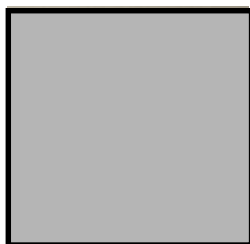


## PERSONAL INFORMATION

Lucanos Strambini


[lucanos.strambini@ieiit.cnr.it](mailto:lucanos.strambini@ieiit.cnr.it)

<https://www.ieiit.cnr.it/people/Strambini-Lucanos%20Marsilio>
Sex  Date of birth  | Nationality 

| Enterprise                                       | University                                                                                               | EPR                                                                                                                 |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Management Level        | <input type="checkbox"/> Full professor                                                                  | <input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist |
| <input type="checkbox"/> Mid-Management Level    | <input type="checkbox"/> Associate Professor                                                             | <input checked="" type="checkbox"/> Level III Researcher and Technologist                                           |
| <input type="checkbox"/> Employee / worker level | <input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator | <input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator            |

## WORK EXPERIENCE

From 2016

**Researcher**

Consiglio Nazionale delle Ricerche, Institute of Electronics, Information Engineering and Telecommunications (CNR-IEIIT, full address: 24, Corso Duca degli Abruzzi, Torino, 10129, Italy – website: <https://www.ieiit.cnr.it/>)

- Participation in National and International research projects; Coordination of research teams within my organization; Responsible of higher education/training of research fellows and young researchers; Participation in R&D contracts with International and National industries in the Electronic and Micro-Electronic field; Participation in Editorial Boards and Scientific Committees; Scientific organization of International and National Congresses and Workshops.

Business or sector **Public Research**

2007 - 2016

**Researcher Fellow**

University of Pisa, Department of Information Engineering (UNIPi-DII, full address: 16, Via G. Caruso, Pisa, 56122, Italy – website: <https://www.dii.unipi.it/en/>)

- Participation in National and International research projects; Coordination of research teams within my organization; Responsible of young researchers; Participation in R&D contracts with International and National industries in the Electronic and Micro-Electronic field.

Business or sector **Public Research**

## EDUCATION AND TRAINING

2004-2007

**PhD in Ingegneria dell'Informazione**Score: *Excellent*

University of Pisa, Pisa, Italy

- Skills within the Information and Communication Technologies. Research activity on different topics (porous silicon, silicon micromachining, photonic crystals, microneedles, silicon/metal nano-machining, polymer and glass technology) for different applications (optics, space, microelectronics, environment, biomedics, energy harvesting), always going beyond the state-of-the-art.

1992-2002

**Master's Degree in Electronic Engineering**Score: *110/110*

University of Pisa, Pisa, Italy

- Electronic engineering and Micro-Electronic technology skills.

## PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s) English: Full Professional Proficiency

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technology Transfer skills         | n. 6 patents of which 3 international and 3 national within the Information Technologies, which involve the collaboration of universities and companies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Higher Education & Training skills | <p>Lecturer of "Misure Elettroniche e Strumentazione", School of Engineering, BSc in Electronic Engineering, University of Pisa. Duration: 7 years.</p> <p>Lecturer of "Elettronica", School of Engineering, BSc in Electronic Engineering, University of Pisa. Duration: 1 year.</p> <p>Lecturer of "Elettronica Biomedica I", School of Engineering, BSc in Biomedical Engineering, University of Pisa. Duration: 10 years.</p> <p>Tutor of PhD students of the PhD Course in Information Engineering of the University of Pisa.</p> <p>Scientific responsible of graduating students at the School of Engineering, MSc in Biomedical Engineering and Electronic Engineering, University of Pisa.</p> |
| Project Management skills          | <p>Scientific responsible of CNR-IEIT Research Unit of the national research project "Transizione industriale e resilienza delle Società post-Covid19 (FOE 2020) - TIRS" [Ministry of University and Research; period: 2020-2023].</p> <p>Scientific responsible of CNR-IEIT Research Unit of the national research project "START 4.0 - Servizi e sensoristica per lo sviluppo di piattaforme Digital Twin" [Ministry of Economic Development; period: 2019-2022].</p>                                                                                                                                                                                                                                 |
| Other skills                       | Skills within the Information and Communication Technologies: design, fabrication, and characterization of new materials and solid-state devices, as well as for their integration on the same chip, by using the silicon technology, to get complex microsystems. Research activity on different topics (porous silicon, silicon micromachining, photonic crystals, microneedles, silicon/metal nano-machining, polymer and glass technology) for different applications (optics, space, microelectronics, environment, biomedics, energy harvesting), always going beyond the state-of-the-art.                                                                                                       |

