

Curriculum Vitae

PERSONAL INFORMATION

Elisabetta Moisello

Date of birth: June 16th, 1993 | Nationality: Italian
E-mail address: elisabetta.moisello@unipv.it

EXPERIENCE

DECEMBER 2020-PRESENT

Postdoctoral Research Fellow

University of Pavia

- Research topics: design of interface circuits for contactless integrated temperature sensors, design of temperature-to-digital converters, design of high efficiency switching dc-dc converters, design of resonant dc-dc converters for wireless charging applications

FEBRUARY 2020-PRESENT

Contract Professor

University of Pavia

- Module of Electronics I - 2 CFU (Elettronica I), in the frame of the Bachelor's Degree on Electronic and Computer Engineering

EDUCATION AND TRAINING

OCTOBER 2017-DECEMBER
2020

Ph.D. in Microelectronics (XXXIII Cycle)

University of Pavia

- Thesis Title: "Integrated interface circuits for MEMS contact-less temperature sensors"

OCTOBER 2015-OCTOBER 2017

Master's Degree in Electronic Engineering

110/110 (Summa
Cum Laude)

University of Pavia

- Thesis Title: "Design of a chopper stabilized readout circuit for integrated thermopiles"

OCTOBER 2012-OCTOBER 2015

Bachelor's Degree in Electronic Engineering and Computer Science 107/110

University of Pavia

- Thesis Title: "Automation of voltage and current measurements for characterizing of a chip for electro-optical transmissions"

PERSONAL SKILLS

LANGUAGES

Italian, English

TEACHING ACTIVITY

- Module of Electronics I - 2 CFU (Elettronica I), in the frame of the Bachelor's Degree on Electronic and Computer Engineering (A.A. 2020/2021 – 2021/2022)
- Experience as tutor: 90 hours for the "Elettronica I" course at University of Pavia (exercises at the blackboard, assistance during laboratory activities, assistance during exams); 30 hours for the "Circuiti Elettrici Lineari" course at University of Pavia (exercises at the blackboard, assistance during exams)
- Bachelor's thesis co-supervisor for
 - Alessandro Portesan, "Development of a data acquisition program for the characterization of a sensor for presence detection"

- Master's thesis co-supervisor for
 - Samuele Fusetto, "Design of a high efficiency inverting buck-boost converter for OLED displays"
- Bachelor's thesis supervisor for
 - Luca Manfredi, "Experimental characterization of thermopile-based integrated sensors"

PUBLICATIONS

- E. Moiseello, M. Vaiana, M. E. Castagna, G. Bruno, E. Bonizzoni and P. Malcovati, "A Chopper Interface Circuit for Thermopile-Based Thermal Sensors", International Symposium on Circuits and Systems (ISCAS 2019), 26-29 May 2019, Sapporo, Japan, doi: 10.1109/ISCAS.2019.8702506.
- E. Moiseello, M. Vaiana, M. E. Castagna, G. Bruno, P. Malcovati and E. Bonizzoni, "An Integrated Micromachined Thermopile Sensor with a Chopper Interface Circuit for Contact-less Temperature Measurements", *IEEE Transactions on Circuits and Systems I: Regular Papers*, vol. 66, no. 9, Sep. 2019, doi: 10.1109/TCSI.2019.2928717.
- E. Moiseello, M. Vaiana, M. E. Castagna, G. Bruno, P. Malcovati and E. Bonizzoni, "An Integrated Thermopile-Based Sensor with a Chopper-Stabilized Interface Circuit for Presence Detection", *Sensors*, vol. 19, no. 18, Sep. 2019, doi: 10.3390/s19183999.
- E. Moiseello, P. Malcovati, E. Bonizzoni. "Thermal Sensors for Contactless Temperature Measurements, Occupancy Detection, and Automatic Operation of Appliances during the COVID-19 Pandemic: A Review", *Micromachines*, vol. 12, no. 148, Feb. 2021, doi: 10.3390/mi12020148.
- E. Moiseello, M. Vaiana, M. E. Castagna, G. Bruno, I. Brouk, T. Blank, S. Bar-Lev, Y. Nemirovsky, P. Malcovati and E. Bonizzoni. "Study of a Voltage-Mode Readout Configuration for Micromachined CMOS Transistors for Uncooled IR Sensing", Latin American Symposium on Circuits and Systems (LASCAS 2021), Feb. 2021, Virtual Format, doi: 10.1109/LASCAS51355.2021.9459117.
- E. Moiseello, M. Vaiana, M. E. Castagna, G. Bruno, I. Brouk, Y. Nemirovsky, P. Malcovati and E. Bonizzoni "A MEMS-CMOS Microsystem for Contact-Less Temperature Measurements," in *IEEE Transactions on Circuits and Systems I: Regular Papers*, doi: 10.1109/TCSI.2021.3091839.
- S. Fusetto, E. Moiseello, F. Cannillo, P. Malcovati and E. Bonizzoni. "A Power Switch Size Optimization Strategy for Multi-Switch DC-DC Converters", International Conference on Electronics, Circuits, and Systems (ICECS 2021), doi: 10.1109/ICECS53924.2021.9665603
- A. Aprile, E. Moiseello, P. Malcovati and E. Bonizzoni. "An Extensive Investigation and Analysis of Temperature-to-Digital Converter FoMs", International Conference on Electronics, Circuits, and Systems (ICECS 2021), doi: 10.1109/ICECS53924.2021.9665502.

MEMBERSHIPS AND ACTIVITY
IN THE INTERNATIONAL
SCIENTIFIC COMMUNITY

- Member of IEEE - Institute of Electrical and Electronics Engineers
- Member of CASS - Circuits and Systems Society
- Young Professional representative for the CASS-North Italy Chapter
- Member of the IEEE Italy Section Young Professional Affinity Group
- Secretary of the IEEE Italy Section Young Professional Affinity Group
- Experience as Guest Editor for "IEEE Transactions on Circuits and Systems II – Express Briefs"
- Experience as Reviewer for "IEEE Transactions on Circuits and Systems I – Regular Papers", "IEEE Transactions on Electron Devices", "IEEE Journal of Solid-State Circuits", "MDPI Applied Sciences", ISCAS Conference, ICECS Conference
- Organizer of the Special Session on "Circuits and systems for non-contact sensing applications" at ISCAS 2022
- Member of the Organizing Committee for PRIME 2022 Conference – Finance Chair
- Special Issue Editor (Organizer and Guest Editor) for "MDPI Micromachines" – "Special Issue: Microsensors and Microsystems for the Human Body"

RESEARCH EXPERIENCE

- Design of integrated interface circuits for MEMS contact-less sensors (p/n polysilicon thermopiles, TMOS)
- Design of integrated temperature-to-digital converter systems
- Design of high efficiency inverting buck-boost converters
- Design of resonant converters for wireless charging applications