



Valentina Bello

Curriculum Vitae

Short Biography and General Information

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address
Date and place of birth April 24th 1994, 15057 Tortona (AL), Italy
Nationality Italian
Website <https://labeo.unipv.it/wordpress/people/valentina-bello/>
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WoS JBR-9842-2023
ResearcherID

Present Position

August 2023 – now **Assistant Professor (Italian RTDa)**. SSD: ING-INF/07 Misure elettriche ed elettroniche. Laboratory of ElectroOptics, Department of Electrical, Computer and Biomedical Engineering, University of Pavia, Pavia, Italy

Academic experience

- October 2024 – November 2024 **Visiting Scholar** at 3D Optical System group (lead by Prof. George Barbasathis), Department of Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts, United States of America
- May 2023 **Visiting Lecturer.** Teaching of the short course titled " *Optofluidic sensing technologies: innovative detection techniques and smart solutions for real world applications*" at SPIM (Sciences Physiques pour l'Ingénieur et Microtechniques) Doctoral School of the University of Bourgogne Franche-Comté, Besançon, France, within the Erasmus+ EU Teaching Mobility program
- October 2021 – July 2023 **Postdoctoral Research Fellow.** Laboratory of ElectroOptics, Department of Electrical, Computer and Biomedical Engineering, University of Pavia, Pavia, Italy
- October 2018 – September 2021 **Ph.D. Candidate** in Electronics, Computer Science and Electrical Engineering. Laboratory of ElectroOptics, University of Pavia, Pavia, Italy
- March 2019 – August 2019 **Visiting Ph.D. Student.** Nanometer Scale Engineering Laboratory, Department of Mechanical Engineering, Photonics Center - Boston University, Boston, Massachusetts, United States of America. Scientific research on the characterization of NEMS (nano electro-mechanical systems) by means of laser interferometry
- March 2018 – August 2018 **Visiting Thesis Student** with Erasmus+Traineeship scholarship. MeBioS-Biosensor Group, KU Leuven, Leuven, Belgium. Research activity for the master thesis on the development of an innovative fiber optic biosensor based on surface plasmon resonance

Education

- October 2018 – September 2021 **Doctor of Philosophy (Ph.D.)** in Electronics, Computer Science and Electrical Engineering. Laboratory of ElectroOptics, University of Pavia, Pavia, Italy - Academic tutor: Prof. Sabina Merlo - Dissertation title: " *Smart micro-opto-fluidic sensing platforms for contactless chemical and biological analyses*" - Final evaluation: Excellent, April 8th 2022
- 2016 – 2018 **Master of Science** in Electronic Engineering (track: Photonics), University of Pavia, Pavia, Italy, Final grade: 110/110 *cum Laude*, September 25th 2018
- 2013 – 2016 **Bachelor of Science** in Bioengineering, University of Pavia, Pavia, Italy, Final grade: 105/110, September 20th 2016
- 2008 – 2013 **High School Diploma**, Liceo Giuseppe Peano, Tortona (AL), Italy, Final grade: 100/100, Track: Scientifico PNI (Piano Nazionale Informatica) - July 2013

Ph.D. Dissertation

Title **Smart micro-opto-fluidic sensing platforms for contactless chemical and biological analyses**

Abstract The main goal of this Ph.D. dissertation was the development of smart sensing platforms to analyze the optical properties of fluids for chemical and biological applications, exploiting label free, remote, contactless and non-invasive techniques. The solutions investigated are based on the use of well established opto-electronic components, traditionally developed for telecom application. in the visible and near infrared optical regions. Part of the research activity was carried on in the framework on the DSF (Dugutal Smart Fluidics) project founded by Regione Lombardia ("Research and Innovation Hub" POR FESR 2014-2020).

