



École internationale du Papier, de la Communication Imprimée et des Biomatériaux

Ouverture d'un nouveau parcours de Master 2

Parcours International

**Sustainable printed and integrated electronics /
Électronique imprimée et intégrée durable – e.PEPS**

Lyon, 29 novembre 2022

Responsable projet : Nadège Reverdy-Bruas



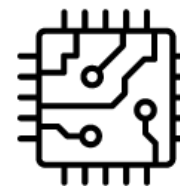


Graduate School of Engineering in Paper, Print Media and Biomaterials

- Engineering school unique in **Europe**, internationally **recognized**
- Closely linked to a research laboratory, **LGP2**
- 200 to 250 students / year
- Apprenticeship in 1 year, 2 years, 3 years
- **2 options**
 - **IFB** – Fibre and Biomaterials engineering
 - **ICI** – Printed Communication engineering

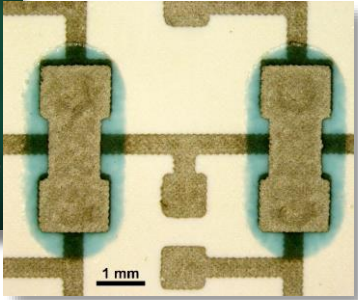
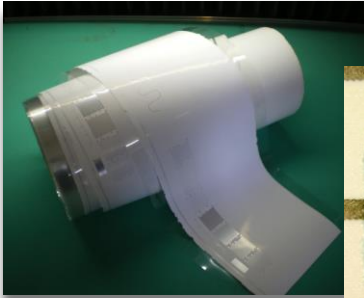


