Academic CV – Luisa Petti

Personal Information

Name: **Luisa Petti**
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Education

- **2009** – **B.Sc. in Electronic Engineering** (Grade: 110/110 cum laude), Politecnico di Milano, Milan, Italy. Thesis Title: "Development of a computational code for a quick calculation of the contrasts that are obtained in x-ray imaging". Referee: Prof. Chiara Guazzoni (Politecnico di Milano).
- **2011** – **M.Sc. in Electronic Engineering** (Grade: 110/110 cum laude), Politecnico di Milano, Milan, Italy. Thesis Title: "Development and application of x-ray optics suitable for microanalysis techniques". Referee(s): Prof. Chiara Guazzoni (Politecnico di Milano), Prof. Christopher Hierold, and Dr. Olga Kurapova (ETH Zürich).
- **2016** – **Ph.D. in Science**, ETH Zurich, Zurich, Switzerland. Thesis Title: "Metal oxide semiconductor thin-film transistors for flexible electronics". Referee(s): Prof. Gerhard Tröster (ETH Zürich), Prof. Thomas Anthopoulos (Imperial College London).

Present Appointments

- **Full Professor in Electronics** (SSD: IINF-01/A) at the Faculty of Engineering, Free University of Bolzano-Bozen.
- **Course Director of the B.Sc. in Electronic and Information Engineering** (L-8) at the Faculty of Engineering, Free University of Bolzano-Bozen.
- **Member of the Competence Center "Health of the Plants"**, Free University of Bolzano-Bozen.
- **Head of the Sensor System Technology Laboratory** at the Faculty of Engineering and NOI Techpark Bolzano, Free University of Bolzano-Bozen.
- **Head of the Sensing Technologies Laboratory** – an Interdisciplinary Research Group currently including 2 Full Professors, 2 Assistant Professors, 3 Technologists, 5 Postdocs, 12 PhD Students – at the Faculty of Engineering, Free University of Bolzano-Bozen.
- **Member of the Scientific Committee ("Collegio Docenti") of the Ph.D. Program Advanced Systems Engineering** (ASE) at the Faculty of Engineering, Free University of Bolzano-Bozen.
- **Member of the Scientific Committee ("Collegio Docenti") of the National Ph.D. Program Micro- and Nano-Electronics** (MNE) coordinated by the University of Pavia.
- **Local Unit Responsible of the Italian Electronic Society** (SIE) for the Free University of Bolzano-Bozen.
- **Local Unit Responsible for the Inter University Consortium for Nanoelectronics** (IUNET) for the Free University of Bolzano-Bozen.
- **Supervisor of 2 Postdoctoral Researchers, 2 Technologists, 8 Ph.D. Students** at the Faculty of Engineering, Free University of Bolzano-Bozen.

- **Lecturer of "Basics of Electronics"** at the B.Sc. in Electronic and Cyber-Physical Systems Engineering (L-8) at Free University of Bolzano-Bozen.
- **Lecturer of "Ubiquitous Sensing"** at the B.Sc. in Electronic and Information Engineering (L-8) at Free University of Bolzano-Bozen.
- **Member of the Board of Governor (BoG)** of the IEEE Electron Device Society (EDS).
- **Member of the Special Interest Group on Electronics for Agri-food** of the IEEE Circuits and Systems Society (CASS).
- **Member of the Meetings Committee** of IEEE EDS.
- **Member of the Women in EDS Committee** (WiEDS) of IEEE EDS.
- **Associate Editor in Chief** of *IEEE Journal on Flexible Electronics (IEEE J-FLEX)*.
- **Associate Editor** of *IEEE Transaction on Agrifood Electronics (IEEE TAFE).*
- **Associate Editor** of *Frontiers in Electronics* (Specialty Section: Flexible Electronics).
- **Review Editor** of *Frontiers in Nanotechnology*.

Past Professional Experience

From/to	Job Title	Name of Institution	Academic Level	Responsibilities
03/2011 – 09/2011	Student research assistant	ETH Zurich, Zurich, Switzerland	M.Sc.	●Research in the areas of design, micro-fabrication, and characterization of x-ray refractive optical micro-lenses.
09/2011 – 12/2011	Student research assistant	Politecnico di Milano, Milan, Italy	M.Sc.	●Research in the areas of x-ray fluorescence micro-analysis of biological samples.
02/2012 – 08/2016	Research assistant	ETH Zurich, Zurich, Switzerland	Ph.D.	●Research in the areas of flexible thin-film transistors, sensors, memories, and integrated circuits based on metal oxide and organic semiconductors. ●Demonstrated first flexible vertical indium gallium zinc oxide transistors. ●Authored and co-authored >58 publications in >21 peer-reviewed journals. ●Coordinated the preparation of an extensive and well-cited review on flexible metal oxide semiconductor electronics (53 pages, 363 references). ●Presented >7 contributed and invited talks at international top conferences. ●Collaborated with >16 academic and industrial partners over >6 countries. ●Main reader and responsible for semester and master thesis supervision. ●Involved in >3 European and Swiss third-party projects.
02/2014 –	Visiting research	Imperial College London,	Ph.D.	●Research in the areas of flexible solution-processed thin-

08/2014	assistant	London, UK		film transistors and complementary digital circuits.
09/2014 – 12/2014	Intern	Apple Incorporated, Cupertino, US	Ph.D.	●Developed innovative designs and fabrication processes for next-generation flexible and stretchable display products. ●Co-inventor of an international patent application on stretchable displays.
09/2016 – 12/2017 (from 10/16 at 10%)	Research Associate	ETH Zurich, Zurich, Switzerland	Postdoc	●Research in the areas of flexible short-channel thin-film transistors and complementary analog circuits based on metal oxide semiconductors. ●Demonstrated shortest channel length ever reported for flexible transistors. ●Authored and co-authored >16 publications in >14 peer-reviewed journals. ●Responsible for Ph.D. student supervision and cleanroom user training. ●Scientific evaluator of European H2020 FET-OPEN and ICT projects.
10/2016 – 12/2017	Scientist	Cambridge Display Technology Limited, Godmanchester, UK	Postdoc	●Responsible for the fabrication, characterization, and integration of flexible printed organic thermoelectric generators for industrial IoT applications. ●Responsible for the electrochemical and physical characterization of novel materials for thin-film flexible polymer-based batteries. ●Responsible for the integration of flexible organic batteries and solar cells for medical wearable, healthcare, and smart home IoT applications. ●Co-inventor of a patent on gel electrolytes for flexible batteries. ●Involved in the 3rd Horizon group for a long-term planning of CDT's research and development activities.
12/2017 – 06/2018	Research Engineer	FlexEnable Limited, Cambridge, UK	Postdoc	●Responsible for the electrical and optical characterization of flexible organic liquid crystal displays (OLCDs). ●Responsible for the management of internal, customer and European research projects on flexible OLCDs. ●Dark-room manager.
07/2018 –	Fixed-term	Free University of Bolzano-	Postdoc	●Research in the areas of flexible, printed, and

