The 2nd International Conference on Bioengineering

ABRIDGED PROGRAM

*Please note that the following schedule is subject to change **

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(Check in from 8:00 AM)
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<tr><td></td><td>Lunch Break and Poster Session A</td><td>Lunch Break and Poster Session B</td><td>Lunch Break</td><td></td></tr>
<tr><td rowspan="4">Afternoon</td><td rowspan="2">Symposia 3: BioInnovation to Commercialization</td><td>Plenary Talk: Prof. Dr.Dame Molly Stevens</td><td rowspan="2">S1. Regenerative Engineering</td><td></td></tr>
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<tr><td>Coffee Break and Poster session A</td><td rowspan="2">Conference Dinner
(20:00-9:30 PM)</td><td rowspan="2">Awards & Closing Ceremony</td><td></td></tr>
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BIOENG 2026 – Detailed Program

Please note that all times indicated in the detailed program are in CET (Central European Time), corresponding to the local time in Barcelona, Spain.

Day 1 – Tuesday, 10 November 2026

08:00-09:00	**Registration & Check-in**	
Main Auditorium		
09:00-09:20	**Opening Ceremony**	
09:20-10:00	**Prof. Dr. Anthony Giuseppi-Elie** Plenary Speaker	**Bioactive Electroconductive Hydrogels: SMART Materials in Bioelectronics, Biosensors and Biochips**
Main Auditorium **Symposia 1: Perspectives on Aging** **Chaired by Prof. Dr. Anthony Guiseppi-Elie, *EiC***		
10:00-10:25	**Prof. Dr. Ennio Tasciotti** Invited Speaker	**Engineering of biomimetic nanomaterials to guide regenerative processes**
10:25-10:50	**Prof. Dr. Stelios T. Andreadis** Invited Speaker	**Nanog mediated partial reprogramming reverses senescence, restores metabolism and improves the function of aged skeletal muscle**
10:50-11:30	**Coffee Break**	

Day 1 – Tuesday, 10 November 2026

Main Auditorium **Symposia 2: Wear tech for Sports and Health** **Chaired by Prof. Dr. Anthony Guiseppi-Elie, *EiC***		
11:30-12:00	**Prof. Dr. Wei Gao** Keynote Speaker	**Body-Interfaced Biosensors**
12:00-12:30	**Prof. Dr. Franz Konstantin Fuss** Keynote Speaker	**Wearable Technology in Medicine and Sports**
12:30-12:55	**Prof. Dr. Dana Al-Sulaiman** Invited Speaker	**Materials-Driven Engineering of Integrated Wearable Microneedle Biosensors for Precision Health and Sports Applications**
12:55-14:30	**Lunch Break and Poster Session A**	
Location: Main Auditorium **Symposia 3: BioInnovation to Commercialization** **Chaired by Prof. Dr. Anthony Guiseppi-Elie, *EiC***		
14:30-14:55	**Dr. Luciano Sappia** Invited Speaker	**From Bioinnovation to Adoption: A Practical Translational Pathway**
14:55-15:20	**Dr. Claudio Parolo** Invited Speaker	**From Clinical Need to Commercialization: Building Translational Pathways for Point-of-Care Diagnostics**
15:20-15:45	**Prof. Dr. Timothy Tan** Invited Speaker	**Clinically Effective Scar Treatment via a Gene Silencing siRNA Nanoplex Platform Technology: From Animal and Clinical studies to Commercialization**
15:45-16:10	**Dr. Sophia Bryan** Invited Speaker	**Converging Frontiers: Bioengineering and Artificial Intelligence for Global Health Futures**
16:10-16:35	**Dr. Marco Pedretti** Journal Bioengineering Presentation	**Academic Publishing in an Era of AI**
16:35-17:00	**Coffee Break & Poster Session A**	

Day 1 – Tuesday, 10 November 2026

Main Auditorium **Session 5: Biomechanics and Sports Medicine** **Chaired by Prof. Dr. Franz Konstantin Fuss**		
17:00-17:30	**Prof. Dr. Franz Konstantin Fuss** Keynote Speaker	**Classification and performance ranking of artificial intervertebral discs based on kinematics and statics**
17:30-17:45	**Tizian Scharl** Oral Presenter	**Biomechanical Analysis of Handball Movements: Sex-Specific Differences and Evaluation of Pivot Point Estimation Techniques**
17:45-18:00	**Lena Malin Baeumker** Oral Presenter	**Smart 3D-printed bouldering hold with integrated pressure sensors produced in a single manufacturing process for monitoring and optimizing the climbing process**
18:00-18:15	**Niko Nagengast** Oral Presenter	**A cyber-physical framework for the computational engineering workflow to design orthosis components**
18:15-18:30	**Cezary Wasilczyk** Oral Presenter	**Long-term follow-up after nanosurgery and bioengineering treatment for anterior cruciate ligament tears**