## ADDITIONAL INFORMATION

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Projects     | <p>National research Project "GSTPAM - Evaluation and consolidation of Additive Manufacturing processes and materials for the manufacturing of RF hardware" [European Space Agency; period: 2019-2021];</p> <p>National research Project "SAPR Multi-Sensore a Ricarica e Navigazione Automatiche (SENSORNAUTA)" [POR FESR Toscana 2014-2020; period: 2018-2020];</p> <p>National research Project 'E-CABIN', WP2 "Rete di sensori e attuatori per il monitoraggio e controllo di E-Cabin" and WP5 "Realizzazione del prototipo E-Cabin" [Ministry of Economic Development; period: 2017-2018];</p> <p>European research Project "Preparing R2 extension to 300mm for BCD Smart Power and Power Discrete (R2POWER300)" [ECSEL JU di Horizon 2020; period: 2015-2018]</p> <p>European research Project "Supramolecularly engineered architectures for optoelectronics and photonics (SYNCHRONICS)" [Marie Skłodowska-Curie Action European Training Network (MSCA-ETN) of Horizon 2020; period: 2015-2019]</p> <p>National research Project "Ultra-Sensitive Flow-Through Optofluidic MicroResonators for Biosensing Applications (SENS4BIO)" [Ministry of University and Research, FIRB2012; period: 2013-2016]</p>                                                                |
| Publications | <p>Mariani S., Corsi M., Paghi A., La Mattina A.A., Strambini L., Frontini F.P., Giuseppe G.D., Barillaro G., "4D Printing of Plasmon-Encoded Tunable Polydimethylsiloxane Lenses for On-Field Microscopy of Microbes", <i>Advanced Optical Materials</i>, 10, 2101610, 2021. [doi: 10.1002/adom.202101610]</p> <p>Mariani S., La Mattina A.A., Paghi A., Strambini L., Barillaro G., "Maskless Preparation of Spatially-Resolved Plasmonic Nanoparticles on Polydimethylsiloxane via In Situ Fluoride-Assisted Synthesis", <i>Advanced Functional Materials</i>, 31, 2100774, 2021. [doi: 10.1002/adfm.202100774]</p> <p>Paghi A., Strambini L., Toia F.F., Sambì M., Marchesi M., Depetro R., Morelli M., Barillaro G., "Peripheral Nanostructured Porous Silicon Boosts Static and Dynamic Performance of Integrated Electronic Devices", <i>Advanced Electronic Materials</i>, 6, 12, 2000615, 2020. [doi: 10.1002/aelm.202000615]</p> <p>Strambini L., Paghi A., Mariani S., Sood A., Kalliomäki J., Järvinen P., Toia F., Scurati M., Morelli M., Lamperti A., Barillaro G., "Three-dimensional silicon-integrated capacitor with unprecedented areal capacitance for on-chip energy storage", <i>Nano Energy</i>, 68, 104281, 2020. [doi: 10.1016/j.nanoen.2020.104281]</p> |

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Castelli G., Tognola G., Campana E.F., Cesta A., Diez M., Padula M., Ravazzani P., Rinaldi G., Savazzi S., Spagnuolo M., Strambini L. "Urban Intelligence: A Modular, Fully Integrated, and Evolving Model for Cities Digital Twinning", Proc. HONET-ICT 2019 - IEEE 16th International Conference on Smart Cities: Improving Quality of Life using ICT, IoT and AI, art. no. 8907962, pp. 33-37, 2019.

