

Grenoble Innovation for Advanced New Technologies, a world-class innovation campus

GIANT background

Testimonials

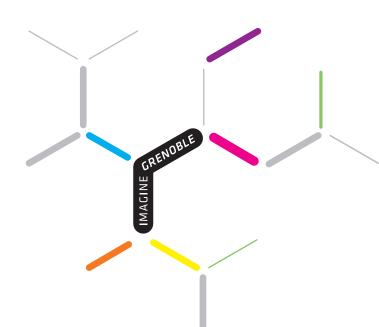
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Questions and answers

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# GIANT background

### Our vision

GIANT, Grenoble's dynamic campus dedicated to science, technology, and innovation, is a unique public-private endeavor that embodies state-of-the-art understanding of how knowledge is created and brought to bear on the needs of society and the lives of individuals.

The basic concept is simple:

- bring together some of the brightest minds in a diverse range of technical fields
- provide the best tools and facilities for cross-disciplinary research and development
- and create a framework for partnerships with innovation-driven corporations and creation of entrepreneurial startups

In support of these activities, GIANT is also cultivating an urban environment that provides scientists, engineers, students and entrepreneurs with vibrant, eco-friendly neighborhoods and access to the natural beauty of the Grenoble region.

This combination of qualities gives GIANT a unique position among the world's innovation centers, and makes it extremely attractive to industrial partners seeking a long-term engine to move technology from research to production.

### GIANT's mission

GIANT, founded in 2008 from an initial proposal by Jean Therme - Director of Technological Research (CEA Grenoble), has a three-fold mission:

- address the most pressing societal challenges: Information and Communications Technology, Energy, and Health
- break down barriers between fields of study by creating centers of excellence that are oriented around functional objectives, rather than academic disciplines
- harmonize urban and scientific development

At all levels, GIANT approaches these goals by facilitating intellectual collaboration – between individual researchers, workgroups, and organizations. GIANT partners, which includes governmental, academic, and industrial officials, firmly believe that this approach has tremendous promise to affect positive change on a broad scale.



# GIANT background

### GIANT' structure: Centers of excellence

GIANT's organizational strategy is built around Centers of Excellence – three that focus on applied research in our priority areas (Information and Communications Technology, Energy, and Health), and three that provide support for those efforts in the form of tight links with upstream basic research and access to expertise in the development of new business models.

In the Information and Communications Technology sector, GIANT partners include world-renowned companies from the fields of microelectronics, microsystems, embedded systems, computing, multimedia, and advanced imaging: Samsung, Soitec, IBM, STMicroelectronics, Alcatel-Lucent. Application focus areas include portable and wearable systems, as well as processors, medical systems, solar energy.

Energy Technology research has two primary focus areas: development of carbon-free sources of energy, such as solar, biomass, and advancement of energy storage capabilities (including fuel cells and advanced batteries, which are enablers for mobile and transportation applications).

The optimization of these technologies has gradually encompassed the entire value- chain analysis, from the basic components (such as electrode-powder composition) to the overriding structures (the power plant itself).

Health Technology efforts are aimed at developing a better understanding of biological systems, and the creation of medical treatments and devices that provide more efficient and less intrusive assistance. GIANT's integrative methodology also enables work on complex but extremely promising new technologies like real-time neurostimulation, advanced medical imaging, and therapeutic microelectronics.

For connections to upstream academic research, GIANT has established a Center of Excellence with Grenoble's EPN Science Campus, which hosts three globally distinguished European institutes: the Institut Laue-Langevin (ILL), the European Synchrotron Radiation Facility (ESRF), and the Grenoble Outstation of the European Molecular Biology Laboratory (EMBL). Together, these provide a unique combination of research infrastructures in the fields of neutron and photon science.

Two other Centers of Excellence focus on links with basic research (including nanoscience, cryogenics, materials and life sciences), and technology management programs at the Grenoble Ecole de Management, a world-class business school.



# GIANT background

## Harmonising urban project and scientific development

An enterprise like GIANT is only as good as the people it attracts. Top-level scientists, engineers, students and entrepreneurs have their choice of many desirable places to live and work, and it is essential to provide an environment that supports their lives and families as well as their work. GIANT will accomplish this with a vibrant community environment featuring housing, shops, restaurants, leisure activities, parks, a tramway, and riverside green spaces.