02/2021	Assistant Professor	Bozen, Bolzano, Italy		environmentally friendly electronics (sensors, biosensors, energy harvesters, actuators, and integrated sensor systems). ●Responsible for the management of internal, regional, and national research projects, as well as for the management and setup of new research laboratories. ●Responsible for postdoc, Ph.D. and master student supervision and training. ●Responsible for the setup of the new Sensor System Technology Laboratories at NOI Techpark. ●Lecturer for electronics and sensor courses at B.Sc. and M.Sc. level. ●Authored and co-authored >17 publications in >10 peer-reviewed journals. ●Presented >6 invited talks at international top conferences and webinars. ●Collaborated with a wide range of academic and industrial partners both locally, nationally, and internationally. ●Involved in a wide range of third-mission public activities (newspapers, radio, TV services). ●Actively participated to the editoral boards of different journals and the technical and scientific committee of various international top conferences.
03/2021-07/2025	Associate Professor	Free University of Bolzano-Bozen, Bolzano, Italy	Tenured	●Research in the areas of flexible, printed, sustainable, and bio-interfaced electronics (sensors, biosensors, and integrated sensor systems). ●Responsible for the management of internal, regional, and national research projects, as well as for the setup and management of new research and didactic laboratories. ●Responsible for postdoc, Ph.D. master and bachelor student supervision. ●Responsible for the setup of the new L-8 didactic laboratories first in the center and then at NOI Techpark (now B1.3.01) ●Lecturer for electronics and sensor courses at B.Sc., M.Sc. and Ph.D. level.

				●Authored and co-authored a large number of publications. ●Presented a large amount of invited and keynote talks at international top conferences and webinars. ●Collaborated with a wide range of academic and industrial partners both locally, nationally, and internationally. ●Involved in a wide range of third-mission public activities (newspapers, radio, TV services). ●Actively participated to the editoral boards of different journals and technical and scientific committee of various international top conferences, being also the general chair of one international conference (IEEE IFETC 2024) as well as the associate editor in chief of IEEE J-FLEX. ●Had a leading role in the setup and coordination of the L-8 BSc (now called Electronic and Information Engineering), as well as in the setup of the new LM-32 MSc in Smart Technologies for Sports and Health.

Participation in Exhibitions, Competitions, and Awards

Exhibitions:

- Organization and participation to "**Long Night of Research**" 2019, Free University of Bolzano-Bozen, Bolzano, Italy, September 2019.
- Participation to "**Rome Maker Fair**" 2022 exhibition, Gazometro di Roma, Rome, Italy, October 2022.
- Organization and participation to the festival "**Le mille e una Scienza**" 2022, Free University of Bolzano-Bozen, Bolzano, Italy, November 2022.
- Participation to "**Rendezvous mit dem Traumberuf**," Free University of Bolzano-Bozen, Bolzano, Italy, November 2022.
- Participation to Festival "**Science Live. Get Curious**!", Free University of Bolzano-Bozen, Bolzano, Italy, October 2023.
- Participation to "**Thrive Festival**", NOI Techpark Bruneck, Bruneck, Italy, October 2023.
- Participation to "**Lvh.apa techParcour Handwerk**", NOI Techpark Bolzano, Bolzano, Italy, February 2024.
- Participation to "**Unibz STEM School**," Free University of Bolzano-Bozen, Bolzano, Italy, February 2024.
- Participation to "**Unibz STEM School**," Free University of Bolzano-Bozen, Bolzano, Italy, February 2025.

Competitions:

- Participation to the competition "**Il Linguaggio Della Ricerca**" (LDR) with the project "La Fisica della Vita" together with a group of students of the ITIS Leonardo Da Vinci in Carpi, Italy, 2019 and 2020.

Awards:

- Awarded with the **gold medal for the top 40 B.Sc. graduates** 2008-2009, Politecnico di Milano, Milan, Italy, April 2011.
- Awarded with the **prize for the most innovative solution** at the European Society for Precision Engineering and Nanotechnology (EUSPEN) Challenge 2011, University of Cambridge, Cambridge, UK, July 2011.
- Awarded with the **best student paper award** at the International Thin-Film Transistor Conference 2013, University of Tokyo, Tokyo, Japan, March 2013.
- Awarded with the **ETH medal for outstanding doctoral theses** in 2016, ETH Zurich, Zurich, Switzerland, November 2016.
- Awarded with the **IEEE EDS early career award** 2019, IEEE EDS, San Francisco, US, December 2019.
- Awarded with the Frontiers in Nanotechnology 2021 **outstanding review editors awards**, London, UK, December 2021.
- Awarded with the **2024 IEEE Sensors Letters Best Paper Award** at the IEEE Sensors Conference 2024, Kobe, Japan.
- Awarded with the **Alexander von Humboldt Professorship 2026**.

Experience in Academic Teaching

Teaching at Free University of Bolzano-Bozen:

Academic Year 2018/2019

- Lecturer and course responsible of *Physik* (6 CFU, 30 hours in German), B.Sc. in Wood Engineering (L-9-wood); Evaluations: *No evaluations available as the course was attended by less than 5 students.*

Academic Year 2019/2020

- Lecturer and course responsible of *Elektronische Qualität und Diagnose* (6 CFU, 54 hours in German), B.Sc. in Wood Engineering (L-9-wood); Evaluations: *No evaluations available as the course was attended by less than 5 students.*
- Lecturer of *Sensors and Biosensors for Food Processing* (6 CFU, 6 hours in English); M.Sc. in Food Sciences for Innovation and Authenticity (LM-70); Evaluations: *No evaluations available as the course was attended by less than 5 students.*
- Lecturer at the 15th International Summer Schools on Nanosciences & Nanotechnologies, Organic Electronics & Nanomedicine (ISSON20); held online on 11th July 2020.

Academic year 2020/2021

- Lecturer and course responsible of *Elektronische Qualität und Diagnose* (6 CFU, 60 hours in German), B.Sc. in Wood Engineering (L-9-wood) and B.Sc. in Industrial and Mechanical Engineering (L-9); Evaluations: *Am I generally satisfied with the course taught? Generally, yes + Definitely Yes: 100%.*
- Lecturer and course responsible of *Introduction to Printing Technologies and Flexible Components* (3 CFU, 30 hours in English), Ph.D. in Advanced Systems Engineering; Evaluations: *No evalutations available as the course was at a Ph.D. level.*
- Lecturer at the 16th International Summer Schools on Nanosciences & Nanotechnologies, Organic Electronics & Nanomedicine (ISSON21); held

online on 4th July 2021.

Academic year 2021/2022

- Lecturer and course responsible of *Sensors and Biosensors for Food Processing* (6 CFU, 30 hours in English); M.Sc. in Food Sciences for Innovation and Authenticity (LM-70); Evaluations: *Am I generally satisfied with the course taught? Generally, yes + Definitely Yes: 94%.*
- Lecturer and course responsible of "*Information and DSS in Fruit Production*" (6 CFU, 30 hours in English) at the M.Sc. in Horticultural Science (LM-69); Evaluations: *No evaluations available as the course was managed by the University of Bologna.*
- Lecturer and course responsible of *Elektronische Qualität und Diagnose* (6 CFU, 60 hours in German), B.Sc. in Wood Engineering (L-9-wood) and B.Sc. in Industrial and Mechanical Engineering (L-9); Evaluations: *Am I generally satisfied with the course taught? Generally, yes + Definitely Yes: 100%.*
- Lecturer at the 2nd Seasonal School-2021 Technology and Agri-Business: Feeding a Growing Population; held online on 9th December 2021.