Supervisor Prof. Sabina Merlo, University of Pavia

Master Thesis

Title **Design and implementation of a dual-channel self-referencing fiber optic biosensor based on surface plasmon resonance**

Abstract This thesis is focused on the theoretical investigation, fabrication and experimental testing of dual-channel self-referencing fiber optic surface plasmon resonance biosensors provided with a sensing region and a reference region that can sense refractive index variations of the surrounding medium independently. The sensing region was used to carry out aptamer-based bioassays and high resolution melting assays; the reference region was successfully exploited used to compensate for spurious signal variations, due to temperature and bulk refractive index changes [C4].

Supervisor Prof. Sabina Merlo, University of Pavia

Co-supervisor Prof. Jeroen Lammertyn, KU Leuven

Laboratory Project for Bachelor Graduation Final Exam

Title **Optical readout of biochemical sensors based on glass microfluidic devices**

Supervisor Prof. Sabina Merlo

Computer Skills

Basic **C - HTML - SQL**

Intermediate **ImageJ - Office**

Advanced **MATLAB code**

Language Skills

- Italian** Native proficiency
English Full professional proficiency
French Elementary proficiency
Chinese Elementary proficiency

Language Certifications [Cambridge - ESOL]

- March 2012 **FCE (First Certificate in English)** - Level B2 *Grade: C*
June 2010 **PET (Preliminary English Test)** - Level B1 *Pass with merit*

Scientific Research Activities within National and International Collaborations

- December 2023 – November 2025 **Team member** of the PRIN 2022 PNRR "MUSKETEER" project: "Milk adulteration detection using SpeckIE pattern and machine Learning". Project number: P2022FX228-002. Funded by the European Union - Next generation EU
- January 2023 – December 2025 **Team member** of the ACOUSTIC project: "Sviluppo di circuiti integrati, Algoritmi e tecnologie meccanico-acustiche per trasformare superfici generiche in elementi acustici radianti ad altissima efficienza". Project number: F/310010/01/X56. Funded by the Italian Ministry of Economic Development (MiSE)
- October 2022 – September 2023 **Research fellow** and **scientific collaborator** of the Fluid-o-Tech company (Corsico, Milano, Italy). Research contract titled "Studio di tecniche ottiche innovative per il riconoscimento di fluidi"
- October 2021 – September 2022 **Research fellow** and **scientific collaborator** of the project DSF: "Fluidica Digitale per le Scienze della Vita – DSF (Digital Smart Fluidics)", Call "Hub Ricerca e Innovazione" of Lombardia Region. Project ID: 1175234. Co-founded by POR FESR 2014-2020 INNOVAZIONE E COMPETITIVITÀ. Work-packages: WP3.4: Monitoraggio e controllo per terapie infusionali [NAD, CHEM-TDD, RIA] (NAD. Messa in rete e controllo) – WP3.8: Monitoraggio e controllo per terapie infusionali [NAD, CHEM-TDD, RIA] (CHEM. Realizzazione prototipo fisico) – WP3.13: Monitoraggio e controllo per terapie infusionali [NAD, CHEM-TDD, RIA] (RIA. Realizzazione prototipo fisico) – WP4.4b: Attività di sostenibilità - Lab@UniPV
- March 2019 – August 2019 **Visiting research fellow** at Nanometer Scale Engineering Laboratory, Photonics Center, Boston University (Boston, MA, USA)
- March 2018 – August 2018 **Visiting thesis student** at MeBioS-Biosensor Group, KU Leuven (Leuven Belgium)