Mariani S., Robbiano V., Strambini L., Debrassi A., Egri G., Dähne L., Barillaro G., "Layer-by-layer biofunctionalization of nanostructured porous silicon for high-sensitivity and high-selectivity label-free affinity biosensing", Nature Communications, 9, 11, 5256, 2018. [doi: 10.1038/s41467-018-07723-8]

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R. Iglío, S. Mariani, V. Robbiano, L. Strambini, G. Barillaro, "Flexible Polydimethylsiloxane Foams Decorated with Multiwalled Carbon Nanotubes Enable Unprecedented Detection of Ultralow Strain and Pressure Coupled with a Large Working Range" ACS Applied Materials & Interfaces, 10, 16, 13885, 2018 [doi: 10.1021/acsami.8b02322]

S. Mariani, L. Strambini, A. Paghi, G. Barillaro, "Low-Concentration Ethanol Vapor Sensing With Nanostructured Porous Silicon Interferometers Using Interferogram Average Over Wavelength Reflectance Spectroscopy", IEEE Sensors Journal, 18, 19, 7842-7849, 2018. [doi: 10.1109/JSEN.2018.2859789]

S. Mariani, L. Pino, L. Strambini, L. Tedeschi, G. Barillaro, "10000-Fold Improvement in Protein Detection Using Nanostructured Porous Silicon Interferometric Aptasensors", ACS Sensors, 1, 12, 1471-1479, 2016. [doi: 10.1021/acssensors.6b00634]

M. Sainato, L. Strambini, S. Rella, E. Mazzotta, G. Barillaro, "Titolo Sub-Parts Per Million NO<sub>2</sub> Chemi-Transistor Sensors Based on Composite Porous Silicon/Gold Nanostructures Prepared by Metal-Assisted Etching", ACS Applied Materials & Interfaces, 7, 13, 7136-7145, 2015. [doi: 10.1021/am5089633]

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L. Strambini, A. Longo, A. Diligenti, G. Barillaro, "A minimally invasive microchip for transdermal injection/sampling applications", LAB ON A CHIP, 12, 18, 3370-3379, 2012. [doi: 10.1039/c2lc40348j]

G. Barillaro, P. Bruschi, G. M. Lazzerini, L. Strambini, "Validation of the Compatibility Between a Porous Silicon-Based Gas Sensor Technology and Standard Microelectronic Process", IEEE Sensors Journal, 10, 4, 893-899, 2010. [doi: 10.1109/JSEN.2009.2034861]

#### Collaborations

Current collaborations within research projects, grants and contracts:

Academic partners: Massachusetts Institute of Technology, MIT (USA); University of California San Diego, UCSD (USA); University College London, UCL (United Kingdom); University of South Australia (Australia); Ecole Nationale Supérieure des Mines de Saint-Etienne (France); Ecole Polytechnique Fédérale de Lausanne, EPFL (Switzerland); Université De Strasbourg (France); Julius-Maximilians-Universität Würzburg (Germany); Università di Pisa (Italy); Politecnico di Milano (Italy); Università degli Studi 'La Sapienza' (Italy); Università di Bologna (Italy); Università del Salento (Italy); Università di Pavia (Italy); Università di Brescia (Italy); Università di Trento (Italy); Consorzio Nazionale Interuniversitario per le Telecomunicazioni CNIT (Italy).

Industries: STMicroelectronics (Italy); IMEC (Belgium); Fondazione Bruno Kessler, FBK (Italy); IBM (Switzerland); Fincantieri (Italy); Surflay Nanotec GmbH (Germany); Thales Alenia Space (Italy); RICO (Italy).

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

Date  
Signed

 LUCANOS  
STRAMBINI  
06.05.2025  
11:25:45  
GMT+02:00