Academic year 2022/2023

- Lecturer and course responsible of "*Information and DSS in Fruit Production*" (6 CFU, 30 hours in English) at the M.Sc. in Horticultural Science (LM-69); Evaluations: *No evaluations available as the course was managed by the University of Bologna.*
- Lecturer and course responsible of *Elektronische Qualität und Diagnose* (6 CFU, 60 hours in German), B.Sc. in Wood Engineering (L-9-wood) and B.Sc. in Industrial and Mechanical Engineering (L-9); *Am I generally satisfied with the course taught? Generally, yes + Definitely Yes: 100%.*
- Lecturer and course responsible of *Fundamentals of Electronics* (6 CFU, 30 hours in Italian) at the B.Sc. in Electronic and Cyber physical Systems Engineering (L-8); *Am I generally satisfied with the course taught? Generally, yes + Definitely Yes: 100%.*

Academic year 2023/2024

- Lecturer and course responsible of *Flexible Electronics: From Materials to Systems and Applications* (3 CFU, 30 hours in English), Ph.D. in Advanced Systems Engineering; Evaluations: *No evaluations available as the course was at a Ph.D. level.*
- Lecturer and course responsible of *Fundamentals of Electronics* (6 CFU, 60 hours in Italian) at the B.Sc. in Electronic and Cyber physical Systems Engineering (L-8); *Am I generally satisfied with the course taught? Generally, yes + Definitely Yes: 100%.*
- Lecturer at h-ALO Training School; held in Bologna from 23rd to 27th October 2023.
- Lecturer at NanoBio Winter School 2023; held in Venice on the 10th of November 2023.
- Lecturer at Summer School on Organic Electronics and Neuromorphic Systems 2024; held in Tarragona on the 17th of June 2024.

Academic year 2024/2025

- Lecturer and course responsible of *Flexible Electronics: From Materials to Systems and Applications* (3 CFU, 30 hours in English), Ph.D. in Advanced Systems Engineering; Evaluations: *No evaluations available as*

the course was at a Ph.D. level.

- Lecturer and course responsible of *Sensors and Biosensors for Food Processing* (6 CFU, 30 hours in English); M.Sc. in Food Sciences for Innovation and Authenticity (LM-70); Evaluations: *Am I generally satisfied with the course taught? Generally, yes + Definitely Yes: 100%.*
- Lecturer of *Electronic Devices* (9 CFU, 30 hours in Italian) at the B.Sc. in Electronic and Cyber physical Systems Engineering (L-8); Evaluations: *Am I generally satisfied with the course taught? Generally, yes + Definitely Yes: 100%.*

Experience in Academic Supervision

At the Free University of Bozen-Bolzano, I have served as the main academic supervisor for a wide range of students and researchers across various levels of academic training. This includes the supervision of **2 technologists**, **7 postdoctoral researchers** ("assegni di ricerca"), and **16 PhD students**, many of whom were involved in collaborative projects with external research institutions and industry partners. In addition, I have supervised **10 bachelor's students** in their thesis work and have acted as a **referee for 3 master's theses**, including external evaluations for students from other universities.

Other Academic Responsibilities or Appointments

Internal Appointments at Free University of Bolzano-Bozen

- **Responsible for the Sensor System Technology Laboratories** at NOI Techpark, Free University of Bolzano-Bozen (March 2019 – now).
- **Member of the Scientific Committee ("Collegio Docenti") of the PhD Program Advanced Systems Engineering** (ASE) at the Faculty of Engineering of the Free University of Bolzano-Bozen (April 2019 – now).
- **Member of the Competence Center "Health of the Plants"** at the Free University of Bolzano-Bozen (December 2020 – now).
- **Member of the Quality Committee** of the Free University of Bolzano-Bozen (May 2021 – July 2023).
- **Course Director of the B.Sc. in Electronic and Information Engineering** (L-8) at the Faculty of Engineering, Free University of Bolzano-Bozen (September 2022 – now).
- **Member of the Scientific Committee ("Collegio Docenti") of the National PhD program Micro- and Nano-Electronics** (MNE) coordinated by the University of Pavia (September 2023 – now).

External Appointments at National/International Level

- **Local Unit Responsible for the Italian Electronic Society** (June 2021 – now).
- **Local Unit Responsible for the Inter University Consortium for Nanoelectronics** (IUNET) (January 2022 - now).
- **Member of the Board of Governor (BoG)** of the IEEE Electron Device Society (EDS) (January 2024 – now).
- **Member of the Flexible Electronics and Display Technical Committee** of IEEE EDS (January 2020 – December 2023).
- **Member of the Special Interest Group on Electronics for Agrifood** of IEEE CASS (June 2020 – now).
- **Member of Women in EDS (WiEDS) Committee** of IEEE EDS (November 2020 – now).
- **Member of Additive Manufactured Electronic Systems Technical**

Committee (TC-AMES) of IEEE RFiDC (January 2022 – December 2024).
- **Member of the MEMS and Nanotechnologies Technical Committee** of IEEE IES (January 2022 – December 2024).
- **Member of Meetings Committee** of IEEE EDS (January 2023 – now).

Responsibilities for Organizing Conferences
- **Member of the Organizing Committee** at the 11th Body Sensor Network Conference, ETH Zurich, Zurich, Switzerland (17-18 June 2014).
- **Organizer** of the Workshop *Technologies for the Futures*, NOI Techpark Bolzano, Bolzano, Italy (28th September 2020).
- **Chair** of the Focused Session "Emerging Technologies for Flexible and Printed Energy Autonomous Sensing Systems" at the *IEEE Sensors Conference 2020*, online (25-28 October 2020).
- **Technical Co-Chair** of the *IEEE International Flexible Electronics Technology Conference (IFETC) 2021*, hybrid (8-11 August 2021).
- **Member** of the "Flexible & Wearable Electronics" Subcommittee of the *IEEE Electron Device Technology Manufacturing (EDTM) 2021,* online (8-11 April 2021).
- **Chair** of the "Flexible & Wearable Electronics" Tutorial and Short Courses Session of the *IEEE Electron Device Technology Manufacturing (EDTM) Conference 2022*, online (6-9 March 2022).
- **Chair** of the Special Session "Wearable Sensors and Devices for Unobtrusive Human Activities and Physiological Monitoring" of the *IEEE International Workshop on Metrology for Industry 4.0 & IoT 2022*, Trento, Italy (7-9 June 2022).
- **Awards Co-Chair** of the *IEEE Flexible and Printed Sensors Conference (FLEPS) 2023*, Boston, US (10-14 June 2023).
- **Technical Co-Chair** of the *IEEE International Flexible Electronics Technology Conference (IFETC) 2023*, San Jose, US (14-16 August 2023).
- **Special Session Chair** of the *IEEE Conference on AgriFood Electronics (CAFE) 2023*, Turin, Italy (25-27 September 2023).
- **Program Committee Member** of the *Innovations in Large Area Electronics Conference (InnoLAE)* 2024, Cambridge, UK (20-22 February 2024)
- **Track Chair** of the "Sensors, Flexible & Bioelectronics" Subcommittee of the *IEEE Electron Device Technology Manufacturing (EDTM) 2024*, Bangalore, India (3-6 March 2024).
- **General Chair** of the IEEE *International Flexible Electronics Technology Conference (IFETC) 2024*, Bologna, Italy (26-28 September 2024).
- **Technical Co-Chair** of the *IEEE Conference on AgriFood Electronics (CAFE) 2024*, Xanthi, Greece (25-27 September 2024)
- **Chair** of AEIT Südtirol Seminar on "Chips Revolution: La crisi delle furniture e il ruolo cruciale di tecnologie e politica per un futuro digitale", Bolzano, Italy (22 November 2024).
- **Organizer** of Symposium "Innovations in Materials and Processes for Printed, Flexible and Stretchable Energy-autonomous Sensing Systems" at the *2024 Materials Research Society (MRS) Fall Meeting*, Boston, USA (1-6 December 2024).
- **Program Committee Member** of the *Innovations in Large Area Electronics Conference (InnoLAE) 2025*, Cambridge, UK (17-20 February

2025).