Teaching and Academic Activities

- June 2024 – **Associate Editor** for the journal IEEE Transactions on Instrumentation and Measurements (IEEE TIM).
now
- July 17th **Member of the examination board** for the Ph.D. Degree in Information
2024 Technology Engineering at Politecnico di Milano.
- July 17th **Invited seminar** at Politecnico di Milano. Title: "LaBEO in the spotlight:
2024 cutting-edge research in opto-electronic measurements and photonic sensing for a brilliant future".
- May 2024 **Co-chair** of the session "Instrumentation and Measurement in Agriculture,
Food Production and Food Safety" at IEEE International Instrumentation and Measurement Technology Conference - I2MTC 2024, May 19th-23rd 2024, Glasgow, UK.
- February **Member of the Organization Committee** (Women in Engineering Panel
2024 – now Co-Chair) and of International Scientific Committee and Steering Committee of 2024 IEEE International Conference on Metrology for eXtended Reality, Artificial Intelligence and Neural Engineering IEEE MetroXRINE 2024.
- January 2024 **Guest Editor** of the special issues titled "Advances in Optofluidic Sensing for
– now Medical, Biological and Chemical Applications" on the international scientific peer-reviewed journals *MDPI Photonics*.
- January 2024 **IMS Mentorship Program**. Participation as mentee. Mentor: Prof. Nicola
– now Moccaldi, University of Naples Federico II.
- A.Y. **Instructor Professor** for the course of "Theranostic Photonics", for the
2023/2024 – Ph.D. School in Electronic, Computer Science and Electrical Engineering, University of Pavia, Pavia, Italy.
- A.Y. **Instructor Professor** for the course of "Microsensors, Integrated Microsys-
2023/2024 – tems and MEMS", for the Master Degree courses of Bioengineering, Electronic Engineering, Electrical Engineering and Computer Engineering, Department of Electrical, Computer and Biomedical Engineering, University of Pavia, Pavia, Italy.
- A.Y. **Instructor Professor** for the course of "Elettronica" - module of "Electronics
2023/2024 – and Material Technology Applied to Medicine", and "Sistemi di Elaborazione delle Informazioni" - module of "Statistics and Healthcare Management" for the Bachelor Degree course of Cardiocirculatory and Cardiovascular Perfusion Techniques, Department of Clinical-Surgical, Diagnostic, and Pediatric Sciences, University of Pavia, Pavia, Italy.
- October 2023 **Tutor/co-tutor** of 2 Ph.D. students enrolled in the Ph.D. School in Electronic,
– now Computer Science and Electrical Engineering, University of Pavia, Pavia, Italy.
- September **Member of the Technical Committee** of the Italian Conference on Optics
2023 – now and Photonics (ICOP).

- February 2022 – now **Reviewer** for international scientific peer-reviewed journals in the field of instrumentation and measurements and (above all, *Sensors* and *IEEE Transactions on Instrumentation and Measurement*).
- A.Y. 2020/2021 – now **Short-term lecturer** ("seminari didattici") for the courses of "Biomedical Optoelectronics" and "Biophotonics", Department of Electrical, Computer and Biomedical Engineering, University of Pavia, Pavia, Italy
- March 2021 – June 2021 **Academic tutor** for the course of "Electronics 1" for students with DSA learning disorders, Department of Electrical, Computer and Biomedical Engineering, University of Pavia, Pavia, Italy
- June 2020 – December 2021 **International Student Ambassador** for the Master Degree in Electronic Engineering, University of Pavia, Pavia, Italy
- March 2020 – July 2023 **Academic tutor** for the class of "Electronics 1", Department of Electrical, Computer and Biomedical Engineering, University of Pavia, Pavia, Italy
- October 2018 – now **Supervisor** of 3 bachelor theses and 10 master theses of students of the Degree courses of Biomedical Engineering and Electronic Engineering, Department of Electrical, Computer and Biomedical Engineering, University of Pavia, Pavia, Italy
- May 2017 **Member of the commission for Gestione dell'Assicurazione della Qualità (AQ)** for the Master Degree in Electronic Engineering for the Academic Year 2016/2017, University of Pavia, Pavia, Italy

Licenses

- January 2020 **Esame di Stato per l'abilitazione alla professione di ingegnere** - Ordine degli Ingegneri della Provincia di Pavia
- January 2018 **TSL (Tecnico della Sicurezza Laser)** - CEI and UNI laser safety standard