The project, based on an urban planning initiative designed by architect Claude Vasconi, embodies a radically innovative carbon-neutral approach. The overall concept is based on three guiding principles, which underpin the entire development:

- a cooperative approach to energy management
- a highly coordinated transportation system
- the strategic inclusion of urban pockets.

On one level, incorporation of these elements addresses key environmental goals such as total carbon neutrality, steep reductions in single-occupancy vehicle transportation and elimination congestion. At the same time, the approach offers very appealing quality of life, including many opportunities for informal sharing of ideas and experiences, and a lowering of barriers to communication.

## Accomplishments

GIANT has sparked the formation of more than 150 industrial partnerships, and many new programs and enterprises. These include:

- development with Sanofi-Aventis of molecules that can provide better therapy for diabetes patients, establishment of an alliance to develop solid-state hydrogen storage (led by the National Center for Scientific Research (CNRS), Grenoble Institute of Technology, and Université Joseph Fourier)
- a three-year R&D effort between the Alternative Energies and Atomic Energy Commission (CEA) and Renault to develop electric vehicles and other automotive technologies
- a Toyota-ESRF effort for longer-lasting automotive catalytic converters
- a joint development program within the IBM Alliance (led by CEA and STMicroelectronics) for advanced nanoelectronics
- setting up of bioMérieux worldwilde research centre
- ongoing programs in technology management at Grenoble Ecole de Management for top executives (SAFRAN, Schneider Electric, Orange etc.)



# GIANT: testimonials

### **STMicroelectonics**

"GIANT delivers on two key levels for STMicroelectronics. It reinforces the innovative partnership model that we have used for more than two decades, a model based on customer focus and a culture of cooperation that is deeply embedded in the way ST works.

Moreover, the Grenoble and Crolles ST sites are at the forefront of innovation and R&D and are key to ST's goal to be the clear world leader in power applications and multimedia convergence. A critical part of our strategy is to focus strongly on three key challenges facing the world today: energy savings, affordable and more- accessible healthcare, and security and data protection.

We see GIANT as an important element in achieving that strategy."

Bernard Fontan, Director, STMicroelectronics Grenoble

ST is a leading technology innovator, and integrated device manufacturer serving all electronics segments.

### Movea

"Open innovation is the proven way to develop and maintain technological leadership, but it doesn't happen by itself.

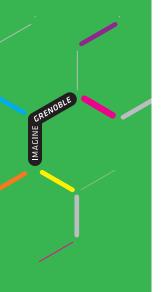
The members of GIANT know that by concentrating top research labs, universities, and leading technology companies in a creative and energized environment that fosters close collaboration will fuel tomorrow's innovation, nurture startups and create jobs.

For Movea, GIANT is a community to thrive in because it provides proximity to expertise and funding and the ability to hire and recruit talent.

There are good reasons why Silicon Valley grew in California."

Sam Guilaumé, CEO of Movea

Movea, a global leader in technology, patents, and products for motion-sensing applications in consumer, healthcare, mobile, and other markets.





# GIANT: facts and figures

GIANT's goal is to become one of the world's top campuses in research, higher education and technology transfer to industry.

GIANT today		GIANT tomorrow		
6,000 researchers 5,000 industrial jobs 5,000 students 300 residents 5,000 publications annually 600 patents applications filed annually 40 on-site businesses 50 start-ups launched in past 5 years 220 hectares		10,000 researchers 10,000 industrial jobs 10,000 students 10,000 residents		
1,6B€ annual bu (industry included)				
€4 billion direct and indirect annual economic impact Facilities  Centres of excellence		New buildings		
MINATEC GreEn NanoBio	120.000 m <sup>2</sup> 110.000 m <sup>2</sup> 50.000 m <sup>2</sup>	Education Research Industry Amenities Housing	53.000 m <sup>2</sup> 95.000 m <sup>2</sup> 47.000 m <sup>2</sup> 40.000 m <sup>2</sup> 57.000 m <sup>2</sup> .	
Total	280.000 m <sup>2</sup>	Total	292.000 m <sup>2</sup>	

## Funding

€1,300 million project investment between 2010 and 2015:

Centres of excellence		Infrastructures et amenities		
MINATEC	110 M€	Services	300 M€	
GreEn	120 M€	Tramway	100 M€	
NanoBio	45 M€	Railway	100 M€	
EPN Science campus	290 M€	Public highway	100 M€	
Basic research	25 M€			



## GIANT: questions-answers

## Why GIANT?

The partners in GIANT recognized the need to create new, dynamic links between academic research and industry to deliver the technological breakthroughs that will help meet the major challenges of the future in such areas as communication technologies, renewable energy and the environment, and bioscience and healthcare.