Day 2 – Wednesday, 11 November 2026

08:30-09:00	**Registration & Check-in**	
Main Auditorium **Session 4: Biomedical Engineering and Biomaterials** **Chaired by Prof. Dr. Lin Huang**		
09:00-09:30	**Prof. Dr. Louis Andrew Lyon** Keynote Speaker	**Soft Colloidal Glasses and Pastes as a Self-Healing Biomaterial Platform**
09:30-09:45	**Tomasz Urbaniak** Oral Presenter	**Design of Covalently Stabilized Polyelectrolyte Multilayers on Electrospun PLGA Scaffolds for Tunable Protein Release**
09:45-10:00	**Laurie Salvadora Van de Weerd** Oral Presenter	**Intraoperative hyperspectral imaging and deep learning for vulvar cancer detection**
10:00-10:15	**Tito Bassani** Oral Presenter	**Assessing the Potential of Deep Learning to Infer Sagittal Spinal Alignment from Coronal Radiographs**
10:15-10:30	**Shambhavi Pandey** Oral Presenter	**Protease-Activated Lipid Nanoparticles Enable Tumor-Selective Transfection through Reversible Surface Masking**
10:30-11:00	**Coffee Break and Poster Session B**	
Main Auditorium **Session 4: Biomedical Engineering and Biomaterials** **Chaired by Prof. Dr. Minqiang Wang**		
11:00-11:25	**Prof. Dr. Carmen Mayorga** Invited Speaker	**Advanced Control of Miniaturized Robots in Real-World Environments for Biomedical Applications**
11:25-11:40	**Omar Ormachea** Oral Presenter	**Development and Validation of a Low-Cost 3D-Printed Smartphone-Based Laser Fluorescence Microscope for Tuberculosis Diagnosis**
11:40-11:55	**Zahra Rajabimashhadi** Oral Presenter	**A Thermosensitive Carbon Dot-Loaded Chitosan/Pluronic Hydrogel: Hydrothermal Synthesis and Physicochemical Characterization for Biomedical Applications**
11:55-12:10	**Haochen Han** Oral Presenter	**Fe Metal-Organic Framework-Derived Heterojunction for Metabolic Diagnosis of Thymic Epithelial Tumors**

12:10-12:25	**Alireza Mohammad Karim** Oral Presenter	**From Quantitative Biophysics to AI-Guided Engineering of Long-Acting Therapeutic Biomaterials**
12:25-12:40	**Zhenqiang Shi** Oral Presenter	**Specific Biomolecular Recognition Toward Bioseparation and Detection**
12:40-14:30	**Lunch Break and Poster Session B**	

Day 2 – Wednesday, 11 November 2026

14:30-15:10	**Prof. Dr. Dame Molly Stevens** **Plenary Speaker**	**Design and Translation of New Biomaterial Platforms to Detect Diseases Earlier and Repair the Body**
Main Auditorium **Session 4: Biomedical Engineering and Biomaterials** **Chaired by Prof. Dr. Carmen Mayorga**		
15:10-15:45	**Alessandro Grattoni** Keynote Speaker	**Biodegradable Nanoporous Intratumoral Seed Enables Safe and Curative Five-Agent Cancer Immunotherapy**
15:45-16:10	**Dr. Daria Podstawczyk** Invited Speaker	**Coaxially Printed Thermoresponsive Hydrogel Microchannels for Adaptive Flow and Transport Regulation**
16:10-16:35	**Prof. Dr. Silviya Petrova Zustiak** Invited Speaker	**Hydrogels and Microgels as Building Blocks of Bioengineered Tissues**
16:35-16:50	**Fanling Meng** Oral Presenter	**Polydiacetylene-based Highly Efficient CT-Raman Cross-scale Imaging**
20:00-21:30	**Conference Dinner**	

