



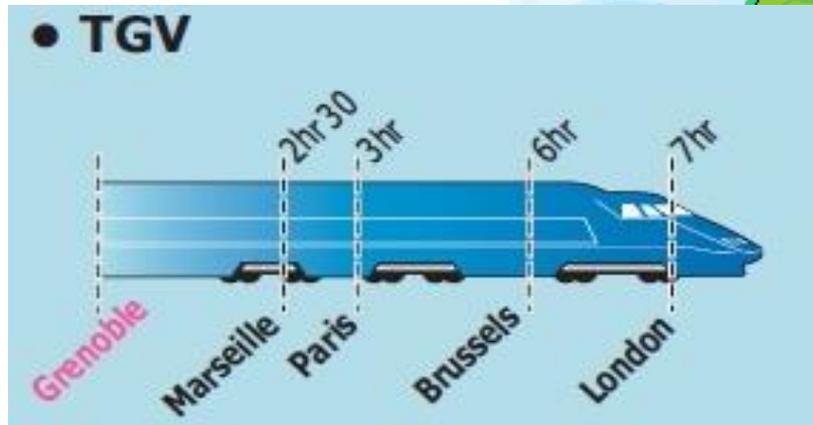
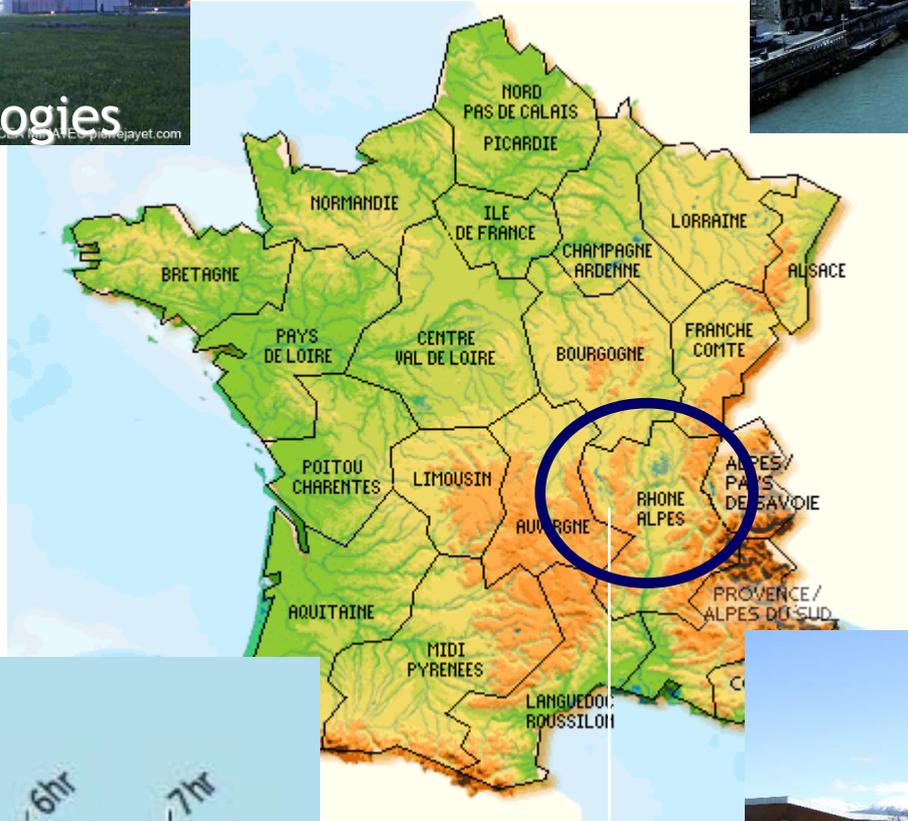
EMNano+ Master Program @ University Grenoble-Alpes

General Informations about Grenoble and UGA





Micro-Nano-Technologies



Grenoble





Grenoble

400 000 people

1 of 5 is a student

25 000 R&D jobs

France's highest concentration

200 research Labs

European
Research Facilities

Grenoble

400 000 people

1 out of 5 is a student

25 000 R&D jobs

France's highest concentration

museums, theaters

Jazz festival (Vienne)

10 ski resorts < 40km



Major area for research, advanced technologies and higher education...