## How will GIANT help achieve these goals?

Our strategy of collaboration delivers excellence in R&D by fostering highly productive partnerships between universities, research and industry in an exceptional urban social-and-working environment that fosters productivity, creativity and interaction among diverse groups.

# Other economic and technology-development projects have similar goals. What makes GIANT different?

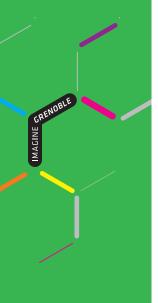
In addition to world-class research facilities, the success of an innovation campus depends on the quality of networking and interaction between scientists, engineers, students and entrepreneurs. The GIANT partners, with regional and national authorities, have undertaken a major urban transformation of the campus to shape it into a dynamic and attractive urban district blending work with leisure. This transformation includes:

- a vibrant living environment around an innovative learning center, with restaurants, shops and services, hotels, and mixed housing designed to create many opportunities for social interaction and communication
- outdoor leisure and sport facilities, with parks and green spaces, and reshaped riverbanks
- a carbon-neutral energy plan, with coordinated public transport, cooperative energy management, and solar energy facilities
- a social and economic enhancement with 10,000 jobs.

### How will GIANT be structured?

Our organizational strategy is built around Centers of Excellence – three that focus on applied research in our priority areas (information and communications technology, energy, and health), and three that provide support for those efforts in the form of tight links with upstream basic research and access to expertise in the development of new business models.

The principle underlying the centers of excellence is to group together, on a single site, research activities and industrial interests, technology platforms and academic activity.



## GIANT: questions-answers

## Why Grenoble?

The Grenoble-Isère region has a history of launching innovative companies and supporting SMEs and strategic operations of leading global enterprises. It is the European capital for micro- and nanotechnology and leads France in the number of engineers as a percentage of total jobs and in the number of research jobs as a percentage of total strategic jobs.

More than 62,000 students attend the region's higher-education institutions. This includes nearly 25,000 enrolled in science, technology, engineering and health.

Grenoble-Isère also is in the heart of Rhône-Alpes, France's second-largest regional economy. Rhône-Alpes offers many advantages to technology organizations, including:

- a research and business community with professionals from over 40 countries
- · world-class research institutes with advanced facilities and equipment
- powerful synergies among R&D centers, corporations and schools that spark effective innovation
- efficient road, rail, and air-transportation infrastructure that connects the region to all major European and world capitals
- · an exceptional quality of life

## How will you commercialize your research results?

Technology transfer is the main pillar of our partners' innovation strategy, and this focus drives our unique collaborative dynamics. The dozen technology platforms on our campus are designed to encourage and facilitate technology transfer from research to commercialization. These platforms cover nanotechnology, biotechnology, and new energy technologies, and host cross-disciplinary projects requiring significant design, characterization and fabrication resources.

The GIANT campus also has launched more than 50 businesses over the past five years. At each stage of the business-creation process, startups receive support from business incubators and other organizations in the form of training and product-launch assistance.

## What if a company wants to set up business on the GIANT campus?

Companies wishing to open a site at or near the GIANT campus can tap into the many support services offered by the local economic development agenies. These services include site visits, help obtaining financing, and introductions to contacts at leading local business organizations.

## What were GIANT's models for a campus?

We studied more than a dozen innovation, R&D and academic environments in the U.S.A, Europe and Asia that have or envisage an urban campus setting. GIANT seeks to learn from their best practices, including urban planning that maximizes interaction and communication, implementation of clean energy and transportation, and a selective focus on multiple areas of research and development.



# **GIANT** partners and key players

GIANT partners have made technology transfer the main pillar of their innovation strategy, driving the unique collaborative dynamics of this innovation campus.

## Founding members

### **Research Organizations**

Alternative Energies and Atomic Energy Commission (CEA) National Center for Scientific Research (CNRS)

### **Large-scale Research Infrastructures**

European Molecular Biology Laboratory (EMBL) European Synchrotron Radiation Facility (ESRF) Institut Laue-Langevin (ILL)

### **Schools and Universities**

Grenoble Ecole de Management (GEM) Grenoble Institute of Technology (G-INP) Joseph Fourier University (UJF)

### Partners

EADS, STMicroelectronics, Schneider Electric, Alcatel-Lucent, PSA, Siemens, Texas Instruments, IBM, bioMérieux, Sanofi-aventis, Astra Zeneca, GlaxoSmithKline, SEM MINATEC Enterprises,...