Memberships

Membership of Academic or Professional Bodies

- **Senior Member** of the IEEE since 2021 (previously, since 2012, Member).
- **Member** of the IEEE Young Professionals (YP) since 2014.
- **Member** of the IEEE Electron Device Society (EDS) since 2015.
- **Member** of the IEEE Women in Engineering Society (WIE) since 2015.
- **Member** of the IEEE Solid-State Circuits Society (SSCS) since 2016.
- **Member** of the Engineering in Medicine and Biology Society (EMBS) since 2021.
- **Member** of the Circuits and Systems Society (CASS) since 2021.
- **Member** of the Italian Electronic Society (SIE) since 2021.
- **Member** of Materials Research Society (MRS) since 2023.

Membership of Editorial Boards

- **Associate Editor in Chief** of *IEEE Journal on Flexible Electronics* (IEEE JFLEX) (September 2023 – now).
- **Associate Editor** of *Frontiers in Electronics* (August 2020 – now).
- **Associate Editor** of *IEEE Transaction on Agrifood Electronics (IEEE TAFE)* (January 2023 – now).
- **Review Editor** of *Frontiers in Nanotechnology* (May 2020 – now).
- **Guest Editor** of the *IEEE Journal of Flexible Electronics* (IEEE J-FLEX) Special Topic "Extension of the Proceedings of the IEEE IFETC 2024 Conference", 2025.
- **Guest Editor** of the *Advanced Electronic Materials* and *Advanced Materials Interfaces* (Wiley AEM & AMI) Special Topic "Women in emerging organic and hybrid electronic materials and interfaces", 2025.
- **Guest Editor** of the *IEEE Journal of Flexible Electronics* (IEEE J-FLEX) Special Topic "Pre-IEEE IFETC 2024 Special Issue", 2024.
- **Guest Editor** of the *IEEE Electron Devices Magazine (IEEE EDM)* Special Issue "Large-Area and Flexible Electronics", 2024.
- **Guest Editor** of the *IEEE Journal of Flexible Electronics (IEEE J-FLEX)* Special Topic "Extension of the Proceedings of the IEEE IFETC 2022 Conference", 2023.
- **Guest Editor** of the *Frontiers in Electronics* Research Topic "Flexible Oxide Semiconductor Based Thin-Film Transistors and Circuits", 2020.

Membership of Committees/Boards for International Conferences

- **Member of the Technical Program Committee** (TPC) of the *IEEE Electron Device Technology Manufacturing (EDTM) Conference 2021*, online (8-11 April 2021).
- **Member of the Scientific Committee** of the *IEEE Flexible and Printed Sensors (FLEPS) Conference* 2020, online (17-19 August 2020).
- **Member of the Scientific Committee** of the *IEEE International Flexible Electronics Technology Conference (IFETC) 2021,* online (8-11 August 2021).
- **Member of the Technical Program Committee** (TPC) of the *IEEE Electron Device Technology Manufacturing (EDTM) Conference 2022*, online (hybrid, 6-9 March 2022).
- **Member of the International Advisory Board** of the *2nd International Conference on Micro/Nanoelectronics, Devices, Circuits*

and Systems (MNDCS22), online (29-21 January 2022).
- **Member of the Technical Program Committee** (TPC) of the *IEEE International Flexible Electronics Technology Conference (IFETC) 2023*, San Jose, US (14-16 August 2023).
- **Member of the Technical Program Committee** (TPC) of *IEEE Conference on Agrifood Electronics* (CAFE) 2023, Turin, Italy (25-27 September 2023).
- **Member of the Technical Program Committee** (TPC) of the *IEEE Electron Device Technology Manufacturing (EDTM) 2024*, Bangalore, India, (3-6 March 2024).
- **Program Committee Member** of the *Innovations in Large Area Electronics Conference (InnoLAE)* 2024, Cambridge, UK (20-22 February 2024).
- **Member of the Technical Program Committee** of the IEEE *International Flexible Electronics Technology Conference (IFETC) 2024*, Bologna, Italy (26-28 September 2024).
- **Member of the Technical Program Committee** (TPC) of the *IEEE Conference on AgriFood Electronics (CAFE) 2024*, Xanthi, Greece (25-27 September 2024).
- **Program Committee Member** of the *Innovations in Large Area Electronics Conference (InnoLAE) 2025*, Cambridge, UK (17-20 February 2025).

Membership of Commissions of Trust
- **Reviewer** of the H2020 IA project "High-ACCuracy printed electronics down to µm size, for Organic Large Area Electronics (OLAE) Thin Film Transistor (TFT) and Display Applications".
- **Scientific Evaluator** of the H2020 FET-OPEN RIA Call 2016-2017 "Novel Ideas for Radically New Technologies" and of the H2020 ICT-2018-2 Call "Flexible and Wearable Electronics".
- **Vice-Chair** (Quality Control) of the H2020 FET-OPEN RIA Call 2018-2020 "FET-Open Challenging Current Thinking".
- **Scientific Evaluator** of the Deutsche Forschungsgemeinschaft (DFG).
- **Scientific Evaluator** of the Swiss National Science Foundation (SNSF).
- **Scientific Evaluator** of the Academy of Finland.
- **Scientific Evaluator** for KAUST.

Membership of Ph.D. Evaluation Committees

I have served as an external examiner or committee member for the defense of **11 PhD theses** across various international institutions, which were conducted both online and in-person, and took place at universities in Italy, France, Spain, Canada, and Saudi Arabia.

Research Projects

Research Projects:

Since 2018, Prof. Luisa Petti has been principal investigator (PI), unit leader, or responsible for the following projects:

Period	Award Holder/ Responsible	Funding Body	Title / Topic	Budget (own share)
2025 – 2027	Luisa Petti (responsible)	EFRE-FESR-2021-2027	Material and device MICRO-CHARacterization lab (MICRO-CHAR)	732,26 k€

