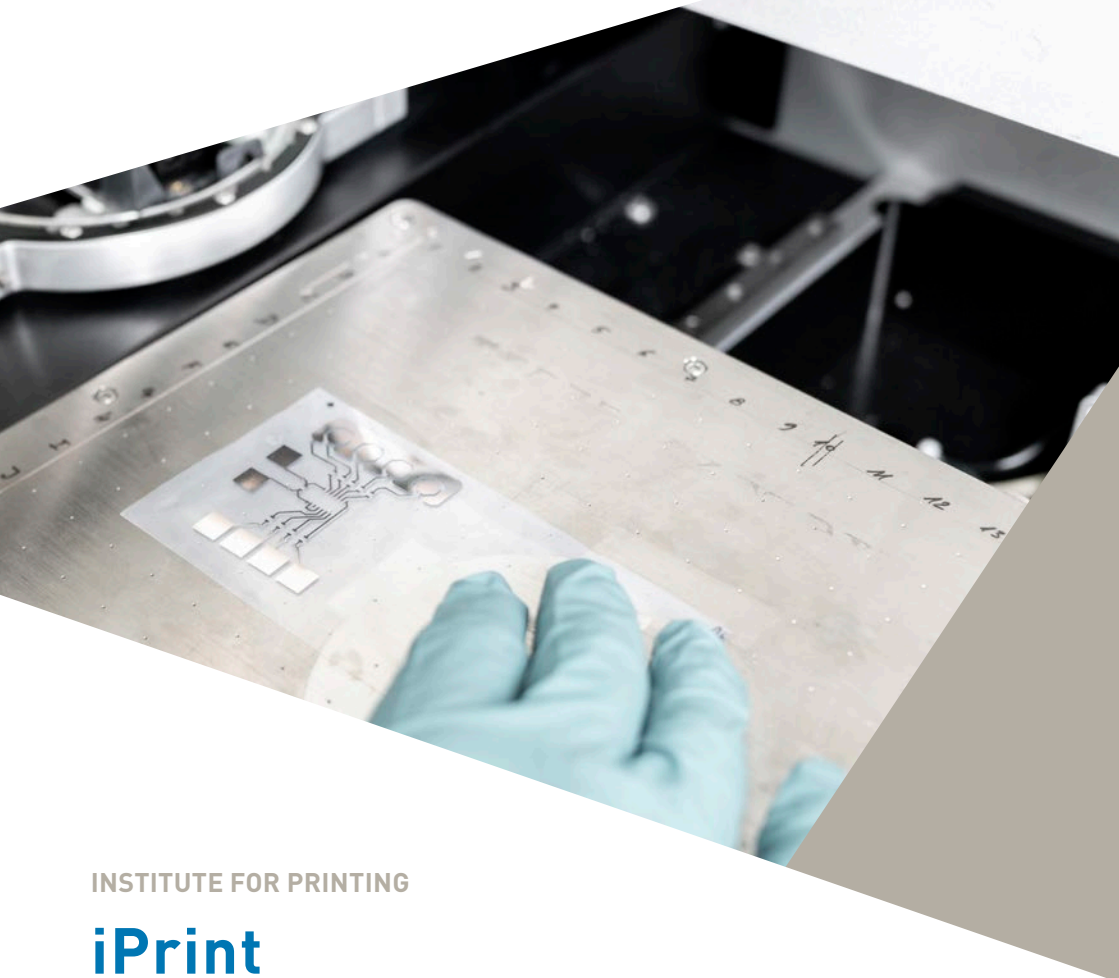




Haute école d'ingénierie et d'architecture Fribourg
Hochschule für Technik und Architektur Freiburg



INSTITUTE FOR PRINTING

iPrint

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

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

iPrint is a unique, international leading institute for applied research and development in the domain of **inkjet technology** and **digital printing**. Supported by a multidisciplinary team of technology experts, engineers and technicians as well as close collaborations with a multitude of industrial and academic research partners, iPrint continuously provides substantial contributions to innovative developments utilizing inkjet technology.