### **Competitive clusters**

MINALOGIC, Tenerrdis, Lyonbiopôle

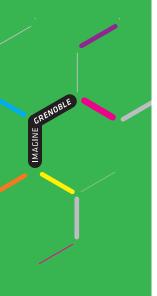
### Academic framework

Grenoble Université

### Local governments

Local agencies

Public transportation



# Commissariat à l'énergie atomique et aux énergies alternatives (CEA Grenoble)

Created in 1956 by Professor Louis Néel, Nobel price winner in Physics, the Alternative Energies and Atomic Energy Commission (CEA) is one of the pillars of the Grenoble innovation ecosystem. It is composed of 4 large research institutes:

- LETI is one of the major research institute in micronanotechnologies in France
- LITEN is a fast growing research institute in new technology for enegery focusing mainly on photovoltaic energy, batteries and fuel cells
- INAC is a large research institute focusing on nanosciences and cryogenics;
- iRTSV explores the integrated functions of proteins.

Thanks to the dynamism of its research institutes the CEA-Grenoble is the initiator of major projects such as MINATEC, GreEn and the GIANT Innovation Campus.

It is an active partner of the competitiveness clusters Minalogic, Tenerrdis and LyonBiopôle.

### Key figures

- 63 hectares
- 3,500 employees, 4,500 people working on site
- 1,500 publications yearly (rank A)
- 500 priority patents in 2009
- more than 130 start-ups created
- annual budget of 500M€

web site: www.cea.fr



**Jean Therme**, Directeur délégué of Renewable Energies/Director of Technological Research, CEA/Director of CEA Grenoble



Mr Therme, one of the original visionaries of the GIANT project, was named Directeur délégué of renewable energies at CEA in 2010. In this new position, he will represent the CEA chairman before government authorities, academic partners and industrialists in matters relating to new energy technologies.

As part of his role as the director of technological research, Mr. Therme has played a driving role in the build-up of research on new energy technologies. After having created the LITEN (Laboratory for Innovation in New Energy Technologies and Nanomaterials) in 2005, he was the main instigator of France's National Solar Energy Institute (INES) and, more recently, he was strongly involved in the creation of the new French manufacturing line for

batteries, with the Renault Nissan Alliance.

Mr. Therme was instrumental in the launch of the Minatec innovation center, alongside the Grenoble Institute of Technology (INPG), the first European research center in the field of micro- and nanotechnologies. He also has championed several centers of research excellence. Besides GIANT, these include Digiteo Lab, dedicated to complex systems; Nanobio and GreEn, dedicated to the meeting points of nanotechnology and the fields of biology and health, and the INES at Chambéry.

Before joinging CEA in 1990, he spent more than 10 years in a variety of operational-management positions with Philips, Thomson CSF, Alcatel and STMicroelectronics.

Mr. Therme has a degree from the Institut National Polytechnique de Grenoble (Grenoble INP).



## **CNRS Alps**

The Centre national de la recherche scientifique (National Centre for Scientifique Research) is a government-funded research organization.

The CNRS has the mission to produce knowledge and bring this knowledge to society. CNRS employs 33,000 people in 1,100 laboratories and its 2010 budget is more than 3 billion euros. CNRS is the largest centre for basic research in Europe.

The CNRS is also among the top ten patent applicants in France and the first European organization to appear, in 2009, in the top ten ranking score board of the «Intellectual Property Today» organization in terms of patents filed in the USA. The CNRS is an important contributor to in the innovation and economic development of our country.

### Key figures

- 2,200 members of staff including 1,700 tenured employees (800 researchers, 900 engineers and technicians) and 500 non-tenured employees (PhD and post PhD students)
  Since 2001:
- 229 patents and 80 licences involving CNRS laboratories
- 57 start-ups created thanks to the work of units from CNRS Alps
- 2,100 industrial and European contracts Since 2005:
- nearly 500 ANR projects managed by CNRS were selected covering almost 70 M€ web site: www.cnrs.fr/alpes



## Jérôme Vitre, Regional Director, CNRS Alps



Mr. Vitre was named regional director of the Centre National de la Recherche Scientifique (CNRS) in the Alps district in 2010. He joined the CNRS in 1997 as manager of the finance department, and was promoted to head of budget and finances in 2004. In 2007, he was named administrative assistant to the director at the National Institute of Nuclear Physics and Particles Physics at the CNRS.