Awards and Grants

- August 2024 **IEEE WIE Travel Grant**. Travel grant awarded by IEEE Women in Engineering to present a work and organize a WIE panel at 2024 IEEE International Conference on Metrology for eXtended Reality, Artificial Intelligence and Neural Engineering IEEE MetroXRINE 2024
- March 2023 **Best Doctoral Thesis in Applied Photonics 2022**. Award given by IEEE Photonics Society - Italy Chapter for the best Ph.D. dissertation discussed in an Italian University

- July 2021 **2021 IEEE Photonics Society Graduate Student Scholarship** - Award established by IEEE Photonics Society to support graduate students giving excellent contributions in the field of photonics research
- September 2020 **Best Oral Award** - First classified for the best oral presentation at ICOP2020 conference. Award offered by IEEE and SIOF
- May 2020 **Student Travel Grant and Award** for IEEE I2MTC 2020 International Instrumentation and Measurement Technology Conference
- December 2019 **Best Contribution Award** for the paper "*In vivo recognition of vascular structures by near infra-red transillumination*" presented at ECSA-6 - 6th International Electronic Conference on Sensors and Applications
- November 2018 **Best Poster Award** for the poster "*Near-infrared transillumination of biological tissues for functional imaging*" given by IEEE Student Branch of Pavia and PESB Pavia Engineering Student Branch

Associations and Organizations

Scientific Associations

- July 2024 – now **Secretary of IEEE Professional Communication Society Italy Chapter**
- 2019 – now **Member** of the Italian Association **GMEE** (Gruppo Misure Elettriche ed Elettroniche)
- December 2019 – July 2023 **Chair of IEEE Student Branch** of the University of Pavia, Geo-code: SBA10871 (Europe - Region 8)
- November 2017 – July 2023 **IEEE Women in Engineering Student Branch Affinity Group** of the *University of Pavia*, Geo-code: SBA10871 (Europe - Region 8)
 - **Founder** (official date: November 14th 2017)
 - **Chair** (official date: November 14th 2017)
- 2016 – now **Member of IEEE** (Institute of Electrical and Electronics Engineers). Member number: 94102840. Grade: *Member* - Member of: *IEEE Instrumentation and Measurement Society, IEEE Photonics Society, IEEE Women in Engineering, IEEE Young Professionals, and IEEE Professional Communication Society.*

Cultural Associations

- 2009 – 2013 **Editor** for **Agorà**, school newspaper of Liceo G. Peano, Tortona (AL), Italy

Voluntary Associations

- 2013 – 2014 **Volunteer** for the project *Palestra Aperta - Giochi e attività sportive con ragazzi disabili*, Tortona (AL), Italy

2011 – 2012 **Member of ENPA** (Ente Nazionale Protezione Animali) and **volunteer** at the Municipal Shelter of Tortona (AL), Italy

