IESL-FORTH, Heraklion, Greece

Project 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-Dec. 2023: 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), FORTH budget 145kEuro, 48 months duration. Technology transfer to Research Institutions:

- Electronic and Communications Engineering, Universidad Pública de Navarra (UPNA), Spain (2019-2021)

- School of Mineral Resources Engineering, TUC, Greece (2022-)
- Nov. 2017-Dec. 2022: 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)**, FORTH budget 100kEuro, 48 months duration. Technology transfer to SMEs:

- IONOS Ltd, Greece (2021-2022)
- Wines of Crete, Greece (2020-2021)
- ANT Ltd, Ireland, (2019-2020)

- Sept. 2016-2022: 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)**, budget 125KEuro, 48 months duration. Technology transfer to SMEs:

- B&T Composites, Greece (2017-2018)
- Prime LaserTech, Greece (2015-2016)

- 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 funded 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 Ta₂O₅ 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 and INNOVATION ACTIVITIES

- Member of the Board of Stakeholder, *Photonics21 Platform*, Nov. 2018
- Member of the National Research Council (TEΣ), for Technology Transfer and IP Management, Nov. 2020-
- Senior Member, IEEE, April 2021
- Senior Member, OSA, May 2017
- Associate Editor, IEEE/Optica Journal of Lightwave Technology, March 2023-
- Topical Editor, Applied Optics, June 2019-July 2025
- 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-IESL 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 (2017-2020)
- 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 “Magneto-optical 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*
- **CLEO Europe, CE –Optical Materials, Fabrication and Characterisation Topical Chair, Munich (2023 & 2025)**
- **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*
 - *ICOEN, Huangshan 2019*
 - *EWOFs, Limassol 2019*
 - *PHOTOPTICS 2020, Valletta 2020*
 - *CLEO Europe, Munich 2021*
- **Conference Session Chairing**
 - *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**
 - **IMA 2023, Chania, Crete 2023**
- **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, Laser and Photonics Reviews, ACS Sensors, Degruyter Nanophotonics, 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, ACS Applied Polymer Materials, IEEE Access

- **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, 2020), *National Science Centre, Poland* (2015, 2016, 2018, 2020), *MITACS-Canada* (2017), *RPF-Cyprus* (2018, 2019), *MIUR-Italy* (2018), *Elevate Greece* (2022), *Karatheodori Awards, Univ. Patras, Greece* (2024), *EALIEK* (2023-2024)
- **Projects:** EU FET-OPEN (2019, 2020), EU-ERC (2018), EU ERANET (2011, 2014), EURASIA (2013), *Greek Ministry of Development & Innovations, IPCEI* (2021), EU FET-OPEN (2021)

- **Seminars, Schools, Workshops 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
- Sci-Café, HMU, Greece, April 2021
- IPEN Online School, September 2021
- Photonics meet Biology, Spetses, Greece, July 2022
- “Who is supervising the management of Intellectual Property?”, Tech Transfer 2022, Athens, Greece, December 2022
- “Optical Sensors in Modern Manufacturing/Production Lines”, Industry-TEC, Athens, Greece, November 2023
- “Φωτονικοί αισθητήρες στις σύγχρονες γραμμές παραγωγής” A&R Expo, Athens, Greece, April 2024
- “Ο πολυδιάστατος ρόλος των στελεχών Μεταφοράς Τεχνολογίας”, METEX, Heraklion, Greece, December 2024
- Optical fiber sensors in Precision Agriculture, Optica AgriPhotonics Industry Summit at Grand Farm, Fargo ND, USA, June 2025

- **Optical Sensors for Precision Agriculture, Optica Online Industry Meeting: Photonics for Farming & Food, March 2026**



AWARDS

- 10kEuros Equipment Research fund in **“Memoriam of Miltiadis Empeirikos”** for the project **Disruptive Near & Mid-IR Optical Fiber Sensors** (Πηξικέλευθοι Αισθητήρες Οπτικών Ινών στο Κοντινό & Μέσο Υπέρθυρο-ΡΩΜΥ), Sept. 2022
- 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” (2013)



COLLABORATIONS

- Active
 - *Politecnico di Torino, Italy*
- Past
 - *ACREO AB, Stockholm, Sweden*
 - *MRD, Technical University of Crete, Greece*
 - *VUB, Brussels, Belgium*
 - *Optoelectronics Research Centre, University of Southampton, UK*
 - *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*
 - *CNR-IMEM, Italy*
 - *Universidad Pública de Navarra, Spain*
 - *Institute of Photonic Technology Jena, Jena, Germany*
 - *CEIT, Spain*
 - *Leibniz-Institute for Surface Modification, Leipzig, Germany*
 - *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*
 - *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*
 - *NHRE, Athens, Greece*



SUPERVISING ACTIVITIES

- Post-docs
 - V. Melissinaki (GR), I. Chapalo (RU), A. Padhye (IN), D. Lopez (ES), 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, 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)
- *M.sc. students*
 - P. Giouni, D. Dolapsakis, V. Sarakatsianos, 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*
 - C. Kouklinou, K. Kalligiannakis, A. Vantaraki, N. Kokkinidis, I. Mpountali, 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*
 - Polit. Torino (IT), Univ. Macquarie (AU), Univ. San Sebastian (ES), Valencia Polytechnic University (ES), VUB Brussels (BE), Univ. Sannio (IT), CUT (CY), Univ. Parma (IT), KTH (SW), AUTH (GR), ORC, Univ. Southampton (UK), (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)
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