Day 3 – Thursday, 12 November 2026

08:30-09:00	**Registration & Check-in**	
09:00-09:40	**Prof. Dr. Sir Cato Laurencin** **Plenary Speaker**	**Regenerative Engineering: Paradigm-Shifts Fundamentally Re-Defining Tissue Regeneration**
09:40-10:05	**Prof. Dr. Gianluca Di Flumeri** Invited Speaker	**Measuring the Driver in the Loop: Bioengineering Challenges for Human-Aware Autonomous Vehicles**
10:05-10:30	**Dr. Mirna Potgieter** Invited Speaker	**Optimising Correction of Craniosynostosis Through Advanced Digital Technologies**
10:30-11:00	**Coffee Break**	
Main Auditorium **Session 3: Biosignal Processing** **Chaired by Prof. Dr. Gianluca Di Flumeri**		
11:00-11:15	**Maria Paz Hospinal Ureta** Oral Presenter	**Artificial Intelligence System for Automated Triage of Visual Field Protocols in Automated Perimetry**
11:15-11:30	**Emil Svoboda** Oral Presenter	**Smartphone-versus-Headset Speech-Feature Pipelines: An Exploratory Concordance Study in Healthy Adults**
11:30-11:45	**Kamran Iqbal** Oral Presenter	**DiT-EMG: Class-Conditioned Diffusion Transformers for High-Fidelity Synthetic Surface Electromyography Generation**
11:45-12:00	**Yiela Saperstein** Oral Presenter	**Machine Learning vs Traditional Risk Scores for Predicting 30-Day In-Hospital Mortality in Upper Gastrointestinal Bleeding**
12:00-12:15	**Chui Ping Ooi** Oral Presenter	**Deep Learning and Explainable AI for ADHD Assessment Using EEG and ECG Signals: Current Advances and Future Directions**

Day 3 – Thursday, 12 November 2026

Main Auditorium **Session 2: Biochemical Engineering** **Chaired by Prof. Dr. Maribel Vazquez**		
12:15-12:30	**Prof. Dr. Maribel Vazquez** Invited Speaker	**Electric fields to stimulate the three-dimensional migration of transplantable donor cells in retina**
12:30-12:45	**Xiaorong Gao** Oral Presenter	**Engineering a Synthetic Microbial Consortium for Efficient Heavy Oil Degradation and Viscosity Reduction**
12:45-13:00	**Sang Un Park** Oral Presenter	**Enhancement of Flavone Yield of Scutellaria baicalensis Hairy Root Cultures through Metabolic Engineering using AtMYB12 Transcription Factor**
13:00-13:15	**Alessandra Mercedes Aldave Javier** Oral Presenter	**Laser-Induced Graphene from Negra Andina potato peel: feasibility and structural characterization**
13:15-14:30	**Lunch Break**	

Day 3 – Thursday, 12 November 2026

Main Auditorium **Session 1: Regenerative Engineering** **Chaired by Dr. Elena Jones**		
14:30-14:45	**Amin Arefi** Oral Presenter	**Simulation-Driven Development and Bench Testing of a Clog-Free Endoscopic Spray Device for Upper Gastrointestinal Bleeding**
14:45-15:00	**Alessandro Polini** Oral Presenter	**Biomimetic Matrigel-Fibrin-GelMA Bioink and Geometric Anisotropy Synergistically Guide Skeletal Muscle Maturation in 3D Bioprinted Constructs**
15:00-15:15	**Milena Mourdjeva** Oral Presenter	**Bone Regeneration with Bioprinted Mesenchymal Stem Cells - Osteogenesis In Vitro Vs In Vivo**
15:15-15:30	**Francesca Gervaso** Oral Presenter	**A Bioengineered Glioblastoma-on-Chip for Modeling Hypoxia-Driven Therapy Resistance**
15:30-16:00	**Prof. Dr. Minqiang Wang** Bioengineering Lectureship Award Presentation	**Wearable Bioelectronics for Personalized Medicine**
16:00-17:00	**Awards Ceremony and Closing Remarks**	

Day 4 – Friday, 13 November 2026

Room 612 (6th Floor) **Bioengineering Editorial Board Meeting** **Chaired by Prof. Dr. Anthony Guiseppi-Elie, *EiC***		
09:00-10:45	**Breakfast Meeting**	**Update and Discussion of the Status and Future of *Bioengineering***