Scientific Publications

International Scientific Journals with Peer-Review Process

- [J1] G. Rigamonti, M. Guardamagna, V. Bello, S. Marconi, F. Auricchio, S. Merlo, " *Flow-through micro-capillary refractive index sensor based on T/R spectral shift monitoring*", **Biomedical Optics Express**, Vol. 8, No. 10, pp. 4438-4453 (2017). DOI: 10.1364/BOE.8.004438. Journal IF: 3.482
- [J2] G. Rigamonti, V. Bello, S. Merlo, " *Spectral optical readout of rectangular-miniature hollow glass tubing for refractive index sensing*", **Sensors**, Vol. 18, No. 2, Article No. 603, pp. 1-13 (2018). DOI: 10.3390/s.18020603. Journal IF: 3.031
- [J3] S. Merlo, V. Bello, E. Bodo, S. Pizzurro, " *A VCSEL-based NIR transillumination system for morpho-functional imaging*", **Sensors**, Vol. 19, No. 4, Article No. 851, pp. 1-12 (2019). DOI: 10.3390/s19040851. Journal IF: 3.275
- [J4] V. Bello, S. Merlo, " *Micro-opto-fluidic sensing platform for analytes identification based on absorption properties in the NIR region*", **Analytical and Bioanalytical Chemistry**, Vol. 412, No. 14, pp. 3351-3358 (2020). DOI: 0.1007/s00216-019-02375-z. Journal IF: 4.157
- [J5] V. Bello, A. Simoni, S. Merlo, " *Spectral phase shift interferometry for refractive 2 index monitoring in micro-capillaries*", **Sensors**, Vol. 19, No. 4, Article No. 1043, pp. 1-12 (2020). DOI: 10.3390/s20041043. Journal IF: 3.576
- [J6] V. Bello, E. Bodo, S. Merlo, " *Near Infrared Absorption Spectroscopy in Microfluidic Devices with Selectable Pathlength*", **IEEE/OSA Journal of Lightwave Technology**, Vol. 39, No. 2, pp. 4193-4200 (2021). DOI: 10.1109/JLT.2020.3040488. Journal IF: 4.142
- [J7] V. Bello, A. Simoni, S. Merlo, " *Spectral Interferometric Detection of NIR Optical Resonances of Rectangular Refractive Index Sensing*", **IEEE Transactions on Instrumentation and Measurement**, Vol. 70, Art. No. 7002609, pp.1-9 (2021). DOI: 10.1109/TIM.2021.3055832. Journal IF: 5.332
- [J8] E. Bodo, V. Bello, V. Asole, S. Merlo, " *Multiwavelength fluidic sensing of water-based solutions in a channel microslide with SWIR LEDs*", **IEEE Transactions on Instrumentation and Measurement**, Vol. 71, Art. No. 7000210, pp.1-10 (2022). DOI: 10.1109/TIM.2021.3132090. Journal IF: 5.332

- [J9] E. Bodo, S. Merlo, V. Bello, "Spectral Fingerprint Investigation in the near Infra-Red to Distinguish Harmful Ethylene Glycol from Isopropanol in a Microchannel", **Sensors** (special issue Selected Papers from the 8th International Electronic Conference on Sensors and Applications), Vol. 22, No. 2, Article no. 459 (2022). DOI: 10.3390/s22020459. Journal IF: 3.847
- [J10] V. Bello, E. Bodo, F. Nicollini, R. Calvaruso, S. Merlo, "Refractive Index Sensing in Microfluidic Channels with Integrated Reflectors by Measuring Light Spot Displacement", **IEEE Transactions on Instrumentation and Measurement**, Vol. 71, Art. No. 7003308, pp. 1-8 (2022). DOI: 10.1109/TIM.2022.3168941. Journal IF: 5.332
- [J11] V. Bello, W. Vandezande, D. Daems, J. Lammertyn, "Design and Implementation of a Dual-Region Self-Referencing Fiber-Optic Surface Plasmon Resonance Biosensor", **ACS Sensors**, Vol. 7, No. 11, pp. 3360–3368 (2022). DOI: 10.1021/acssensors.2c01362. Journal IF: 9.618
- [J12] V. Bello, E. Bodo, S. Merlo, "Optical Identification of Parenteral Nutrition Solutions Exploiting Refractive Index Sensing", **Sensors**, Vol. 22, No. 18, Article no. 6815 (2022). DOI: 10.3390/s22186815. Journal IF: 3.847
- [J13] V. Bello, E. Bodo, S. Merlo, "Speckle Pattern Acquisition and Statistical Processing for Analysis of Turbid Liquids", **IEEE Transactions on Instrumentation and Measurement**, Vol. 72, Art. no. 7005004, pp. 1-4 (2023). DOI: 10.1109/TIM.2023.3289543. Journal IF: 5.6
- [J14] C. Anelli, V. Pellicorio, V. Bello, S. Merlo, "Label- and Reagent-Free Optical Sensor for Absorption-Based Detection of Urea Concentration in Water Solutions", **Sensors**, Vol. 24, No. 9, Art. no. 2754, pp. 1-13 (2023). DOI: 10.3390/s24092754. Journal IF: 3.4

