



Haute école d'ingénierie et d'architecture Fribourg  
Hochschule für Technik und Architektur Freiburg



INSTITUTE FOR PRINTING

# iPrint

Manufacturing by Printing -  
Your Partner for Research and Education in Inkjet

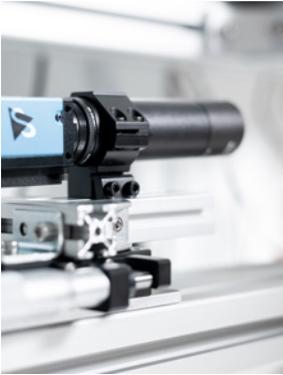
iPrint

Institute for Printing

**Hes**·SO

Haute Ecole Spécialisée  
de Suisse occidentale  
Fachhochschule Westschweiz  
University of Applied Sciences and Arts  
Western Switzerland

## iPrint, Institute for Printing



The iPrint Institute is a research institute focusing on inkjet technology and digital printing. The applied research is multidisciplinary, drawing on the latest developments in engineering, chemistry, and nanotechnologies, and collaborating closely with fundamental research institutes.

As a leading research partner for industry, iPrint regularly makes significant contributions to technology innovation. Thanks to its expertise in processes and methods, instrumental development and advanced materials, the iPrint Institute is a valued provider of know-how in various industrial sectors.



### Core Competences

Digital printing processes, especially in inkjet technology applications, are at the heart of iPrint's activities. Inkjet research covers a wide range of application domains, including highly promising domains such as additive manufacturing, bioprinting, packaging, direct-to-shape, and printed electronics. The institute is also an authority in the field of viscous fluid metering. Because of iPrint's established expertise in these domains, applied research is directly involved in making digital manufacturing a reality in some of today's most dynamically evolving markets.



### Research Areas

**Graphical printing research** focuses on high-quality packaging-printing solutions in a variety of materials and shapes. Researchers in this group also work on developing finishing methods that create sophisticated tactile and visual effects.

**Material printing research** has the aim of developing cutting-edge generative processes (advanced manufacturing) for the production of functional 2D layers, multi-material 3D objects, structures with inhomogenous properties, and low-cost printed sensors.

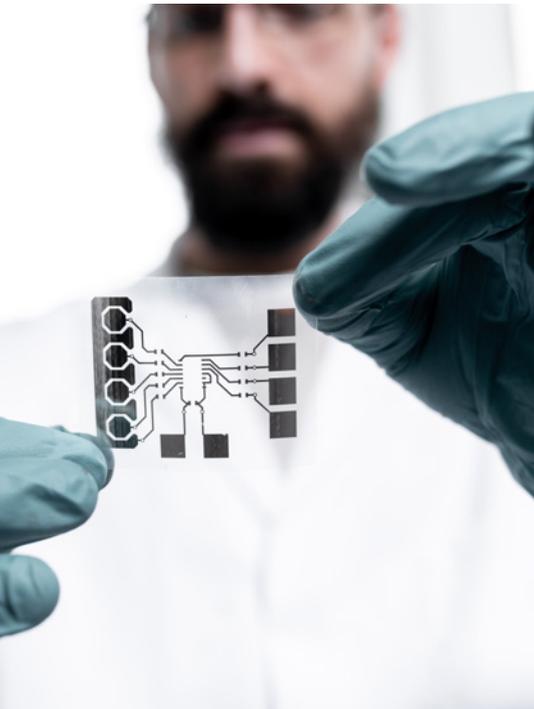
**Life Science printing research** is about creating innovative printing technologies for medical applications. Notable projects include the development and printing of biomedical sensors and implant-friendly biodegradable materials, and the fabrication of human tissue, which is a stepping-stone in the quest to produce fully functioning organs.



## Key Equipment

The institute is endowed with state-of-the-art technological facilities. Its **more than 20 laboratories** attract both national and international project partners, and feature:

- 40 self-designed research platforms
- Drop watching stations
- Jetting, dosing and extrusion equipment
- Substrate pretreatment equipment
- Drying and curing equipment
- A coating pilot line
- An ebeam pilot line



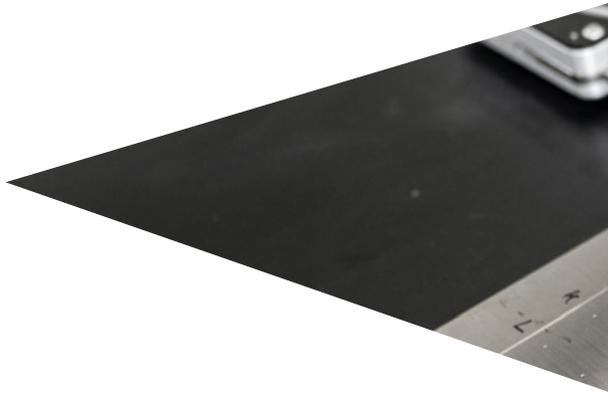
## Education

In addition to its research activities, the iPrint Institute provides training and education in the field of inkjet. Featuring permanently installed dedicated lab and training platforms, the training course program entitled “**The Inkjet Training**” offers hands-on lab experiences to participants from all over the world. The first level is the **Foundation Course**, which imparts introductory knowledge in inkjet engineering and chemistry. Participants in this course will emerge with a broadened knowledge base and a capacity for interdisciplinary communication. Advanced learners attend one of the **Masterclass** courses, which offer higher-level training in specific areas of expertise.



## Research Team

The iPrint Team comprises 6 professors, 7 research associates, 20 R&D engineers and 2 technicians. Management and administrative staff support the applied research and education activities. As part of the University of Applied Sciences of Western Switzerland, iPrint provides an ideal combination of research and learning opportunities, which can take place in the context of lectures and student projects at the Bachelor and Master level as well as PhD studies.



## Contact and Information

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*Communication service  
October 2019*