

# Free Silicon Conference FSiC2023

Marie-Minerve Louërat

Campus Pierre et Marie Curie, 4 place Jussieu, 75005 Paris, France

July 10-12, 2023



Funded by  
the European Union

**FSiC2023**  
Free Silicon Conference

bienveni  
sou dhavan  
pô la bwam  
benvenuti  
Добре Дошло  
又欢迎  
yôkoso  
Karibu  
willkommen  
bon bini  
awaa vaa atuv  
fôite  
καλώς ήλθατε

# Welcome from LIP6

welkomma  
välkommer  
Welcome  
bem-vindo  
tervetuloa  
يَـوْـزَـلَـتْ  
bel bonjour  
vözlet  
vaelkomin  
tere tulemast  
châa mong benvido  
ani kié  
degenen mad  
binlavinu namaste  
bona rinuta  
kakwao  
welkom  
benvingots

# Program and location



Funded by  
the European Union

**FSiC2023**  
Free Silicon Conference

# The tutelles of LIP6



## Pluri-disciplinary University with Intensive Research

55 600 students (incl. 4 500 Ph.D.)

3 400 professors &

3 000 researchers (CNRS, Inserm)

More than 100 research structures

## Three faculties

Science & Engineering

Medicine

Humanities



Funded by  
the European Union

**FSiC2023**  
Free Silicon Conference

# The tutelles of LIP6



## Pluri-disciplinary University with Intensive Research

55 600 students (incl. 4 500 Ph.D.)

3 400 professors &

3 000 researchers (CNRS, Inserm)

More than 100 research structures

### Three faculties

Science & Engineering

Medicine

Humanities



## National Center for Scientific Research

33 000 researchers, engineers &  
technicians

1 400 laboratories

### Ten institutes

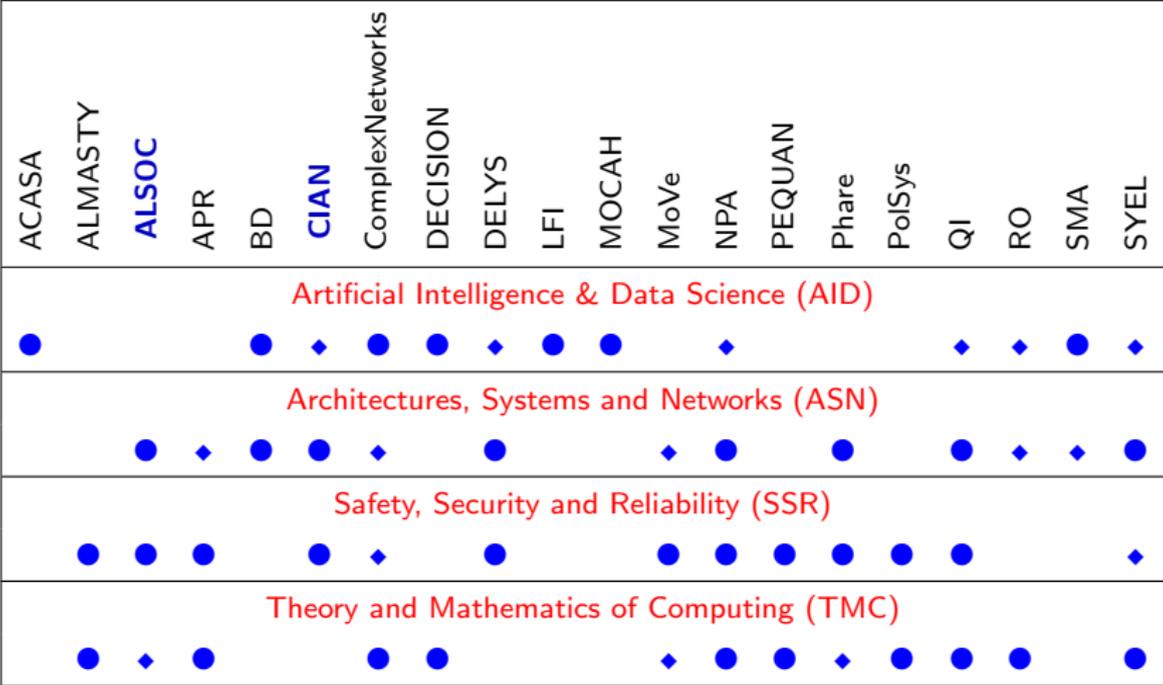
*Information Sciences and Technologies,*  
Engineering and Systems Sciences, Ecology  
and Environment, Humanities and Social  
Sciences, Mathematical Sciences and their  
Interactions, Physics, ...