International Conferences with Proceedings

- [C1] S. Merlo, V. Bello, E. Bodo, R. Catalano, S. Pizzurro, M. Rossi Borghe-
sano, "NIR transillumination system for in vivo functional imaging", DOI:
10.1117/12.2520116, **SPIE Optics + Optoelectronics - Optical Sensors
2019**, April 1st-4th, 2019, Prague, Czech Republic. Published in **SPIE
Proceedings**, Vol. 11028, Article no. 1102810. DOI: 10.1117/12.2520116
- [C2] V. Bello, E. Bodo, S. Pizzurro, S. Merlo, "Near-infrared transillumination of
in vivo biological tissues for functional imaging", ISBN 978-1-7281-3837-4,
DOI: 10.1109/BioPhotonics.2019.8896750, **4th International Conference
on Biophotonics**, September 15th-18th, 2019, Taipei, Taiwan. ISBN 978-1-
7281-3837-4. DOI: 10.1109/BioPhotonics.2019.8896750

- [C3] V. Bello, E. Bodo, S. Pizzurro, S. Merlo, " *In vivo recognition of vascular structures by near infra-red transillumination*", **6th International Electronic Conference on Sensors and Applications**, November 15th-30th 2019. Published in **Proceedings**, Vol. 42, No. 1, Article No. 24 (2020). DOI: 10.3390/ecsa-6-06639. Presentation by Valentina Bello
- [C4] V. Bello, S. Merlo, " *Phase detection of the NIR optical resonances of rectangular glass micro-capillaries*", **I2MTC 2020 IEEE International Instrumentation and Measurement Technology Conference**, May 25th-28th 2020, Dubrovnik, Croatia. DOI: 10.1109/I2MTC43012.2020.912963. Presentation by Valentina Bello
- [C5] V. Bello, A. B. Ari, M. S. Hanay, K. L. Ekinici, " *Measurement and characterization of nano-electro-mechanical systems using laser interferometry*", **I2MTC 2020 IEEE International Instrumentation and Measurement Technology Conference**, May 25th-28th 2020, Dubrovnik, Croatia. DOI: 10.1109/I2MTC43012.2020.9129282. Presentation by Valentina Bello
- [C6] V. Bello, E. Bodo, " *A NIR-spectroscopy-based approach for detection of fluids in rectangular glass micro-capillaries*", **7th International Electronic Conference on Sensors and Applications**, November 15th-30th 2020. Published in **Engineering Proceedings**, Vol. 2, No. 1, Article no. 43 (2020). DOI: 10.3390/ecsa-7-08250. Presentation by Valentina Bello
- [C7] V. Bello, E. Bodo, S. Merlo, " *Micro-opto-fluidic platform for spectroscopic identification of water-based fluids*", **SPIE Optics + Optoelectronics Digital Forum 2021**, April 19th-23rd 2021. Published in **SPIE Proceedings Optical Sensors 2021**, Vol. 11772, 117720C. DOI: 10.1117/12.2589141
- [C8] V. Bello, E. Bodo, S. Merlo, " *Quality Control of Ethanol-Based Hand Sanitizer Gels in Micro-Opto-Fluidic Devices*", **CLEO 2021 Virtual Conference**, Paper no. JTh3A.87. DOI:10.1364/CLEO_AT.2021.JTh3A.87. Presentation by Valentina Bello
- [C9] E. Bodo, V. Bello, " *Microfluidic Devices with Selectable Optical Pathlength for Quality Control of Alcoholic Solutions*", **8th International Electronic Conference on Sensors and Applications**, November 1st-15th 2021. Published in **Engineering Proceedings**, Vol. 10, No. 1, Article no. 13 (2021). DOI: 10.3390/ecsa-8-11286
- [C10] E. Bodo, S. Merlo, V. Bello, " *Refractive Index Sensing in a Disposable Micro-Channel Provided with Integrated Reflectors Based on Laser Beam Shift*", **9th International Electronic Conference on Sensors and Applications**, November 1st-15th 2022. Published in **Engineering Proceedings**, Vol. 27, No. 1, Article no. 49 (2022). DOI: 10.3390/ecsa-9-13195