**Will to create a new Master dedicated to
Printed and structured electronics**

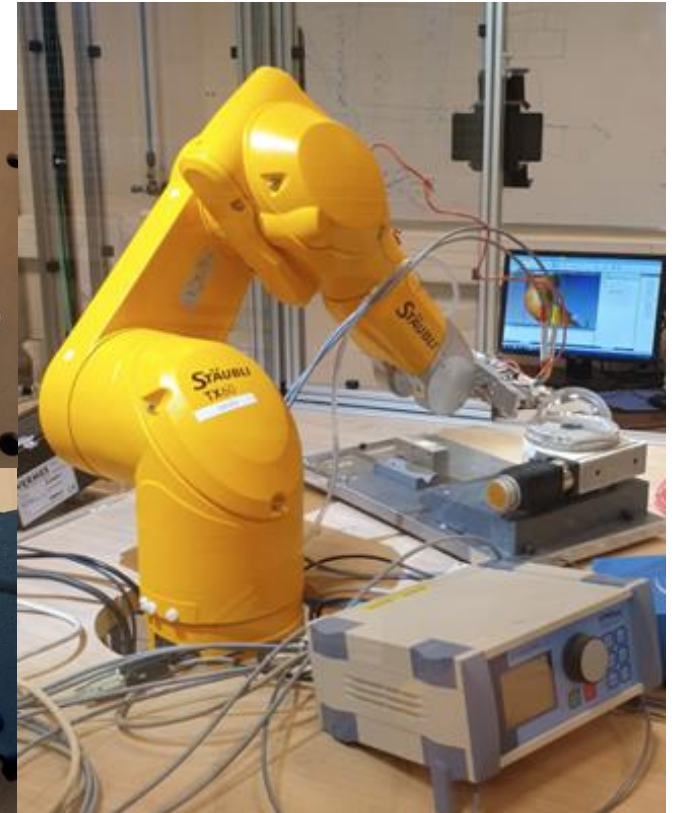
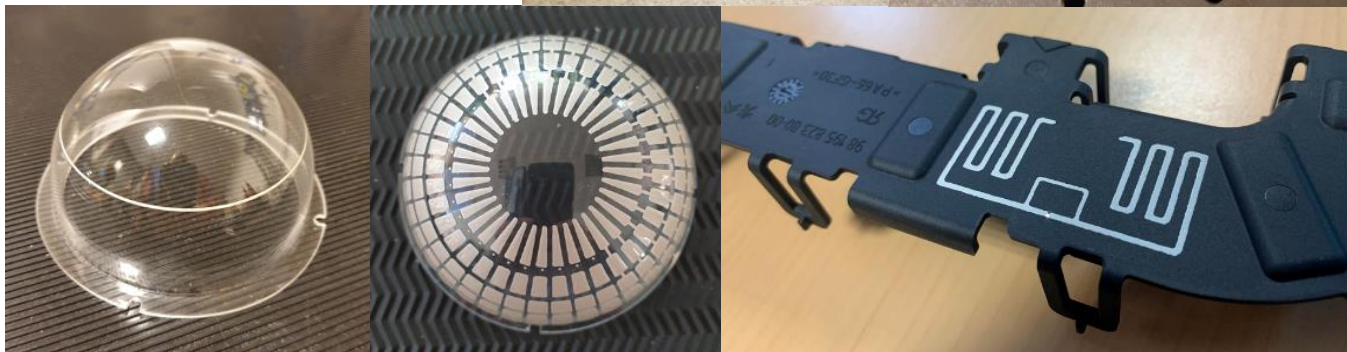
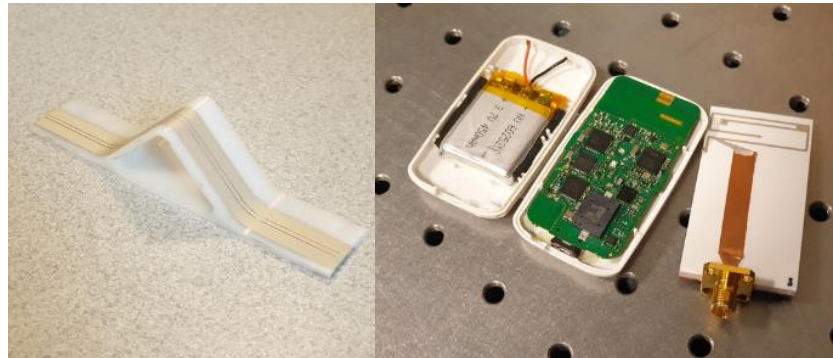


La certification qualité a été délivrée au titre des catégories d'actions suivantes :
- Actions de formation
- Actions de formation par apprentissage

Context – Previous research topics



Flexible printed electronic on flexible green ceramic and on paper – European Project and internship



Work realized within MINT Chair – Partnership between LGP2, IMEP-LaHC and IUT1 of Grenoble, with the support of Fondation Partenariale Grenoble INP and with the sponsorship of Schneider Electric – 2016-2022

Context – Competitive analysis

➤ France

✓ 17 identified courses

- Partially focused : printed electronics, additive manufacturing, organic electronic, flexible electronic, 3D printing, 3D-MID...
- No competitive

➤ International

✓ 11 identified courses

- United-States, United-Kingdom, Belgium, Finland, Germany
- Numerous courses focused on 3D printing, one training module « Printed electronics » or « Printed functionalities » in option