2025 – 2026	Luisa Petti (coordinator)	Fondazione Cassa di Risparmio di Bolzano and Loacker Ag (Fusion Grant 2024)	Impedance spectroscopy for enhanced natural gas leakage SENSing and Evaluation with metal oxide gas sensors (SENSE)	50,4 k€
2024 – 2025	Luisa Petti (responsible)	UNIBZ (Infrastructure Call 2024)	Electronic materials and devices on 3D and unconventional SURFaces (3D-SURF)	64,3 k€
2024 – 2026	Luisa Petti (responsible)	Bando mobilità ricercatori 2023, Provincia Autonoma di Bolzano	BIOelectronic microfluidic platform to study neuronal REgeneration of SEnsory Neurons (BioReSeN)	170,4 k€
2024 – 2026	Luisa Petti (responsible)	UNIBZ (Near Misses Call 2023)	Sustainable and bio-inspired electronics	60 k€
2023 – 2024	Luisa Petti (responsible)	PIPO Srl (Commissioned Research Contract)	Preliminary prototypes on wearable electrodes (WEAR_EL)	6,8 k€
2023 – 2025	Luisa Petti (unit leader)	PRIN 2022	BIodegradable Thin film ELectronicS for massively deployable and sustainable Internet of Things applications (BITES4IoT)	79,5 k€
2023 – 2024	Luisa Petti (coordinator)	Fondazione Cassa di Risparmio di Bolzano and Loacker Ag (Fusion Grant 2022)	Towards smart factories: SENSorization and digitalization of the production plant for wasteWATER monitoring (SENSWATER)	50,4 k€
2023 – 2025	Luisa Petti (responsible)	UNIBZ (Near Misses Call 2022)	Flexible and sustainable electronics	40 k€
2023 – 2026	Luisa Petti (responsible)	COMET K1 Centre Project (Research Agreement)	Sustainable sensors on cellulose	40 k€
2022 – 2025	Luisa Petti (responsible)	UNIBZ (RC Call 2022)	WEarable self-powered textile sensors for healthCARE applications (WE-CARE)	110 k€
2022 – 2023	Luisa Petti (responsible)	UNIBZ (Teaching Investments)	Unibz grant for the set-up of the teaching laboratories of the B.Sc. in Electronics and Cyber-Physical Systems Engineering (L8)	1,5 M€
2022 – 2025	Luisa Petti (responsible)	Eurac Research (Research Contribution)	Autonomic modulation of cardiac cells in a dish: set up of a NEUROcardiac construct and OPTOelectrical monitoring (NEURO–OPTO)	96 k€
2022	Luisa Petti (responsible)	Pizzolli Spa (Commissioned Research Contract)	Electrical impedance spectroscopy measurements of potato samples (KARTEIS)	3 k€
2021	Luisa Petti (responsible)	Holz Pichler Ag (Commissioned Research Contract)	PRINTing tests with conductive inks on WOOD (PRINTWOOD)	0,8 k€
2021 – 2024	Luisa Petti (responsible)	UNIBZ (Start-up Funds)	Electronic enhancement of bio-photosynthetic systems (ELPLANT)	50 k€
2020 –	Luisa Petti	UNIBZ (ID Call	New directions in statistical	100 k€

2023	(coordinator)	2020)	methods for BIO-impedance analysis of FRUIT ripeness (BIOFRUIT)	
2019 – 2026	Luisa Petti (responsible)	19 PhD External (Co)Fundings from IIT (7), FBK (6), Laimburg (2), EURAC (2), EMPATICA (1), Thales Alenia (1), also joint with PON, PNNR or ESF funds	Various PhD Topics	1,2 M €
2019 – 2022	Luisa Petti (responsible)	UNIBZ (RTD Call 2019)	Environmentally friendly ElectRonics on PapEr (EYRE)	13,5 k€

Additionally, Prof. Luisa Petti has been co-investigator or team member on the following research projects:

Period	**Award Holder/ Responsible**	**Funding Body**	**Title / Topic**	**Budget (unibz share)**
2024 – 2026	Erwin Rauch (unit leader)	Erasmus+ KA	Smaller Universities for Sustainability in Engineering Education (SUSEE)	97,8 k€
2024 – 2027	Nitzan Cohen (PI)	Research Südtirol	Materials-based innovation as catalyst for a sustainable transition into circularity in South Tyrol	299,65 k€
2024 – 2025	Franco Cacialli (PI)	UNIBZ (Infrastructure Call 2024)	Biomaterials for Bio-hybrid living electronics and bioenergy production (BIO-LIVEL)	83 k€
2024 – 2025	Nitzan Cohen (PI)	UNIBZ (Infrastructure Call 2024)	Design Friction Lab (DFL)	50,8 k€
2024 – 2025	Niko Münzenrieder (PI)	UNIBZ (Infrastructure Call 2024)	Confocal laser scanning surface analyser (CLaSSy)	106,2 k€
2023 – 2024	Franco Cacialli (PI)	UNIBZ (Infrastructure Call 2023)	stylUs ThIn fiLm mEtrology (UTILE)	75,9 k€
2022 – 2025	Renato Vidoni (unit leader)	Horizon Europe	Physical cognition for intelligent control and safe human robot interaction (SESTOSENSO)	273 k€
2022 – 2025	UNIBZ	PNNR	PNNR national research center for AGRIcultural TECHnologies (AGRITECH)	250 k€ (own share)
2022 – 2024	Martina Aurora Costa Angeli	UNIBZ (ID call 2022)	WEarable self-powered textile sensors for health CARE applications (WE-CARE)	110 k€
2022 – 2024	Paolo Lugli	CH Joint Project	IN MEmory sensing (IN-ME)	245 k€
2022	Merlyne De Souza	IEEE EDS Project Funds	Creating video material for promoting women in EDS	15 k€
2021 – 2023	Niko Münzenrieder (unit leader)	Royal Society (International Exchanges Scheme 2020)	Integrated flexible sensor Conditioning Circuits for high performance wearables (ICC)	13,4 k€
2020 –	Paolo Lugli	UNIBZ (ID call	discovering complexity:	163 k€

2023		2020)	Advanced Technology for Narrative Education and System Thinking (AT-NE-ST)	
2020 – 2023	Giuseppe Cantarella	UNIBZ (RTD call 2020)	Flexible ElectRonics-integrated MIcromachines (FERMI)	13,7 k€
2019 – 2023	Niko Münzenrieder	DFG FFlexCom project	WIreless Indium-Gallium-Zinc-Oxide TranSmitters and Devices on Mechanically Flexible Thin-Film Substrates II (WISDOM II)	283 k€
2019 – 2022	Paolo Lugli	EFRE-FESR-2014-2020	Smart TEXtile for monitoring muscles activity (STEX)	623,9 k€
2018 – 2022	Paolo Lugli	UNIBZ (ID call 2017)	Sustainable Smart Parasites (SSP)	198 k€
2018 – 2021	Paolo Lugli	EFRE-FESR-2014-2020	SENSing LABoratory (SensLab)	1,5 Mk€

As shown above, Prof. Petti's research activities are based on a wide range of regional, national, and international collaborations from both academic and industrial partners. Just to mention a few, these collaborations include Microgate, Tex Market, Loacker, Sensit, Dolomites Milk, Kerr Italy, Empatica, Thales Alenia, Microtec, Biometic, Tessa Agritech, Eurac Research, Laimburg Research, Fondazione Bruno Kessler, Istituto Italiano di Tecnologia, Università di Trento, Università di Verona, Università di Venezia Cà Foscari, Università di Modena e Reggio Emilia, Università di Parma, Università di Padova, Università di Roma Tor Vergata, Università della Tuscia, Politecnico di Milano, Politecnico di Torino, Technische Universität München, ETH Zurich, EPFL, Universidad de Granada, University of Oslo, Universitè Paris Citè, University of Sussex, University of Surrey, Hemholtz Zentrum Dresden Rossendorf, University of Duisburg-Essen, Technical University of Denmark, Ludwig Maximilians University in Munich.

Publications

Luisa Petti is author of **210 (231) SCOPUS (Google Scholar) listed publications**, and co-inventor of two patent applications (1 granted). According to SCOPUS (Google Scholar) her **H-Index is 36 (39)**, with a **total number of citations of 4304 (5416)**.