Core Competences

Apart from inkjet technology, iPrint's core competences also include digital printing and dosing processes like valvejet or microextrusion. iPrint's continuous success in applied inkjet research is supported by a broad competence pool in domains like electronics, mechanics, microfluidics, informatics, chemistry, biology or material sciences.



Research Areas

Graphical Printing

Research on printing with graphical quality on complex objects with curvature as well as challenging materials, with the goal of developing new manufacturing possibilities.

Printing for Electronics

Typical activities include printing of a broad range of conductive or dielectric traces or layers, isolators, protective coatings, optoelectric elements or sensors, again on a multitude of materials and shapes.

Biomedical Printing

Typical activities include printing of biomedical substances such as cells, drugs, proteins, enzymes, development and printing of biomedical sensors or 3D printing (or digital coating) of implants.

Advanced Manufacturing

Typical activities include for example 3D printing (additive manufacturing) or hybrid printing (inkjet in combination with other processes like CNC extrusion or valvejet).

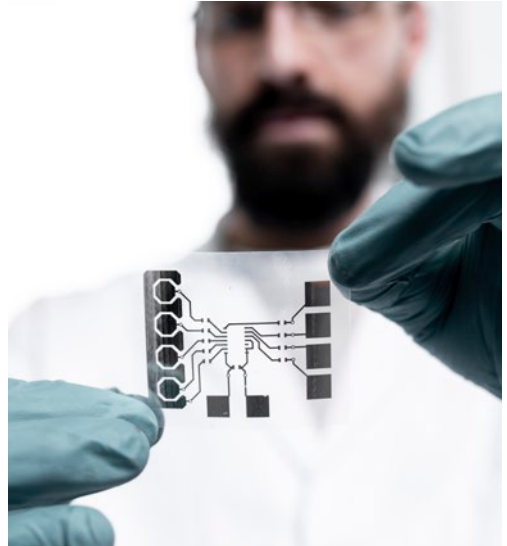




Key Equipment

More than 20 laboratories attract both national and international project partners at iPrint, and feature:

- 40+ custom-designed research printers and platforms
- 100+ industrial inkjet print heads of most manufacturers
- 10+ systems for drop analysis (Drop watching)
- Measurement lab for ink, substrate and layer characterization
- Multiaxis robotic arm powered printer for direct to shape inkjet printing onto 3D objects
- Corona, flame & neutral plasma for substrate pretreatment
- UV sources (LED/ deuterium / mercury arc) for curing of photo-curing layers
- IR / NIR (400 – 7'500W) dryers for water & solvent based layers
- R2R inkjet pilot line equipped with E-Beam curing system
- Photonic curing unit
- Biomedical printer



Team

The iPrint Team comprises professors, research associates, R&D engineers and technicians.

As part of the University of Applied Sciences of Western Switzerland, iPrint provides an ideal combination of research and educational opportunities, which can take place in the context of lectures and student projects at the Bachelor and Master level as well as PhD studies.

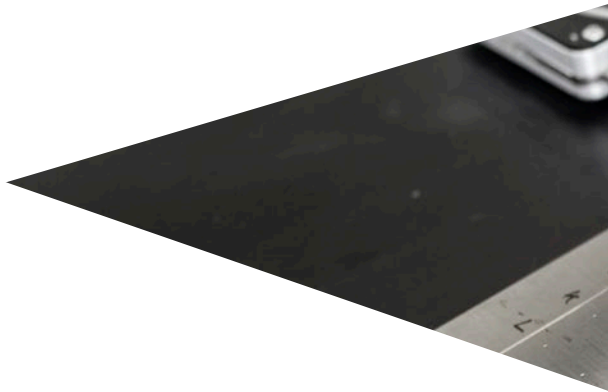


Education

iPrint Institute provides training and education in the field of inkjet and inkjet supporting technologies, which are offered as a five days foundation course or as three days advanced course (masterclasses) featuring permanently installed dedicated labs and training platforms.

In the foundation course, participants get a basic insight in the multidisciplinary topics of inkjet technology whereas each module splits equally into theory and practicals.

Advanced participants can join one **Masterclass course** to deepen their knowledge in inkjet rheology or waveform development (with as well 50% theory and 50% practical training).



Contact and Information

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