- [C11] [V. Bello](#), E. Bodo, S. Merlo, "A Smart Optofluidic Sensing Platform Ensuring Patients' Safety during Parenteral Nutrition Administration", **2023 Conference on Lasers and Electro-Optics Europe and European Quantum Electronics Conference (CLEO/Europe-EQEC)**, June 26th-30th 2023, Munich, Germany. DOI: 10.1109/CLEO/Europe-EQEC57999.2023.10232403. Presentation by Valentina Bello.
- [C12] [V. Bello](#), W. Vandezande, D. Daems, J. Lammertyn, "A Dual-Region Fiber-Optic SPR Biosensor with Self-Referencing Compensation of Bulk Refractive Index and Temperature Effects", **2023 Conference on Lasers and Electro-Optics Europe and European Quantum Electronics Conference (CLEO/Europe-EQEC)**, June 26th-30th 2023, Munich, Germany. DOI: 10.1109/CLEO/Europe-EQEC57999.2023.10231532. Presentation by Valentina Bello.
- [C13] E. Bodo, [V. Bello](#), S. Merlo, "Towards the development of a SWIR-LEDs based optoelectronic system for urea monitoring during haemodialytic therapy", **2023 Conference on Lasers and Electro-Optics Europe and European Quantum Electronics Conference (CLEO/Europe-EQEC)**, June 26th-30th 2023, Munich, Germany. DOI: 10.1109/CLEO/Europe-EQEC57999.2023.10232293.
- [C13] [V. Bello](#), M. Fiocchi, I. Bassi, E. Figus, S. Merlo, "Speckle Pattern Imaging for Recognition of Milk Dilutions", **IEEE International Instrumentation and Measurement Technology Conference I2MTC 2024**, May 20th-23rd 2024, Glasgow, UK. Presentation by Valentina Bello.
- [C14] L. Ciccarelli, E. Bodo, [V. Bello](#), S. Merlo, S. Morganti, "Computational modelling of piezoelectric actuators for surface sound generation", **9th European Congress on Computational Methods in Applied Sciences and Engineering- ECCOMAS Congress 2024**, June 3rd-6th 2024, Lisbon, Portugal. Accepted for presentation.
- [C15] [V. Bello](#), Irene Bassi and Matteo Fiocchi, Cristina Nuzzi, Paolo Bellasi, Luca Cattaneo, Simone Pasinetti, "Milky WAI: Unlocking the Secrets of Raw Cow Milk Through Speckle Pattern and AI", **2024 IEEE International Conference on Metrology for eXtended Reality, Artificial Intelligence and Neural Engineering IEEE MetroXRINE 2024**, October 21st-23rd 2024, St. Albans, UK. Presentation by Valentina Bello.

International Conferences without Proceedings

- [W1] [V. Bello](#), G. Rigamonti, S. Merlo, "Innovative micro-fluidic sensing platform based on glass rectangular micro-capillaries for refractive index detection", **EBS 2019 2nd European Biosensor Symposium 2019**, February 18th-21st 2019, Firenze, Italy. Presentation by Valentina Bello

- [W2] V. Bello, W. Vandezande, D. Daems, J. Lammertyn, " *Theoretical investigation, fabrication and experimental testing of dual-channel self-referencing fiber-optic biosensors for biological interaction analysis. Presentation by Valentina Bello*", **DIATECH 2020**, January 27th-29th 2020, Leuven, Belgium
- [W3] E. Bodo, V. Bello, " *Artificial nutrition monitoring through an optofluidic platform*", **10th International Electronic Conference on Sensors and Applications**, November 15th-30th 2023