Day 1 – Poster Session A, 10 November 2026

Koine Room		
1	**Rossana Madrid** Poster	**Paper-based enzyme-free electrochemical sensor for the quantification of total flavonoids in plant extracts**
2	**Magdalena Czeleń** Poster	**Temporal Speech Parameters and Relative Voice Signal Level as Potential Indicators of Cognitive Load and Psychomotor Fatigue: A Proof-of-Concept Study**
3	**Yelzhan Aidarkhanov** Poster	**Engineering an Explainable Decision-Support Pipeline for Automated Blood Gas Interpretation**
4	**Jin-Woo Oh** Poster	**Self-Assembled Bio–Metal Hybrid Film for SERS-Based Serum Metabolite Profiling and Gastric Cancer Diagnosis**
5	**Antonella del Rosario Torres** Poster	**Design of a Pollutant Gas Monitoring Device Using Digital Sensors and IoT Technology for a Microbiological Laboratory**
6	**Giustino Varrassi** Poster	**Bioengineering Pain Medicine: From Digital Phenotyping to AI-Enabled Closed-Loop Precision Analgesia**
7	**Barkın Başgül** Poster	**Development of an Open-Access Computational Simulator for Nanoparticle Drug Release and Tissue Penetration**
8	**Anne Carrillo Chuyes** Poster	**Low-Cost Baropodometric Platform Based on Velostat for Instrumented Evaluation of the Modified Star Excursion Balance Test**
9	**Carmen Clotilde Mayorga Martinez** Poster	**Real-Time Monitoring of Cervical Movements Using Two Nodes Inertial Sensor System**
10	**Kaitlyn Wei** Poster	**Contributions of Gait Waveforms and Patient-Reported Knee Pain to Radiographic Knee Osteoarthritis Severity**
11	**Elisenda Santaló Ferrer** Poster	**Incorporation of nanomaterials into ELISA platforms**
12	**Kriss Soria** Poster	**A Humanoid Robot-Based Master–Slave Framework for Therapeutic Support**

Day 2 – Poster Session B, 11 November 2026

Koine Room		
1	**Julia Grochowska** Poster	**Optimisation of Secondary Metabolite Production in *Melissa officinalis* L. through Methyl Jasmonate, Salicylic Acid, and Chitosan Elicitation**
2	**Sabrina Gabardo** Poster	**Sugarcane bagasse: from the enzyme to the XOS production**
3	**You Hwan Kim** Poster	**Hierarchical Machine Learning of Salivary SERS Fingerprints for Noninvasive Discrimination of TMD, OLP, and BMS**
4	**Norihiko Saga** Poster	**A Leader–Follower Flexor System Using EMG-Based Motion Prediction for Remote Rehabilitation**
5	**Ismail Agir** Poster	**Fine-Tuning LLMs to Design Microfluidic Devices: Dataset Generation**
6	**Dafner Yomira Condori-Quenta** Poster	**Machine learning-assisted multispectral platform for paper-based optical biosensors**
7	**Isabel Sabrina Agreda** Poster	**Automated Optical Detection Station for Residual Protein Contamination on Metallic Reusable Surgical Instruments**
8	**Ana Rita Domingues** Poster	**Nitinol spring controlled by electromagnetic induction for biomedical applications**
9	**Tae-Young Jeong** Poster	**Neural Network-Assisted SERS Analysis of Gastric Juice on PVP-Coated Gold Nanocluster Films for Gastric Cancer Diagnostics**
10	**Kangmin Park** Poster	**Effect of pVIII N-Terminal Aromatic Amino Acid Insertion on M13 Bacteriophage Production Yield from a LepB Cleavage Interference Perspective**
11	**Zuzanna Podgórniak** Poster	**Synthesis and Processing of Mupirocin-PLGA Conjugates into Scaffolds with Tunable Degradation and Antimicrobial Activity**
12	**Lingyun Jia** Poster	**Precise Construction, Preparation, and Functional Regulation of Adsorbent Materials for Blood Purification**
13	**A Young Sung** Poster	**Analysis of Dehydration Resistance and Physical Properties of Hydrogel Lenses containing Betaine Additives**
14	**Yiyun Jang** Poster	**Screening Evaluation of a Drug Delivery Platform Using Ophthalmic Hydrogels Containing L-Carnitine with IPN Coating method**