Publications (2012-2025):

a. Journal Articles in Refereed Academic Journals *(Main Author in Italics)*

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89. *S. Vasquez*, B. Shkodra, A. Rivadeneyra, M.A. Costa Angeli, A. Altana, C. Allarà, P. Ibba, P. Lugli, and **L. Petti**, "Fully Printed Low-Cost Ammonia Gas Sensor on Paper Substrate", In 2024 IEEE SENSORS, pp. 1-4. IEEE, 2024, doi: 10.1109/SENSORS60989.2024.10785124.
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93. *S. Vasquez*, A. Altana, C. Allará, M. Gullino, E. Holzknecht, W. Guerra, P. Lugli, P. Ibba, and **L. Petti**, "Autonomous and Low-Cost Data Acquisition System for Impedimetric Sensors in Precision

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94. *N. Münzenrieder*, **L. Petti**, H. de Souza Oliveira, G. Cantarella, R. Libanori, and A.R. Studart, "Direct Fabrication and Performance Evaluation of InGaZnO Thin-Film Electronics on a Flexible Polyurethane Substrate", In 2025 IEEE International Symposium on Circuits and Systems (ISCAS), 2025, doi: 10.1109/ISCAS56072.2025.11043635.

c. Book Chapters *(Main Author in Italics*)

1. *MA. Costa Angeli*, M. Ciocca, **L. Petti**, P. Lugli, "Advances in printing technologies for soft robotics devices applications", Advanced in Chemical Engineering, 2021, doi: /10.1016/bs.ache.2021.05.001.

d. Journal Cover Pages *(Main Author in Italics*)

1. *N. Münzenrieder*, D. Karnaushenko, **L. Petti**, G. Cantarella, C. Vogt, L. Büthe, D. Karnaushenko, O. G. Schmidt, D. Makarov, and G. Tröster, "Entirely flexible on-site conditioned magnetic sensorics," in Advanced Electronic Materials, 2016.
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3. *N. Münzenrieder*, G. Cantarella, C. Vogt, **L. Petti**, L. Büthe, G. A. Salvatore, Y. Fang, R. Andri, Y. Lam, R. Libanori, D. Widner, A. Studart, and G. Tröster, "Stretchable and Conformable Oxide Thin-Film Electronics," in Advanced Electronic Materials, 2015.
4. *Shkodra*, B.D. Abera, G. Cantarella, A. Douaki, E. Avancini, **L. Petti**, and P. Lugli, "Flexible and Printed Electrochemical Immunosensor Coated with Oxygen Plasma Treated SWCNTs for Histamine Detection," in Biosensors 10(4), 2020.
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7. *R. Riaz*, B. Dudem, MA. Costa Angeli, A. Douaki, M. Ahmad, A. Mejia-Aguilar, R. Monsorno, P. Lugli, SRP Silva, **L. Petti**, "Surface Textured Double Layer Triboelectric Nanogenerator for Autonomous and Ultra-Sensitive Biomedical Sensing", Advanced Materials Technologies 8 (13), 2023.
8. *B. Shkodra*, M. Petrelli, KA. Yang, A. Tagliaferri, P. Lugli, **L. Petti**, N. Nakatsuka, "Polymeric integration of structure-switching aptamers on transistors for histamine sensing", Faraday Discussions, 2024.

9. *F. Catania*, E. Scattolo, D. Giubertoni, A. Cian, B. Shkodra, P. Lugli, **L. Petti**, N. Münzenrieder, and G. Cantarella, "Channel Nanoscaling of InGaZnO TFTs and Circuits via Focused Ion Beam", ACS Applied Electronic Materials, 2024.
10. *Nijkoops*, M. Ciocca, M.A. Costa Angeli, S. Pogliaghi, S. Krik, E. Avancini, N. Münzenrieder, P. Lugli, and **L. Petti**, "Ammonia Dynamics in the Human Body: Insights in Biomedical Sensing Technologies", in Advanced Sensor Research, 2025, doi: 10.1002/adsr.202400179.
11. *Allará*, G. Ciccone, M. Ciocca, S. Vasquez, P. Ibba, M. Maver, T. Mimmo, P. Lugli, and **L. Petti**, "Electronic Nanomaterials for Plants: A Review on Current Advances and Future Prospects", in Advanced Electronic Materials, 2025, doi: 10.1002/aelm.202500080.

Publications About the Applicant

Mentions in Newspapers/Magazines/School Books:

- **L. Petti**, "Hybridization and Thin-Film Sensors Key Enablers of Flexible Electronics Today", *Electronics for You*, May 2015.
- **L. Petti**, "Awarded", Südtiroler Wirtschaftszeitung, January 2020.
- **L. Petti**, "High-tech und Motherhood", *Academia* + *Salto.bz* + *Südtirol News*, February 2020.
- **L. Petti**, P. Lugli, and B. Shkodra, "Università di Bolzano: ricerca su sensori e anticorpi per prevenire le intossicazioni alimentari", *Academia* + *Italicom.net* + *Tecnomedicina.it* + *Automazione-plus.it* + *Macchinealimentari.it* + *Dolomiten* + *La Usc Di Ladins* + *Teknoscienze.com* + *Innovami.news*, April-May 2020.
- **L. Petti**, "Jenseits der Klischees", *Die Südtiroler Frau*, June 2020.
- **L. Petti**, "La maglietta che misura la fatica e le altre invenzioni del Senslab, il nuovo laboratorio Unibz al NOI Techpark", *Salto.bz*, 6th November 2020.
- **L. Petti**, P. Lugli, and E. Avancini, "Tecnologie per il futuro: ecco il «Senslab», il nuovo laboratorio di unibz al NOI", *Alto Adige Innovazione* + *Südtirol News* + *La Usc Di Ladins* + *Dolomiten*, September 2020.
- **L. Petti,** "Luisa Petti: Reflections from an EDS Young Professional", *IEEE Electron Devices Society (EDS) Newsletter*, July 2021.
- **L. Petti**, T. Mimmo, R. Vidoni, H. Schuler, F. Mazzetto, and G. Orzes," Plant Health 4.0", Academia, December 2021.
- **L. Petti,** P. Lugli, B. Shkodra, and M. Petrelli, "Scientific Advances of Electrolyte-Gated Carbon Nanotube Field-Effect Transistor Biosensors"; Azonano, December 2021.
- **L. Petti** "Wir wollen transversales Wissen und vertikale Kompetenzen vermitteln", *Unibz News* + *Südtirol News* + *Dolomiten* + *Alto Adige Innovazione*, July 2022.
- **L. Petti**, "Dalla buccia al condensatore", *Salto.bz* + *Unibz News* + *Südtirol News* + *Dolomiten* + *Alto Adige Innovazione*, August 2023.
- **L. Petti,** G. Cantarella, and P. Lugli, "Elektronikkomponenten aus Obstabfällen", *Unibz News* + *Südtirol News* + *Dolomiten* + *Alto Adige Innovazione*, July 2023.
- **L. Petti,** MA. Costa Angeli, and P. Lugli, "UniBz, realizzati nuovi sensori triboelettrici per applicazioni indossabili", *Unibz News* + *Technomedicina.it* + *30science.com* + *Stol.it* + *Südtironews.it* +

Magazine-Italia.it + *Alto Adige Innovazione* + *Labussolanews.it* + *Ilcorrieredibologna.it*, September 2023.