As regional director, Mr. Vitre coordinates the activities of CNRS on behalf of the president with regional and local authorities, public administrations, universities, schools and companies, and regularly meet with laboratory directors, management and employees of regional companies.

Mr. Vitre has a degree in controlling and auditing from Paris University Dauphine.



## European Molecular Biology Laboratory (EMBL)

The European Molecular Biology Laboratory (EMBL) Grenoble is an international laboratory of about 85 people, located in very close proximity to two unique European facilities for research in structural biology: ILL and ESRF

EMBL Grenoble has three principle activities:

• collaborating with the ESRF and ILL in developing methods and instrumentation for structure determination by X-ray and neutron crystallography



- $\bullet$  leading research in molecular structural biology notably in the fields of protein-RNA complexes
- developping instruments and technologies dedicated to automated expression and crystallisation of proteins.

web site: www.embl.fr

### Stephen Cusack, Director, EMBL Grenoble



Dr. Cusack joined the European Molecular Biology Laboratory in 1977 and has served as head of the EMBL Grenoble Outstation and group leader in the structural biology of protein-RNA and viral proteins projects since 1989.

He has guided the Outstation's close collaboration with the European Synchrotron Radiation Facility to provide state-of-the-art beamline facilities for structural biology. Under Dr. Cusack's leadership, the Outstation also became a founding member of the Partnership for Structural Biology, which provides an interactive environment for multidisciplinary structural biology. He is also director of the EMBL-CNRS-Grenoble University international unit for virus host cell interactions and he is extensively involved in European-level

structural biology initiatives.

His research group uses X-ray crystallography as a central technique to study the structure-function relationships of complexes involving RNA in eukaryotic cells. In parallel, Dr. Cusack has focused on the structural biology of viral proteins, most notably adenovirus capsid proteins and negative strand RNA virus polymerases, especially that of the influenza virus. These projects are leading to development of novel antibiotics and anti-virals.

Dr. Cusack has a degree in physics and theoretical physics from Cambridge University and a Ph.D. degree in theoretical solid-state physics from Imperial College, London.



## European Synchrotron Radiation Facility (ESRF)

The European Synchrotron Radiation Facility (ESRF) is an international institute set up by 19 countries. It operates one of the world's most powerful X-ray sources as a user facility for external scientists and researchers. Its 41 beamlines host 1500 cutting-edge experiments every year.

The frontline basic science at the ESRF has strong links to applications in advanced materials, environment, energy and health.

Academic research enjoys free access through a peer-review selection process of experiment proposals. All results are published in scientific journals.

Proprietary (industrial) research may access ESRF beamlines against a fee if the research project prefers to retain the intellectual property rights.

### Chiffres clés

- 2,000 experiment proposals received
- 7,000 user visits by external scientists
- 1,600 publications in refereed journals
- 600 staff from more than 40 countries
- 155 scientists 30 Ph.D. students
- Budget 2010: 100 M€

site web : www.esrf.eu



### Dr Francesco Sette, Director General, ESRF



Appointed director general of the European Synchrotron Radiation Facility (ESRF) in 2009, Dr. Francesco Sette has nearly three decades of research in synchrotron radiation.

He joined the ESRF in 1991 and as a group leader he developed a new generation of inelastic X-ray scattering beam lines, which made possible the study of atomic motions and electronic properties of condensed matter at unprecedented energy resolution.

Dr. Sette was promoted director of research in 2001. In that position, he played a pivotal role in maintaining the ESRF among the world's leading synchrotron radiation sources, and in enlarging its user base, which today comprises more

than 4,000 scientists.

Earlier in his career, he spent eight years at the AT&T Bell Laboratories in Murray Hill, N.J. USA. In 1990, Dr. Sette co-invented the world's first high-energy-resolution, high-intensity soft X-ray source, which quickly found its way into many synchrotron light facilities around the world.

Dr. Sette holds a Ph.D. in physics from the University of Rome.



