



University  
of Basel

Department of  
Biomedical Engineering

# DBE Newsletter

## November 2024

### Congratulations



**to Dr. Valentina Basoli on her “Horizon Europe Collaborative Projects” grant**

Valentina has been awarded this grant for her ground-breaking research on bioprinting. Her project titled "A Bioprinting Platform for the Rapid, Reliable, Controlled, and Quantifiable Patterning of Cellular Aggregates and Microtissues into Macroscale Regenerative Grafts with Programmable Architectures," was granted 569'348 CHF.



**to Dr. Valentina Basoli on her appointment as new Group Leader**

Valentina will be heading the new subgroup “Biofabrication and Biosensors Unit” within the Swiss MAM Research Group. Firmly woven into the well-perfused fabric of Swiss MAM research, Valentina and her team are pushing the boundaries of 3D printing by combining it with advanced tissue engineering technologies and integrating it with biosensors for implant monitoring.



**to Dr. Joël Lavanchy, PD Dr. Peter Maloca, Dr. Bekim Osmani as new Junior Group Leaders**

In the last DBE Board Meeting, it has been decided to appoint Joël, Peter, and Bekim as new DBE junior group leaders. They will start research groups within the fields of digital surgery, ophthalmology, and biomaterials and biosensors and submit applications to the SNSF. Good luck!



**to PD Dr. F. Santini on being nominated as Program Chair for the ESMRMB congress**

Francesco, head of the BAMB (Basel Muscle MRI) research group has been nominated Program Chair for the annual congress of the European Society for Magnetic Resonance in Medicine and Biology (ESMRMB). This congress is aimed at multiple professional figures working in the field of magnetic resonance and takes place in October 2025 in Marseille. Member of the interdisciplinary program committee is also Dr. Claudia Lenz, leader of the Forensic Medicine & Imaging Research Group.

### About us – Highlighted



**Swiss Robotics Day 2024 – bigger than ever**

Prof. Georg Rauter from the DBE together with Prof. Aude Billard (EPFL) co-organized the 15<sup>th</sup> edition of the Swiss Robotics Day with a focus on medical robotics. After 1000 registrations, the organizers had to stop the registration process and welcomed more than 70 exhibitors. [Read more in the DBE news](#) or [Watch on SRF](#)



**Final piece in place: CADENCE Lab treadmill installation completed**

An important part of the CADENCE Lab facilities has been delivered. The installation of the treadmill marks one of the final milestones in the development of the CADENCE Lab. The treadmill features a split belt design, enabling the left and right feet to move at different speeds. Its advanced control system allows for continuous incline adjustments of up to  $\pm 6^\circ$  and a maximum speed of 6 m/s. The treadmill will be ready for use in January 2025, following specialized training provided by the company.



**Global impact of Dr. J. Wolleb’s paper on diffusion models for medical anomaly detection**

Two years after its publication at the MICCAI 2022 conference in Singapore, Dr Julia Wolleb’s Paper “Diffusion Models for Medical Anomaly Detection” has become one of the most influential papers in the field of Medical Image Analysis. [Read more in the DBE news.](#)



**National Future Day 2024 @DBE**

On the occasion of the National Future Day 2024, 23 curious children between 11 and 13 years visited us to take a deep dive into the world of biomedical engineering and learn more about DBE research. Our guests explored the human body in VR, discovered AI advancements in medicine, navigated a laser maze, x-rayed a chocolate surprise egg, designed key rings in the 3D printing lab, and left with a DBE Future Day trophy. [Read more in the DBE news](#)

### About us – We welcome



**Dr. Dunia Blaser**, who started as a Postdoc in the Centre for Intelligent Optics (CIO) group, led by Dr. Ferda Canbaz. Dunia holds a PhD in Applied Physics from the University of Bern. Her thesis focused on the fabrication of high alumina optical fibres by powder methods for mid-infrared transmission. At the CIO, Dunia will support the research and development of the Innosuisse project and provide support to PhD students.



**Dr. Merel Hoozemans-Strik**, who joined the admin team to support Prof. Philippe Cattin and Dr. Daniela Vavrecka-Sidler. Among other tasks, she is currently updating the Core Facility price lists and will soon focus on the department's patent strategy. With a PhD in immunology/oncology, she has over ten years of experience with the Dutch Cancer Society (grant selection) and in the last six years led the research support group for paediatric departments at Erasmus Medical Center.



**Lorenzo Pettinari**, who started his PhD at the Center for medical Image Analysis & Navigation (CIAN), led by Prof. Philippe Cattin. He completed his master's degree in Biomedical Engineering at Politecnico di Milano, where he explored touchless interfaces for surgical data navigation and AI applied to medical imaging. Lorenzo's research will investigate the use of augmented reality for intraoperative surgical guidance, with focusing on surgical procedures for scoliosis correction.