Funded by  
the European Union

**FSiC2023**  
Free Silicon Conference

# Research axes of LIP6



● → Main activity ◆ → Lower activity and/or application domain



Funded by the European Union

**FSiC2023**  
Free Silicon Conference

Program :

<https://wiki.f-si.org/index.php/FSiC2023>

▶ Day 1: Monday July 10

- ▶ Welcome from LIP6 and F-Si
- ▶ Keynote
- ▶ High-level design and logic synthesis
- ▶ Foundries and PDKs
- ▶ On-going FOS silicon projects
- ▶ Sustainability (part 1)

▶ Day 3: Wednesday July 11

- ▶ Back-end design tools (part 2)
- ▶ Teaching and education
- ▶ Paving the road for open source flow: gaps, challenges opportunities

▶ Day 2: Tuesday July 11

- ▶ Keynote
- ▶ Hardware security
- ▶ IP blocks
- ▶ Transistor modelling and simulation
- ▶ Sustainability (part 2)
- ▶ Funding opportunities
- ▶ Back-end design tools (part 1)



Funded by  
the European Union

**FSiC2023**  
Free Silicon Conference

# Speakers and attendees

- ▶ **Countries:** Austria, Belgium, Canada, Denmark, Egypt, Finland, France, Germany, Italy, Latvia, The Netherlands, Spain, Switzerland, UK, USA
- ▶ **Institutes:**
  - ▶ **Academia:** American U in Cairo, UC Berkeley, Berner Fachhochschule, CEA, CERN, CNRS, ENS, EPFL, ESIEE, ETH Zurich, Hochschule RheinMain, IHP Microelectronics, IMSE-CNM, Johannes Kepler Universität Linz, Sorbonne Université, T.U. of Denmark, T.U. Graz, T.U. Wien, TelecomParis, U.C. Louvain, U. Montpellier, U. de Rennes
  - ▶ **Companies:** ChipFlow, Elmos Semiconductor, Fairphone, FibraServi, Google, IQM, NitroKey, OVH Cloud, Psychogenic, Resilio, Safran, SecureIC, STMicroelectronics, Thales, YosysHQ
  - ▶ **Others:** GHDL, GnuCap, KLayout, LibreEDA, Libre Silicon, Naja, NLnet Foundation, OpenSource Ecology Germany, Spherical, SpinalHDL, Unbinare

# Schedule

## ▶ Monday 10 July

- ▶ 9h00–9h30 **Registration and coffee**
- ▶ 9h30–12h00 Morning session
- ▶ 12h00–13h30 **Lunch Break**
- ▶ 13h30–16h Afternoon session 1
- ▶ 16h–16h30 **Afternoon tea**
- ▶ 16h30–19h Afternoon session 2

## ▶ Tuesday 11 July:

- ▶ 8h30–9h30 **Registration and coffee**
- ▶ 9h30–12h00 Morning session
- ▶ 12h00–13h30 **Lunch Break**
- ▶ 13h30–16h Afternoon session 1
- ▶ 16h–16h30 **Afternoon tea**
- ▶ 17h00–19h Afternoon session 2

## ▶ Wednesday 12 July:

- ▶ 8h30–9h30 **Registration and coffee**
- ▶ 9h30–12h00 Morning session
- ▶ 12h00–13h30 **Lunch Break**
- ▶ 13h30–16h Afternoon session
- ▶ 16h–16h30 **Afternoon tea**

# Location 1/2

- ▶ **Talks:** Amphitheater 43
- ▶ **Coffee and Tea Breaks:** 33 - 43
- ▶ **Lunch:** 33-43
- ▶ **Dinner:** Self organized
- ▶ **Toilets:** Tower 43