## Institut Laue Langevin (ILL)

The Institut Laue Langevin (ILL) is an international research centre at the leading edge of neutron science and technology. It operates one the most intense neutron source in the world, feeding intense beams of neutrons to a suite of 40 high-performance instruments that are constantly upgraded. As a service institute the ILL makes its facilities and expertise available to visiting scientists. Research focuses primarily on fundamental science in a variety of fields: condensed matter physics, chemistry, biology, nuclear physics and materials science,... ILL is funded and managed by France, Germany and the United Kingdom, in partnership with 11 other European countries.

### Key figures

- More than 800 experiments performed annually
- 1,200 researchers from over 40 countries
- 493 members of staff including 67 experimentalists in the scientific sector and 29 thesis students.
- Budget 2009: 84 M€

web site: www.ill.eu



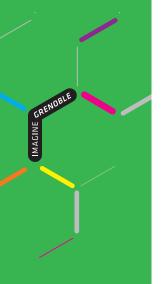
### Andrew Harrison, Director, ILL



On 1st October 2011 Andrew Harrison has been appointed Director General of

Andrew grew up in Keele, UK and graduated from Oxford University with a degree and DPhil in Chemistry. He then worked as a Royal Society University Research Fellow before joining Edinburgh University in 1992, becoming Professor of Solid State Chemistry in 2000.

Andrew was Founding Director of the Centre for Science at Extreme Conditions in 2001. He joined ILL as Science Director in 2006.



## Grenoble Ecole de Management (GEM)

With 6,000 students, including 2,000 international students, in Grenoble and on its 10 sites abroad, the school delivers 40 national and international programs from the undergraduate to the post-graduate level.

Ranked in the Financial Times and accredited EQUIS, AACSB and AMBA, Grenoble Ecole de Management is one of only a few business schools worldwide to hold the triple accreditation crown. Grenoble Ecole de Management has developed a unique expertise in Technology Management and Innovation.

### Key figures

- 6,000 students and 1500 Executive Education participants
- 700 core and adjunct teaching staff, including 193 professors and more than 500 guest lecturers
- 13.000 alumni
- 230 doctoral students
- 3rd french business school in research according to the 2010 ranking of Le Point
- 8 institutes and reseach centers
- 96 different nationalities in Grenoble, 120 in the group

web site: www.grenoble-em.com



## Thierry Grange, President of the Stratégic Board, Grenoble Ecole de Management



Mr. Grange serves as President of the Strategic Board at Grenoble Ecole de Management, which he co-founded in 1984. The school is one of the top six French business schools (Grandes Ecoles) and among the top 25 European Business schools.

Under his leadership, the school has signed numerous agreements with partners in Europe, the U.S. and Asia, including: a strategic agreement with Grenoble INP to develop common programs in technology management at the graduate and executive-education level; an agreement with Minalogic to contribute to innovation and local technological-entrepreneurship initiatives; an agreement with Georgia Tech University in Atlanta, GA USA, to develop

courses in management of technology, and an agreement with Tsukuba University in Japan to develop distance-learning courses.

Mr. Grange started his professional career as an international industrial project manager in developing countries in Africa and Asia. In 1978, he co-founded BFG motorcycles and was the company's CEO for six years.

He has received numerous awards, including, in 2009, the Academic Achievement Award for 25 years promoting teaching and research activities in management of technology, from the International Association for Management of Technology. Mr. Grange also has published more than 60 scholarly and professional works, including journal articles, books, conference papers and book chapters in the area of Technology Management and Business Education.

Graduate Engineer – Mechanical Engineering – TU München (D)
MSc Economy & Finance – Institut d'Etudes Politiques – Grenoble (F)
MPhil Marketing Research – University Pierre-Mendes-France – Grenoble (F)



## Grenoble Institute of Technology (Grenoble INP)

For more than 100 years, Grenoble Institute of Technology has been training engineers and PhD students in key technologies, as well as developing high level research activities and strong links with industry and business.

Grenoble Institute of Technology plays a key role in innovation and it has been involved in the scientific area of Grenoble, GIANT's root, for over 50 years.