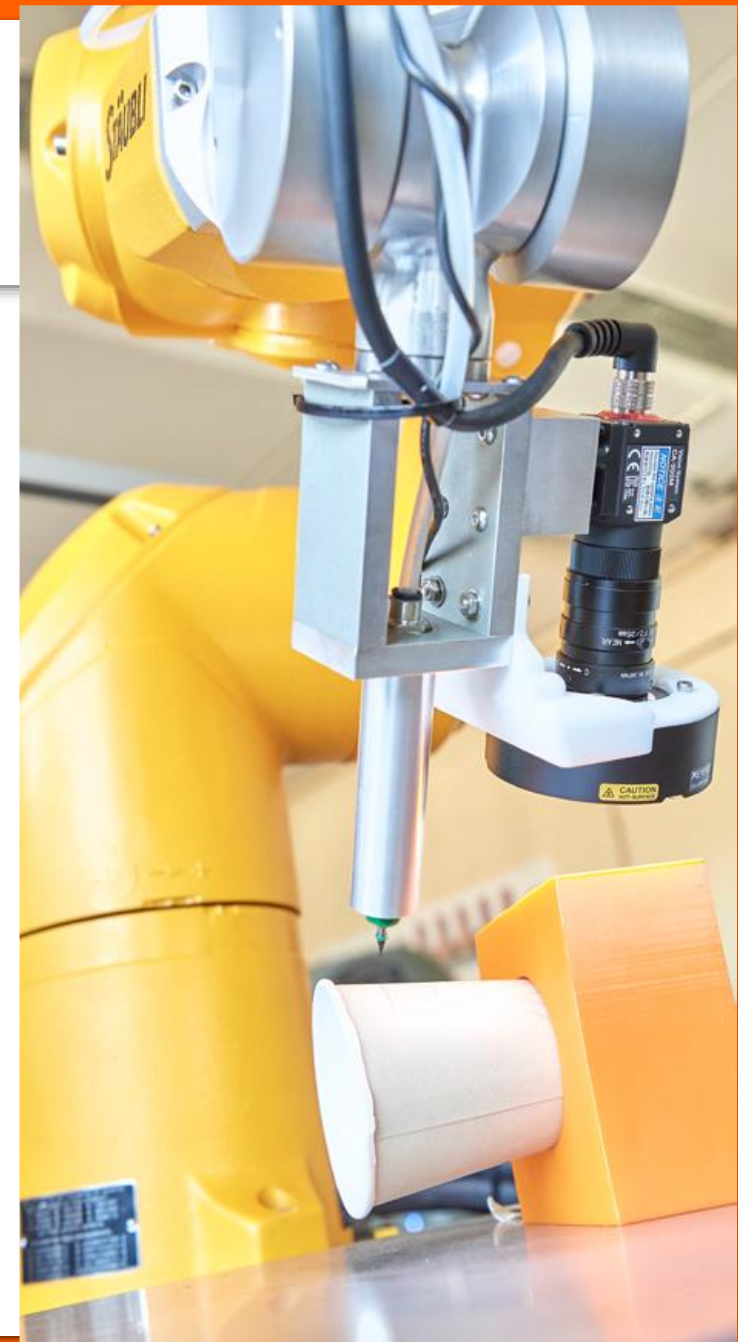
=> No identified equivalent formation at M2 level

Learning objectives

- Giving companies the keys to solve **the challenges**

Of **miniaturization**, **weigh reduction** and **eco-conception** of electronic devices