- **L. Petti**, and MA. Costa Angeli, "Tessuti intelligenti grazie all'elettronics", Newsletter Società Italiana di Elettronica, November 2023.
- **L. Petti**, G. Cantarella, "Carta-frutta per circuiti elettronici", Tecnologia.verde, Zanichelli, 2023.
- **L. Petti**, G. Cantarella, "L'elettronica sperimenta riciclo e compostaggio, NOVA 24, Sole24Ore, March 2024.
- **L. Petti,** "Pink&Green va a Bolzano, dove si studia l'elettronica circolare", Green Planner Magazine, April 2024.
- G. Elli, **L. Petti** and P. Lugli, "Inventato il "ghostbuster" delle nanoplastiche", *Greencity.it, teleambiente.it, msn, tiscali.it, altoadigeinnovazione.it, dire.it, metro, scuolalink.it, economiadelmare.org, rainews.it, italiaonline.news, ilsole24ore.com, gaeta.it, zampelibera.it, youmark.it, 9colonne.it, ambiente.news, ilgazzettino.it, ansa.it, meteoweb.eu, huffingtonpost.it, Lapresse, GEA, AGI,* December 2024.
- R. Di Cagno, T. Mimmo, **L. Petti**, „Freie Universität Bozen: Forschung für eine grüne Zukunft", die Zeit, January 2025.
- L. Mistral Peppi, M. Gullino, P. Ibba, P. Lugli, W. Guerra, **L. Petti**, L. Manfrini, "Sensori di crescita dei frutti in continua evoluzione", Rivista di Frutticultura e di Ortofloricoltura, February 2025.
- G. Elli and **L. Petti**, "Donne nella scienza: da Bari a Bolzano esempi di innovazione", Sole 24 ore, February 2025.
- **L. Petti**, "An Alexander von Humboldt Professorship for Luisa Petti", Humboldt Foundation News, RWTH Aachen News, IdW, Land NRW, SZ.de, Antenne AC, aktuell24.ch, Forschung & Lehre, Aachener Zeitung, Mindener Tageblatt, WDR, etc, June 2025.

Participation to Radio/TV/Podcast Services:

- **L. Petti** and N. Münzenrieder, in Südtirol forscht, *Radio Südtirol*, Bolzano, February 2020.
- **L. Petti** and P. Lugli, "Al Senslab di Bolzano di studiano i sensori per la società dei big data", *RAI TGR Alto Adige* and *RAI TG Leonardo*, December 2020.
- **L. Petti** and P. Lugli, "Das neue Senslab an der Freien Universität Bozen", in *ORF Südtirol Heute*, April 2021.
- **L. Petti,** "Cosa è la sensoristica?", Unibz Insight Podcast on *RAI Radio Alto Adige*, July 2022.
- **L. Petti**, MA. Costa Angeli, A. Scarton, and S. Poliaghi, "The STEX project: a video", *NOI Techpark Podcast*, November 2022.
- **L. Petti**, MA. Costa Angeli, and B. Shkodra, "IEEE WiEDS Video Series on Female in STEM", *IEEE EDS Podcast*, December 2022.
- **L. Petti**, "Luisa Petti: Elektronik Ingenieurin", Unibz Insight Podcast on *RAI Alto Adige*, April 2023.
- **L. Petti** and P. Lugli, "Dagli scarti della frutta circuiti e sensori biodegradabili", *RAI TGR Alto Adige*, July 2023.
- **L. Petti**, N. Cohen, and G. Cantarella, "Dank Laserbehandlung leitfähig-Gedruckte Elektronik aus Obstabfällen", *Deutschlandfunk*, September 2023.
- **L. Petti**, "Nachgeschaut: Mikroplastik Dokuabend mit Film und Diskussion on *RAI Südtirol*, May 2024.

- **L. Petti**, RAI Campus service, on *RAI Südtirol*, September 2024.
- **L. Petti**, G. Elli, P. Lugli, *Eta Beta Radio 1*, December 2024.
- **L. Petti**, G. Elli, P. Lugli, *TG Leonardo*, December 2024.
- **L. Petti**, G. Elli, P. Lugli, *TG3 Pixel*, January 2025.

Invited Presentations

Keynote Presentations:

- **L. Petti**, "Flexible Electronics for Low-Cost and Unobtrusive Sensor Systems Everywhere", in International Conference on Micro/Nanoelectronics Devices, Circuits and Systems, National Institute of Technology Silchar, online, 30th January 2022.
- **L. Petti,** "Environmentally Friendly Electronics", International Forum Mechatronics, NOI Techpark Bruneck, Bruneck, September 2023.
- **L. Petti**, "Unconventional Electronics: Enabling Seamless and Sustainable Integration", LV Annual Meeting of the Italian Society of Electronics, Genova, Italy, June 2024.
- **L. Petti**, "Printing Technologies for Unconventional and Sustainable Sensors", INFRACHIP School "Smart Surfaces: Devices and Integration Challenges", online, February 2025.
- **L. Petti**, "Low-cost and Additive Manufacturing Technologies for Unconventional and Sustainable Sensors", Scientific Seminar WOOD KPLUS, St. Veit an der Glan, May 2025.

Invited Presentations:

- **L. Petti**, N. Münzenrieder, C. Zysset, T. Kinkeldei, G. A. Salvatore, and G. Tröster, "Mechanically flexible InGaZnO-based ferroelectric memory thin-film-transistors," in International Device Physics Young Scientists Symposium (IDYS), Nara, Japan, March 2013.
- **L. Petti**, P. Aguirre, N. Münzenrieder, G. A. Salvatore, C. Zysset, A. Frutiger, L. Büthe, C. Vogt, and G. Tröster, "Mechanically flexible vertically integrated a-IGZO thin-film transistors with 500 nm channel length fabricated on free standing plastic foil," in Wagner's Group Seminar, Princeton University, US, December 2013.
- **L. Petti**, N. Münzenrieder, and G. Tröster, "Oxide semiconductor thin-film transistors for flexible electronics," in IIN Seminar, IFW Dresden, Dresden, Germany, July 2014.
- **L. Petti**, N. Münzenrieder, G. A. Salvatore, C. Zysset, T. Kinkeldei, L. Büthe, C. Vogt, and G. Tröster, "Flexible electronics based on oxide semiconductors," in 21st International Workshop of the IEEE on Active-Matrix Flat-Panel Displays and Devices (AM-FPD), Kyoto, Japan, July 2014.
- **L. Petti**, N. Münzenrieder, F. Bottacchi, H. Faber, C. Zysset, G. Cantarella, C. Vogt, L. Büthe, T. D. Anthopoulos, and G. Tröster, "Flexible integrated circuits on plastic substrates," in 581. WE-Heraeus-Seminar on Flexible, Stretchable and Printable High-Performance Electronics, Bad Honnef, Germany, January 2015.
- **L. Petti**, G. Cantarella, and N. Münzenrieder, "Flexible InGaZnO Thin-Film Transistors: Towards High-Frequency and High-Gain Analog Systems on Plastic," in International Symposium on Flexible and Organic Electronics (ISFOE19), Thessaloniki, Greece, July 2019.
- **L. Petti**, "Flexible InGaZnO Thin-Film Transistors: Towards High-Frequency and High-Gain Analog Systems on Plastic," in electronic-

based Systems Event, NOI Techpark, Bolzano, Italy, October 2019.