Grenoble Institute of Technology is a founding member of MINATEC and of GIANT Innovation Campus. It is leader of the GreEn-ER project (Grenoble Energies-Education and Research)

- 22 fields of engineering training
- 30 high level research laboratories (7 international ones), in partnership with CNRS, INRIA, universities.
- 117 million euros budget
- 5.200 students
- 1,100 engineering degrees and 200 PhDs delivered each year
- 1,150 teachers, researchers and office staff
- 40,000 alumni working all over the world
- a portfolio of 145 patents since 2005
- 25 start-ups created since 2006

All the engineering training fields of Grenoble Institute of Technology are accredited by EUR-ACE (European Accreditation) and have confirmed their good ranking in 2010 in the French press. web site: www.grenoble-inp.fr





Ms. Plateau has acquired both the skills and experience to achieve the ambitious goals she has set for Grenoble Institute of Technology. Her qualifications include a teaching degree from France's prestigious École normale supérieure as well as France's highly-selective agrégé certification in mathematics education. She is also a certified university professor and holds a PhD in Informatics from the University of Paris XI.

Ms. Plateau began her career as a researcher at CNRS, France's national center for scientific research. She then taught at the University of Maryland in the United States before coming to Grenoble Institute of Technology in 1988. She founded and directed the 500-person Grenoble Informatics Lab

(LIG), which received an A+ rating from French research accreditation council AERES in 2010. Her research examines information systems performance, with a particular focus on distributed and parallel systems. She also studies waiting systems, distributed algorithmics, and massively parallel calculation (programming and observation).

Ms. Plateau has served as Director of Ensimag (Grenoble Institute of Technology's school of informatics, applied mathematics, and telecommunications) since November 2010. She sits on a number of national scientific boards including those at CNRS, ANR, INRIA, and MESR. She received the French Knight of the Legion of Honor medal in February 2011.



## Joseph Fourier University (UJF)

Joseph Fourier University (UJF) is one of the leading French research-intensive universities for science, technology and health, in the world's top 200 universities (Shangaï ranking). UJF has 50 large laboratories and its top level research is developed in partnership with national research bodies (CNRS, CEA, INSERM, INRIA,...) and major international facilities located in the Grenoble area (European synchrotron radiation facility - Institut Laue Langevin).

In terms of technology transfer, the university's assets include a portfolio of over 500 patents, and 25 start-ups that have been created over the past ten years.

### Key figures

- 16,800 students
- 1.400 PhD students
- 1,500 faculty members and researchers
- 1,400 technical and administrative staff
- 16 training departments, including an engineering school, a university technology institute (IUT), a graduate teacher-training college (IUFM)
- 50 laboratories
- 5 M€ annual revenue from intellectual property
- 16 M€ annual contract resources
- 240 M€ budget

web site: www.ujf-grenoble.fr



## Patrick Lévy, President and Vice-Chancellor of Joseph Fourier University



Patrick Lévy, 57, is a University Professor and Hospital Practitioner in Physiology (UJF/Grenoble University Hospital). He has been running Pulmonary Function Testing and the Sleep Lab at Grenoble University Hospital since 1988, as well as the HP2 Lab (Hypoxia Pathophysiology – UJF/INSERM) since 2003. He is now the President and Vice-Chancellor of Université Joseph Fourier in Grenoble, following his election in April 2012.

He is a Doctor of Medicine (Université Joseph Fourier, 1982), a lung specialist (1983), and holds a Diploma of Advanced Studies in Animal Biology (Université Louis Pasteur, Strasbourg, 1986) as well as a Doctorate in Biology (Université Joseph Fourier, 1989). He was appointed as Lecturer (1989) and

later as Professor of Physiology (1997) at the Université Joseph Fourier Faculty of Medicine. He has been running Pulmonary Function Testing and the Sleep Lab at Grenoble University Hospital since 1988. Among his various and wide-ranging hospital responsibilities, he was Head of the Rehabilitation and Physiology Centre, the Regional Delegation for Clinical Research and Innovation, and the Research Centre at Grenoble University Hospital. For the past twenty years, he has been developing clinical research into sleep apnoea and Grenoble is now one of the main centres in Europe for this particular pathology. More recently in 2002, he began setting up an experimentation laboratory for intermittent hypoxia – the Hypoxia Pathophysiology Lab (HP2, UJF/INSERM U1042). He has authored more than 200 publications in major scientific journals. The international recognition he received for this research led him to take on responsibilities both on a national (President of the French Society for Sleep Research and Medicine, Founding President of the National Institute of Sleep and Alertness) and an international scale within European and American scientific societies. He will remain Vice-President of the European Sleep Research Society (2009-2012) for a few more months. He has also been a Visiting Professor over the past few years at a great number of universities worldwide (Universities of Harvard, Pennsylvania, Sydney, Melbourne and Hong Kong).