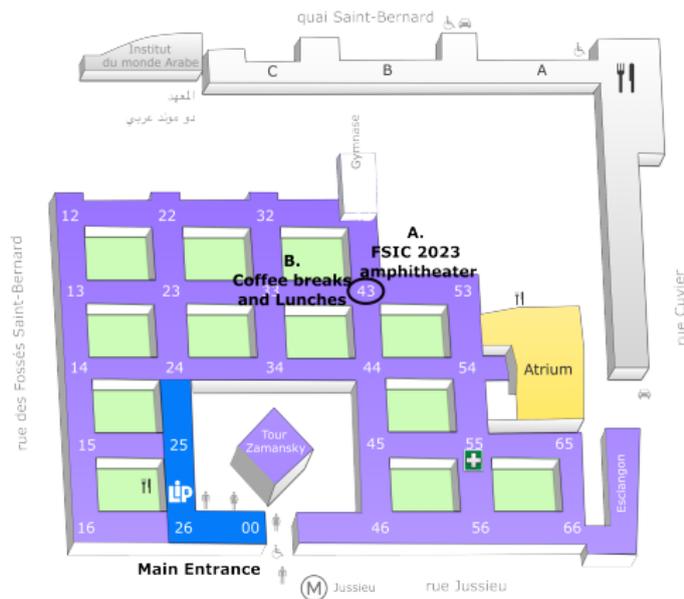


Figure: Campus Pierre et Marie Curie

# Location 2/2

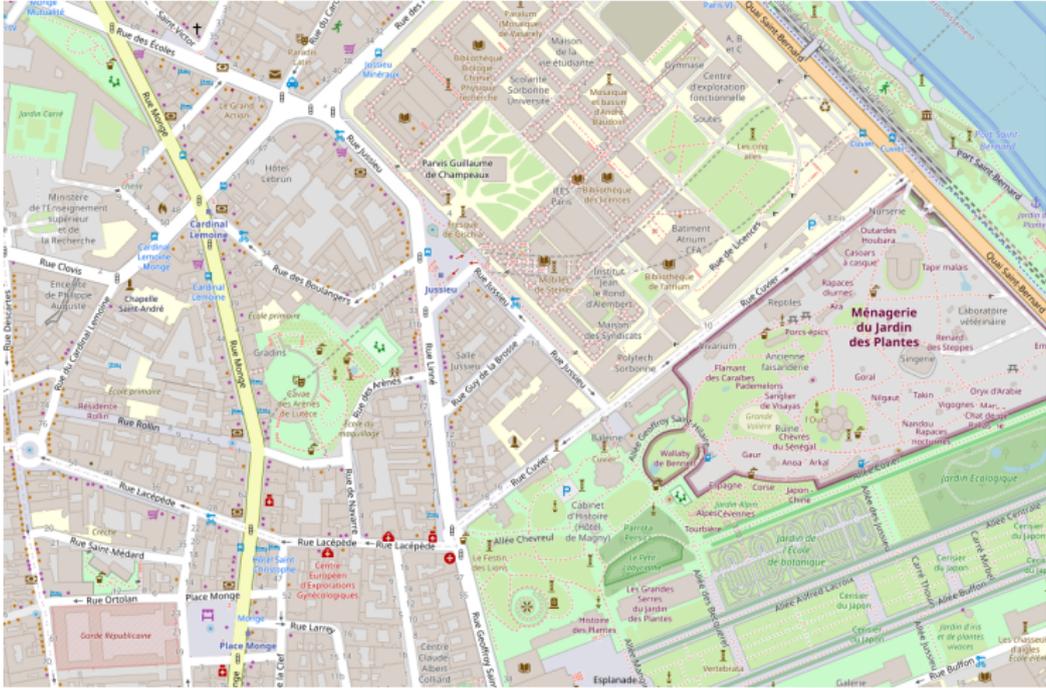


Figure: Around Campus, a lot of restaurants: Rue Linné, Rue Jussieu



Funded by the European Union



# Acknowledgment 1/3

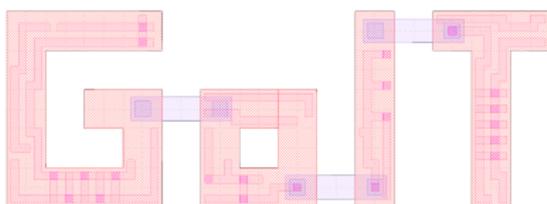
- ▶ Pr. François Anceau : CMP and MPW (1981 –)
- ▶ Pr. Gérard Noguez : starting Microelectronics research and teaching (Emilie-2 CAD Tool by CAO-VLSI Team) at Université Pierre et Marie Curie (1980 –)
- ▶ Pr. Alain Greiner, Pirouz Barzargan Sabet, Pr. Frédéric Pétrot, Franck Wajsbürt et al : Alliance VLSI Design Tool chain (1992 –)
- ▶ Jacky Porte: Oceane, Outil pour la conception et l'enseignement d'électronique analogique (1996 –)
- ▶ Pr. Naohiko Shimizu, teaching VLSI design, fabricated with Phenitec  $0.6\mu$ , ROHM 180nm and with the free and educational facility of Hibikino  $2\mu\text{m}$  in Japan (2013, –).

## Acknowledgment 2/3

- ▶ The Sorbonne U. and LIP6 local FSIC 2023 team
  - ▶ Cécile Braunstein
  - ▶ Roselyne Chotin
  - ▶ Franck Wajsbürt
  - ▶ Mathieu Albet
  - ▶ Catherine Chou
  - ▶ Sandra Silva Gonçalves
  - ▶ Chrystelle Mathieu
  - ▶ Sabine Voets
- ▶ The history of CIAN and ALSOC: FOSS EDA
  - ▶ ALLIANCE
  - ▶ and Coriolis <http://coriolis.lip6.fr/>

## Acknowledgment 3/3

- ▶ IRILL *Initiative de Recherche et Innovation sur le Logiciel Libre* <https://www.irill.org/>
- ▶ NLnet <https://nlnet.nl/>
- ▶ GoIT Consortium and Support Action (CSA) project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101070660 (2022-2025).



Check Public Transports

<https://www.ratp.fr/infos-traffic>

and

**Enjoy FSIC 2023!**



Funded by  
the European Union

**FSiC2023**  
Free Silicon Conference