



University
of Basel

Department of
Biomedical Engineering

IN COLLABORATION WITH

Biosensors and
Biomolecular Electronics
Springer Nature

NEXT-GENERATION BIOSENSORS FOR LIFE SCIENCES

International Workshop on Biosensors and Bioelectronics



18 September 2026, 9:00-17:00 (or ONLINE)



Department of Biomedical Engineering



University of Basel · Allschwil



Andrew DeMello
ETH Zürich



Eric Bakker
University of Geneva



Sebastian Kruss
Bochum University



Vitalijs Zubkovs
CSEM



Emily Abigail Schafer
EPFL Lausanne



Bringing together leading researchers in
optical, electrochemical and microfluidic sensing.

Organised by Valentina Basoli and Stefano Cinti

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International Workshop on Biosensors and Bioelectronics

Programme

09:00-09:10 - **Valentina Basoli** (*Uni. Basel*), **Stefano Cinti** (*Uni. Naples*)

Welcome and opening remarks

09:00-09:10 - **Sara Ceci** (*BMC, Springer Nature*)

Presentation of "Biosensors and Biomolecular Electronics"

09:20-09:50 - **Eric Bakker** (*Uni. Geneva*)

Modern developments with membrane electrodes for ion sensing

09:50-10:20 - **Andrew deMello** (*ETH Zurich*)

From Images to Mechanics: Advanced Cytometry for Disease

10:20-10:40 **Coffee break**

10:40-11:10 - **Sebastian Kruss** (*Bochum University*)

Near infrared fluorescent nanosensors for biomedical diagnostics

11:10-11:40 - **Vitalijs Zubkovs** (*CSEM*)

Embedded Calibration Markers for Lateral Flow Assay Data Quantification using Smartphone in Point-of-Care Diagnostics

11:40-11:55 - **Panagiota Kalligofyri** (*Selected Oral*)

Fully 3D-Printed Electrochemical Biosensors for Liquid Biopsy and Beyond

12:00-13:00 **Lunch break**

13:00-13:45

Poster & Lab tour

13:45-14:15 - **Emily Schafer** (*EPFL*)

Title to TBD

14:15-14:30 - **Antonia Perju** (*Selected Oral*)

Beyond the Proof of Concept: Why Most Biosensors Do Not Leave the Laboratory

14:30-14:45 - **Arpana Parihar** (*Selected Oral*)

Ultrasensitive Label-Free Detection of Carcinoembryonic Antigen Using a Facile 2D Nanomaterial-Gold Nanocomposite-based Aptasensor: Toward Early Breast Cancer Diagnosis

14:45-15:00 - **Anasua Mukhopadhyay** (*Selected Oral*)

Single-Molecule Sensing of Proteins and Tau Oligomers Using a Pneumolysin Nanopore

15:00-15:20 **Coffee break**

15:20-15:35 - **Guy Elisha** (*Selected Oral*)

Tarsal bristle mechanosensors mediate active tactile sensing and obstacle detection in *Drosophila*

15:35-15:50 - **Mehmet Ozsoz** (*Selected Oral*)

CRISPR-Based Electrochemical Biosensors, and Aptamer Applications

15:50-16:05 - **Cosimo Loffreda** (*Selected Oral*)

Sterilization of Iridium Oxide-Modified Paper and Polyester pH Sensors: Effects on Analytical Performance and Cytocompatibility

16:05-16:20 - **Chairpersons, Plenary Speakers**

Round-table discussion: Future directions in next-generation biosensors

16:20-16:30

Closing remarks