60 000 students
9000 international students

7500 staff members

23 international
Master's programs

1st University in France
in 11 fields including
Nanoscience-Nanotechnology



<https://www.univ-grenoble-alpes.fr/university/>

Since January 2020: UGA is the aggregation of the former Université-Grenoble Alpes and the most prestigious higher education in Grenoble : Grenoble INP Institute of Engineering and Management, Sciences Po Grenoble, School of Political Studies and ENSAG School of Architecture.

Academic Research laboratories in Nanoscience-Nanotechnology

- More than 33 academic laboratories affiliated with CNRS, UGA or CEA working in **Nanoscience** See map on the next slide and the third pdf file dedicated to the study program **with web links**. See also <https://master-nanosciences.univ-grenoble-alpes.fr/nano-grenoble/>

- 4 European facilities: ESRF, ILL, EMBL, EMFL:   EMBL   European Magnetic Field Laboratory
- Micro-nanoelectronics centers and platforms: CEA Leti, CIME Nanotech, ST ...



TECHNOLOGY
 RESEARCH
 INSTITUTE



- 3 Laboratories of excellence (federative actions for research including PhD programs)

- **Labex Gral:** Grenoble alliance for integrated structural and cell biology (Molecular machines dynamic, self organization of Living Systems: <https://www.labex-gral.fr/ongoing-call/>)



- **Labex Lanef:** Photonics, spintronics, nanoelectronics, energy, cryogeny, nanosensors, nanomaterials... <http://www.grenoble-lanef.fr/>