- **L. Petti**, B. Shkodra, P. Ibba, B. D. Abera, E. Avancini, G. Cantarella, N. Münzenrieder, and P. Lugli "Flexible and Printed Electronics: From Materials to Sensor Systems", in Arias's Research Group Seminar, University of California Berkeley, Berkeley, US, December 2019.
- **L. Petti**, G. Cantarella, N. Münzenrieder, and P. Lugli, "Flexible Hybrid Electronics: From Materials to Sensor Systems," in International Symposium on Flexible and Organic Electronics (ISFOE20), online, July 2020.
- **L. Petti**, B. Shkodra, A. Douaki, P. Ibba, M. Rivola, C. Ebner, M. Costa Angeli, M. Petrelli, E. Avancini, and P. Lugli, "Flexible and Printed Electronics: Overview of Current Activities at the Free University of Bozen-Bolzano," Workshop Technologies for the Future, NOI Techpark Bolzano, Bolzano, Italy, September 2020.
- **L. Petti**, R. Monsorno, P. Lugli, "Sensor System Technology Laboratory: Overview of Current Activities for Textile Electronics", Webinar Textile Comfort, online, December 2020.
- **L. Petti**, G. Cantarella, J. C. Costa, N. S. Münzenrieder, "Bendable Metal Oxide Thin-Film Transistors and Circuits for Analog Electronics Applications", SPIE Photonics West, online, March 2021.
- **L. Petti**, and P. Lugli, "Flexible and Printed Electronics: Overview of Current Activities at the Sensing Technologies Laboratories (STL) of the Free University of Bozen-Bolzano", Caironi's group seminar, online, March 2021.
- **L. Petti**, G. Cantarella, N. Münzenrieder, P. Lugli, "Flexible electronics and sensorics based on low-cost and high throughput processes", 717. WE-Heraeus-Seminar "Curvilinear Condensed Matter: Fundamentals and Applications", online, June 2021.
- **L. Petti**, G. Cantarella, N. Münzenrieder, and P. Lugli, "Cost-effective and high throughput processing of flexible electronics: from materials to systems and applications," in International Symposium on Flexible and Organic Electronics (ISFOE21), online, July 2021.
- **L. Petti**, G. Cantarella, and N. Münzenrieder, "Flexible Amorphous Oxide Thin-Film Transistors for Analog Circuits and Systems" in 2021 IEEE Computer-Aided Thin-Film Transistor (CAD-TDT) conference, online, September 2021.
- **L. Petti**, G. Cantarella, and N. Münzenrieder, "Flexible Analog Circuits based on Oxide Thin-Film Transistors: from Modelling to Applications" in 18th MOS-AK ESSDERC/ESSCIRC Workshop Grenoble, online, September 2021.
- **L. Petti** and P. Lugli, "Flexible and printed electronics for sensing and biosensing devices and systems" in International Workshop on Flexible Hybrid Electronics - Manufacturing, Processes & Applications, online, October 2021.
- **L. Petti**, "Flexible and Printed Sensors and Biosensors: From Materials and Processes to Systems and Applications", in 9th Forum on New Materials, CIMTEC 2022, Perugia, June 2022.
- **L. Petti**, "Flexible, printed, and sustainable Electronics: Overview of current activities at the sensor system technology laboratory", ERDF Seminar on the Opportunities and development of unconventional electronics, Free University of Bozen Bolzano. November 2022.

- **L. Petti**, "Functional Materials and Devices for Emerging Bioelectronic Interfaces", in Innovations in Large Area Electronics Conference (innoLAE) 2023, Cambridge, UK, February 2023.
- **L. Petti**, "Functional Materials and Devices for Emerging Bioelectronic Interfaces", in 2023 MRS Spring Meeting, San Francisco, April 2023.
- **L. Petti**, "Presentation of the Sensing Technologies Lab at Libera Università di Bolzano: Overview of Current Activities", Sensing Technologies Talks at DISI Seminar, Department of Information Engineering and Computer Science, University of Trento, May 2023.
- **L. Petti**, "Flexible and Printed (Bio)Electronics @Free University of Bozen-Bolzano: an Overview of the Activities of the Sensing Technologies Lab", Coffee Seminars at Istituto Italiano di Tecnologia, Genova, Italy, November 2023.
- **L. Petti**, "Sustainable Sensors for a More Sustainable World", ELFO Winter Workshop, Bormio, Italy, December 2023.
- **L. Petti**, "Unconventional Electronics as a Key Enabler of Seamless and Sustainable Integration Possibilities", Workshop on "Soft Electronics meets Soft Robotics" at IEEE Robosoft 2024, San Diego, US, April 2024.
- **L. Petti**, "Advances in Unconventional Sensing Technologies for Sustainable Applications", E-MRS 2024 Spring Meeting, Strasbourg, France, May 2024.
- **L. Petti**, "Printable gas/vapor sensors with an emphasis on those based on carbon nanotubes", Webinar: Enabling the Future: Printable Sensors for a Sustainable, Intelligent World, online, October 2024.
- **L. Petti**, "Beyond Conventional Electronics: Smart Sensing for a Sustainable Future", IEEE OFCCT 2024, online, November 2024.
- **L. Petti**, "Biopolymers for Unconventional and Sustainable Electronics", 3DMMO Conference, Schöntal Monastery, Germany, March 2025.
- **L. Petti**, "Redefining Electronics Through Sustainable Biopolymers", MRS Spring 2025, Seattle, US, April 2025.
- **L. Petti**, "Electrochemical Devices for Sweat-Based Health and Sports Monitoring", Device Research Conference 2025, Duke University, US, June 2025.

Other (Third Mission) Presentations:

- **L. Petti**, "La ricerca scientifica: esperienza e vissuti a cavallo fra industria ed accademia", online to High School Salesiani Sesto, 2021 & 2022.
- **L. Petti**, "Wie macht man Karriere in der Wissenschaft?", Various High Schools in Bolzano, 2022 & 2023.
- **L. Petti**, "Women in Electron Devices Society (WiEDS) Presentation", IEEE 52nd European Solid-State Device Research Conference (ESSDERC), Milan, Italy, September 2022.
- **L. Petti**, "Series of Lectures on Sustainability: Sustainable Electronics", Free University of Bozen Bolzano, March 2023.
- **L. Petti**, "Electronics & Sustainability: From Materials to Smart Solutions", Unibz & UniTn STEAM School, Cavalese, March 2024.
- **L. Petti** and P. Massoner, "Towards smart factories: SENSorization and digitalization of the production plant for wasteWATER

monitoring", Unibz Industry Days, September 2024.
- **L. Petti**, "SUSEE Virtual Lecture on Sustainable Electronics", Free University of Bozen-Bolzano, March 2025.

Patents

Luisa Petti is co-inventor of one granted patent and one deposited patent application:
- H. S. Kim, Y. Y. Hsu, P. S. Drzaic, **L. Petti**, "Electronic Devices with Soft Input-Output," US Patent No 9, 841, 548, 2017.
- T. Kugler, M.C. O'Sullivan, **L. Petti**, "Separator," UK Patent Application GB 2566991, 2019.

Language Competences

Italian: First Language
English: C1 (IELTS test, Cambridge, June 2018).
German: C1 (Language Center of the Free University of Bozen-Bolzano, Bolzano, October 2018).

I declare, pursuant to art. 76 of Presidential Decree 445/2000, that the information is true. I authorize the processing of my personal data in accordance with Legislative Decree 30 June 2003, n. 196 "Code for the protection of personal data" and the GDPR 679/16 - "European Regulation on the protection of personal data".

1st August 2025