National Conferences

- [N1] V. Bello, " *Spectral optical readout of rectangular glass micro-capillaries for refractive index sensing*", **IEEE RTSI 2017 3rd International Forum on Research and Technologies for Society and Industry**, September 11th-13th 2017, Modena, Italy. Presentation by Valentina Bello
- [N2] S. Merlo, V. Bello, G. Rigamonti, " *Rifrattometro microfluidico realizzato tramite misure riflettometriche su micro-tubi in vetro a sezione rettangolare*", **XXXIV Congresso Nazionale di Misure Elettriche ed Elettroniche**, September 13th-16th 2017, Modena, Italy
- [N3] S. Merlo, V. Bello, E. Bodo, S. Pizzurro, " *Valutazione di informazioni morfo-funzionali in tessuti biologici in vivo mediante transilluminazione infrarossa*", III Forum Nazionale delle Misure, **XXXVI Congresso Nazionale di Misure Elettriche ed Elettroniche**, September 12th-14th, 2019, Perugia, Italy
- [N4] V. Bello, G. Rigamonti, S. Merlo, " *Micro-capillary refractive index sensor based on monitoring of T/R ratio spectral shift*", **NANO-DAY IV**, December 11th-14th 2019, Milano, Italy. Presentation by Valentina Bello
- [N5] V. Bello, E. Bodo, S. Pizzurro, " *Morpho-functional in vivo imaging of biological tissues based on NIR transillumination*", **ICOP 2020 Italian Conference on Optics and Photonics**, September 9th-11th 2020, Parma, Italy. Presentation by Valentina Bello
- [N6] V. Bello, A. Simoni, " *Spectral interferometry-based detection of optical resonances of micro-capillaries*", **ICOP 2020 Italian Conference on Optics and Photonics**, September 9th-11th 2020, Parma, Italy. Presentation by Valentina Bello
- [N7] V. Bello, E. Bodo, S. Merlo " *Interferometria spettrale per rivelazione di risonanze ottiche e misure di indice di rifrazione ad alta sensibilità*", **V Forum Nazionale delle Misure**, September 16th-18th 2021, Giardini Naxos, Italy. Presentation by Valentina Bello
- [N8] V. Bello, E. Bodo, S. Merlo, " *Rilevazione di fluidi senza contatto mediante spettroscopia ad assorbimento nel vicino infrarosso in dispositivi micro-fluidici multipasso*", **V Forum Nazionale delle Misure**, September 16th-18th 2021, Giardini Naxos, Italy

- [N9] V. Bello, E. Bodo, S. Merlo, " *Artificial nutrition at home: monitoring the compliance of the therapy with a smart opto-fluidic sensor*", **Workshop Ricerca e Nanomedicina**, June 14th 2022, Pavia, Italy. Presentation by Valentina Bello
- [N10] E. Bodo, V. Bello S. Merlo, " *Investigation of an optoelectronic system using SWIR-LEDs for urea monitoring during haemodialytic therapy*", **VII Forum Nazionale delle Misure**, September 13th-15th 2023, Bologna, Italy
- [N10] E. Bodo, V. Bello, S. Merlo, " *Investigation of an optoelectronic system using SWIR-LEDs for urea monitoring during haemodialytic therapy*", **VII Forum Nazionale delle Misure**, September 13th-15th 2023, Bologna, Italy
- [N11] I. Bassi, V. Bello, E. Bodo, S. Merlo, " *Development of a low-cost opto-fluidic platform for refractive index sensing based on glass micro-capillaries*", **ICOP 2024 Italian Conference on Optics and Photonics**, June 17th-19th 2024, Florence Italy.
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Yours Faithfully,

Valentina Bello