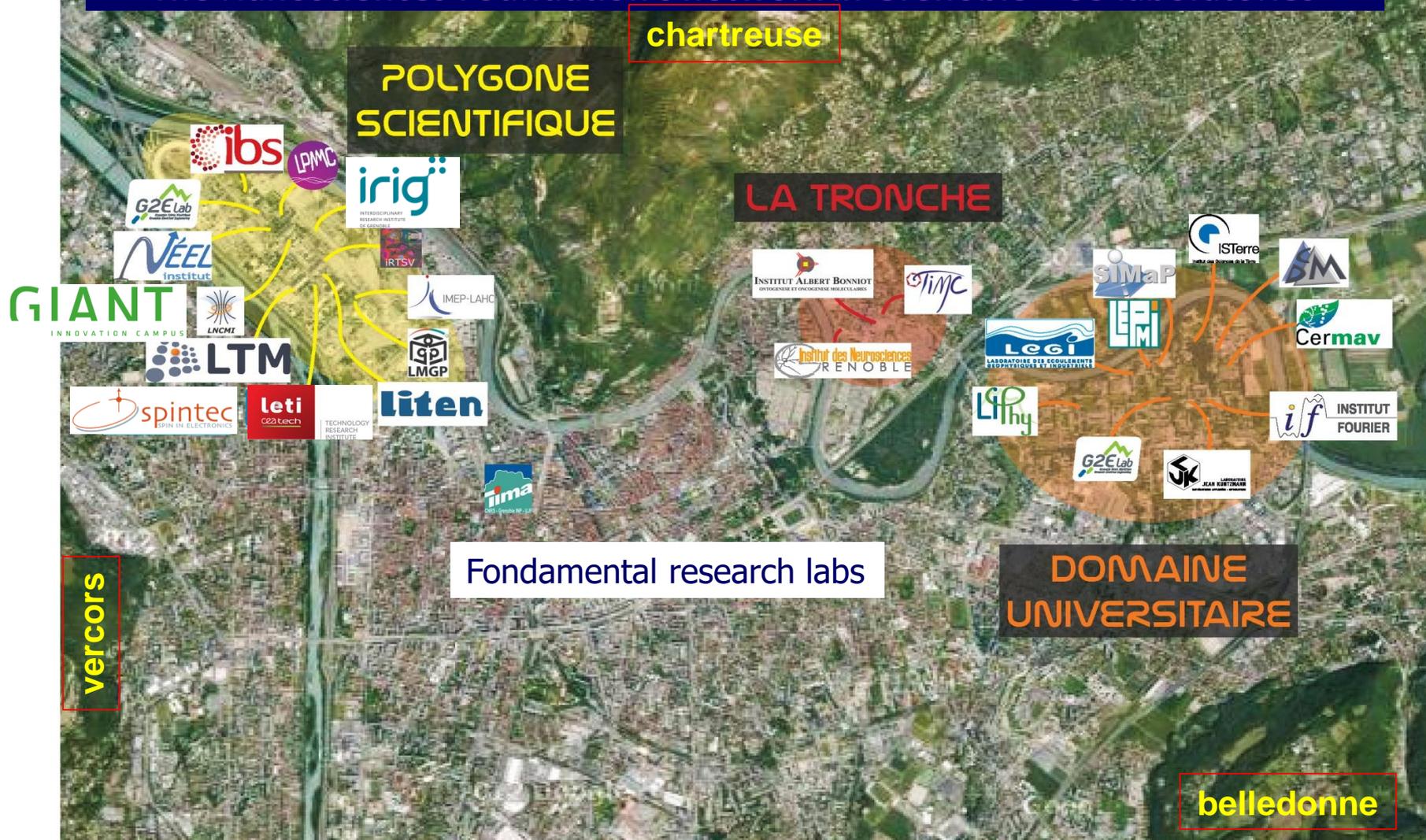


- **Labex Arcane:** Biology/chemistry interface, bio-inspired chemistry, <https://www.labex-arcane.fr/en>



- 3 European pre-doctoral schools: [Esonn](#), Hercules, Erca (dead line May 2021 for ESONN !)

The Nanosciences Foundation's network in Grenoble = 33 laboratories



See third pdf file dedicated to the study program **with online web links on labs**

Quantum technologies in Grenoble

An outstanding ecosystem for Research, Education and Innovation.

- **January 21th 2021** : the French President announced the launch of the **national quantum strategy**,



Quantalps Federation launched in January 2022

Grenoble uses its unique strengths to impact Quantum Technologies.

The exceptional density of expertise present on the site and their synergy also makes it a natural place for the emergence of new ideas and breakthrough innovations, beyond quantum technologies.

More than **200 researchers in 21 different laboratories in QuantAlps**, a Quantum Federation working on different scientific axes :

Quantum Engineering and Hardware :

Coherent manipulation and controlled entanglement of individual quantum objects.

Quantum Matter :

Collective quantum effects and new states of matter.

Quantum Information and Software :

New quantum techniques for the manipulation, processing and transfer of information.

Enabling technologies :

Technologies essential to Quantum Technologies: elaboration, cryogenics, cryo-CMOS, spintronics.



<https://quantalps.univ-grenoble-alpes.fr/>



QuantEdu-France national training program on quantum technologies (ANR CMI program 2022-2027)



- National quantum strategy for education, research and innovation launched in January 2021.
 - **5 year joint program led by UGA** gathering 21 French universities and academic institutions, professionals in academic training and industrial and innovation players in quantum technology. (start in 2022).
 - Goal: supports the emergence of talent and to accelerate the adaptation of training to the skill requirements of the new sectors in order to meet the needs of companies and research in terms of training and education.
 - **Implementation@UGA**: complementary trainings and **scholarships** in preparation for Bachelor, Master, Engineer and PhD students with a broad perimeter targeted: **Quantum engineering, quantum information, quantum computing, mathematics, humanities...**
 - **PhD and Master Scholarships calls to come from Spring 2022, see Quantalps web site: <https://quantalps.univ-grenoble-alpes.fr/>**