**Jan Schimmelpennig**, who recently joined the LAROCARE project in the group of Prof. Georg Rauter. Jan completed his bachelor's and master's degrees in electrical engineering and information technology with a focus on signal processing at KIT. During his PhD, Jan will develop a surgical robotic system for cartilage regeneration in close collaboration with other DBE laboratories of Prof. Canbaz, Prof. Barbero and Prof. Schulz.

## Events



### 5<sup>th</sup> Annual SIGN Conference | January 9–11, 2025 | Basel

This prestigious event will bring together leading experts to discuss the latest advancements in the treatments for brain cancer, stroke and movement disorders using nanotechnology, robotics, molecular imaging, immunotherapy, stem cell research, and more. [More information.](#)



### UZB Research Day | May 9, 2025 | Basel

Due to current events and its widespread attention, the Universitäres Zentrum für Zahnmedizin Basel is also dedicating itself to the topic of "Artificial Intelligence" and will examine it from the perspective of dentistry and the university environment. Prof. Philippe Cattin will give the talk "KI aus Sicht des Departments Biomedical Engineering". [More information.](#)

## Awards & Competitions



PHB Translational Award



### PHB Translational Award

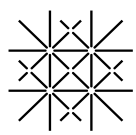
The PHB Translational Award seeks proposals for projects that demonstrate a strong potential to significantly impact clinical practices or patient outcomes. The award provides up to 50'000 CHF to cover release time from clinical routine (salary reimbursement) of the applicant for a maximum period of 12 months. [Read more](#)



### The SNSF Scientific Image Competition 2025 is now open

Show off your research in a new light! Researchers working in Switzerland are invited to submit their photographs and videos to the SNSF Scientific Image Competition. Submission deadline: January 31, 2025. [Read more](#)

## Calls & Research Funding



Universität  
Basel

### Promotion of scientific activities of recognized research networks

Established research networks can apply for [support from the Research Fund](#) for specific scientific activities (e.g. organization of conferences and symposia, guest lectures, lecture series, visiting scientist programs, workshops, scientific retreats, scientific outreach activities). Applications can be submitted at any time.

### Doc.Mobility@unibas

[Doc.Mobility@unibas](#) grants are aimed at doctoral students who wish to improve their scientific profile at a research institute abroad. The grants are awarded in all disciplines. Submission deadline: March 1, 2025.

### Short Time Travel Grants for doctoral students and postdocs

The University of Basel and the [Nikolaus and Bertha Burckhardt-Bürgin Foundation](#) award grants to doctoral students and postdoctoral researchers. Grants can be awarded for a short stay at a research institution abroad (in justified exceptional cases also in Switzerland). Submission deadline: February 15, 2025.



### ERC Grants

[ERC Consolidator Grant Call 2025](#): deadline January 14, 2025, for applicants with 7-12 years post PhD experience. Get in touch with [grants@unibas.ch](mailto:grants@unibas.ch), they offer support and advice.



### Geistlich-Stucki promotion of young academics

The [program](#) supports the careers of young academics. In particular, the foundation will finance the salary costs of the researchers for 3 years. Funding can be granted if the following topics are being researched: Tissue regeneration, particularly with biological materials in dentistry, and oral and maxillofacial surgery, and cancer research. Submission deadline: January 7, 2025.



#### Starting Grants 2025

An [SNSF Starting Grant](#) comes after several years of research after the PhD, or an equivalent qualification or medical degree, during which time the grantees have already conducted research independently and contributed to impactful research in their field. The scheme is open to all disciplines and topics; researchers of any nationality may apply. Applicants can request a budget of up to CHF 1.8 million for a period of five years. Submission deadline: January 15, 2025

*Applicants require a support letter: This is a general confirmation from the Vice President for Research which is provided by the Grants Office. We kindly ask you to submit the Grants Tool entry by December 16, 2024 at the latest.*

#### National Centres of Competence in Research (NCCRs)

Long-term research on strategic topics: the SNSF is launching a new series of [National Centres of Competence in Research \(NCCRs\)](#) on behalf of the federal government. This new call is thematically open and is aimed at all disciplines. Submission deadline: February 3, 2025

#### Postdoc.Mobility

[Postdoc.Mobility](#) fellowships support researchers after the doctorate who wish to conduct a research stay abroad. Submission deadline: February 3, 2025.

Check out the [SNSF website](#) for further calls.

At the Department of Biomedical Engineering, we translate basic science and engineering into medical knowledge and healthcare innovations. We provide high quality education and capacity building for academics, clinicians, and industrial partners. The DBE is a joint venture of the University of Basel, the University Hospital Basel and the University Children's Hospital Basel.

Would you like to publish news in the newsletter?

Please write to us at [news-dbe@unibas.ch](mailto:news-dbe@unibas.ch)



Universität  
Basel



Universitätsspital  
Basel