By using **conventional and innovative printing technologies**



Training description

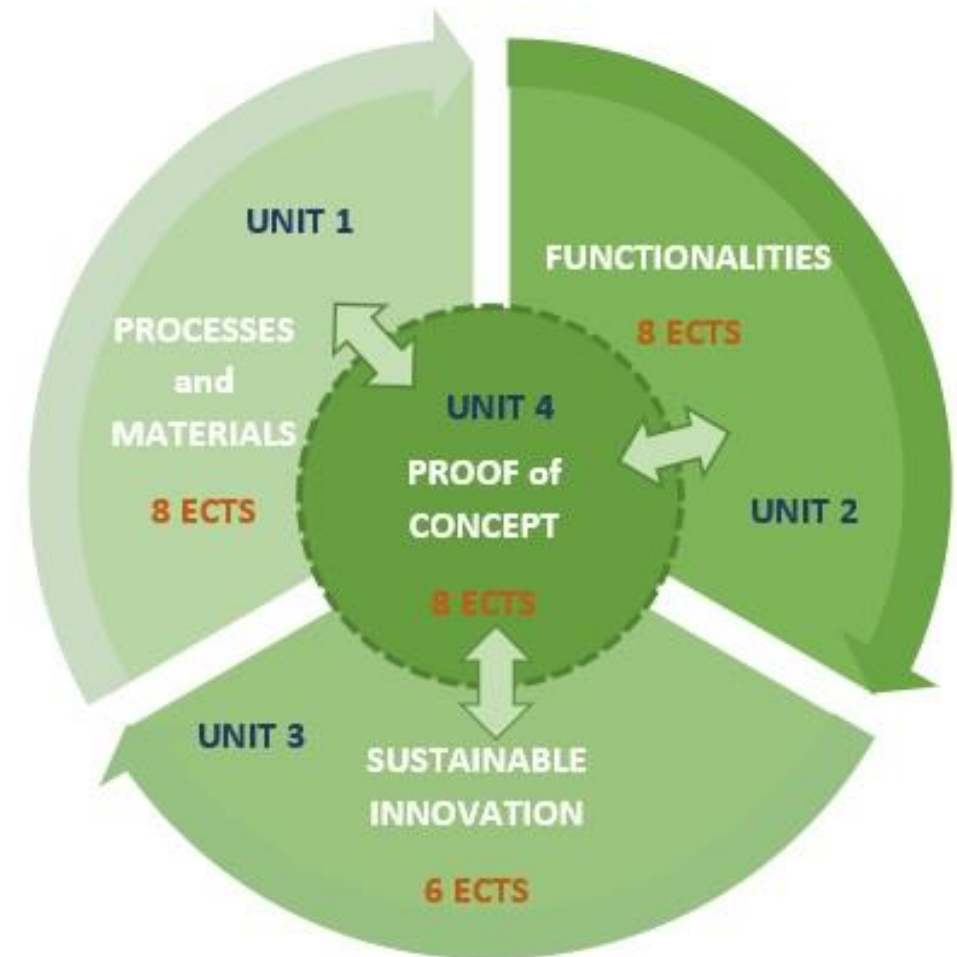
➤ Semester 9

- ✓ 4 units of education
 - Unit 1 – Processes and Materials (110 h)
 - Unit 2 – Functionalities (110 h)
 - Unit 3 – Sustainable innovation (70 h)
 - Unit 4 – Project Proof Of Concept (110h)

➤ Semester 10

- ✓ Internship in company/laboratory
- ✓ 5 to 6 months

➤ Courses taught in English



Target audience – Prerequisites

➤ **Target audience**

- ✓ Students having, at least, 4 years of post-graduate studies in France or abroad

➤ **Prerequisites** (at least 1 among the list)

- ✓ Chemistry of complex fluids
- ✓ Printing processes
- ✓ Materials science
- ✓ Electronic
- ✓ Additive manufacturing
- ✓ Connected objects
- ✓ Sustainable industrial processes

Next steps...To complete the building of the Master

- **Communication** => in progress
 - ✓ HDM Stuttgart (Germany)
 - ✓ University of Pardubice (Czech Republic)
 - ✓ University of Leeds (UK)
 - ✓ University of Ljubljana (Slovenia)
 - ✓ University of Zagreb, Faculty of Graphic Arts (Croatia)
 - ✓ Toronto Metropolitan University (Canada)
- **First promotion** => **Sept. 2023** (welcome), **Sept. 2024** (diploma)
- **Letter of support from industrial partners**
 - ✓ Attesting the interest for the training => **You are welcome!**

Why to become a professional partner?

- Contribute to the development of a **unique training program in France**
- **Test and explore new subjects** during student projects and with interns
- Develop your employer brand among **specific profiles**
- **Keep up-to-date** with scientific advances in this field

Already involved as partners

afelim
association française de l'électronique imprimée

ARC EN CIEL
sérigraphie

ardeje

arjowiggins

FABÉON

iSRA
CARDS

Schneider
Electric

SYMBIO
A FAURECIA MICHELIN HYDROGEN COMPANY



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Thank you for attention
Merci de votre attention

