Innovating in a digital world

 Télécom ParisTech

The leading French graduate engineering school in Information and Communication Technologies (ICT)

Master of Engineering – Master of Science – PhD – Advanced Master
 Télécom ParisTech: The French leading graduate school in ICT Information & Communication Technology

- **Is the 1st innovative graduate engineering school in ICT** under the aegis of the minister for Industry
- Situated in **Paris**, France with an English speaking campus in **Nice** in the 1st European Technopole; it also shares a campus in **China** (Shanghai)
- Provides Engineering training at the highest standards: Master of Sc. In Engineering – Master of Science – PhD
- Research and teaching at the highest international level in the ICT
- Holds the 1st ICT Incubator in France, with 2-3 start-up created per month
- **a distinctive ambition: Innovating in a Digital World!**
  Aim to educate leaders and entrepreneurs in all fields of digital science and technology, in France and beyond
Some of our records

- Founded in 1878
- The word *Telecommunications* invented here (1904)
- **Digital exchanges** (in the 70’s)
- **Turbocodes, golden codes** (Titanic; NASA ..)
- Telecom ParisTech graduates … did it !
- **Founding successful start-up**
  - Linked In : 400 million+ members
  - Netvibes, bought by Dassault Systems
  - Leetchi.com, 4 millions Euros fund raising
  - Deezer, 100 millions Euros fund raising
- **Becoming CEO of major companies:**
  Thales, Alcatel Lucent, Dior Couture, … ,
  McKinsey France, Facebook Mobile, ..
Institut Mines-Télécom

Telecom ParisTech… to Innovate in a digital world

- ICT major factor of Innovation, worths 25% of the French GDP growth
- Telecom ParisTech deals with all sciences & technologies for ICT: Computer Science, Networks, Communications, Electronics, Signal and Image Processing, Social and Human Sciences as well as the study of the economic and social aspects associated with modern technology
- French “Ingénieur”: MEngineering, MScience: 3 years curriculum with high scientific level (maths, physics) together with strong teaching in economics, humanities and personal development
- Highly international: 50% international students, 130 partner universities abroad
- High faculty Ratio : 1/7 (200 full-time professors / 1,540 students)
- Highly Innovative: 200 sustainable companies & 2,200 jobs created in 16 years – 3 start-up per month – 100 patents – Research of International excellence (A+).
- Closely connected to industry & economy: Research contracts with industry. Among the 66,4 Millions Euros operating Budget, 30% is self driven. Graduates: hired with high salary they reach top positions in various companies.
Famous alumni

- Patrick Drahi, president of Altice (Numericable, SFR, HOT…)
- Jean Bernard Lévy, chairman and CEO of Electricité de France (EDF)
- Michel Combes, CEO of Alcatel Lucent
- Eric Labaye, director of Mc Kinsey Europe
- Jean Beunardeau, director of HSBC Europe

In the past:

- Alain Glavieux, co-inventor of turbo-codes
- Maurice Lauré, creator of the Value Added Tax
Famous alumni

- Mongi Marzoug, Minister of ICT (2011-2014), Tunisia
- Yang-hee Choi, Minister of Science, ICT, and Future Planning, South Korea
- Bedoumra Kordjé, Minister of Finances of Tchad
Famous alumni

- They succeeded in the US:
  - Jean-Luc Vaillant & Yan Pujante (co-founders of LinkedIn)
  - Vincent Dureau & Barbara Coppola (in charge of Google TV)
  - Henri Moissinac (former head of Facebook Mobile)
  - Luc Julia (owner of a majority of Apple SIRI patents)
  - Fred Potter (Founder of NetAtmo, awarded at CES Las Vegas)

- They Succeeded in France:
  - Tariq Krim (creator of Netvibes, sold 50 M€ to Dassault Systemes)
  - JC Dufourd (cofounder of Streamezzo, sold to Vodafone for its portal Vodafone Live)
  - Diaa Elyaacoubi (founder of Streamcore)
  - Corentin Raux (founder of « Pretty Simple » and creator of the game « Criminal Case » on Facebook, n°1 worldwide for games on FB in 2013)
A school with 3 strong affiliations

12,500 students
1,700 PhD students
1,450 faculty

The first group of engineering and business schools in France
www.mines-telecom.fr

At Opening 1.1.2014
60,000 students
6,000 PhD students
11,000 faculty

A worldwide hub for innovation & education, whose ambition is to be classified in the top 25 of the Shanghai international ranking
www.universite-paris-saclay.fr

15,000 students
2,400 PhD students
2,600 faculty
200,000 alumni

The Paris Institute of technologies gathers 10 Graduate schools, each one being the best in its domain in France
www.paristech.fr
Degrees offered at Telecom ParisTech

- **French Engineer:** *Ingénieur Grande Ecole Télécom ParisTech*
  - Engineer Double-degree (1.5 years)

- **Master** (1 year)

- **Doctorate** (3 years)

- **Post-master’s degree**
  (executive education)
How to get admitted at Télécom ParisTech?

**French students**: After 2 or 3 years in “Classes préparatoires” or 3 years in French University.

**International students**: After 4 or 5 years in University.

**Bachelor level**: After completion of "Baccalauréat" level (French Universities entrance exam).

**Ingénieur**
- Year 1
- Year 2
- Year 3

**Master**
- Year 1
- Year 2

**Doctorate**
- Year 1
- Year 2
- Year 3

**PhD Level**

**Masters**
- 328 in Master of Science in Engineering "Diplôme d'Ingénieur"
- 62 in Masters ParisTech
- 66 Others
- 356 in Advanced Master

**Doctorate**
- 1,540 students
Fields of teaching and research

Computer science & Networking

- Systems, software and services
- Information, communications and computing mathematics
- Networks, mobility and security
- Interaction, cognition and complexity

Economics, Management & Social Sciences

- Interactions, Technology Activity
- Mutations of Cultural Industries in a Digital World
- Regulation and Innovation
Communication & electronics

- Digital Communications
- System On Chip ; Digital Electronic Systems
- Antennas, Microwave & Radiofrequences
- Circuits and Communication Systems
- Optical communications

Signal & Image

- Statistics and Applications
- Audio, Acoustics and Optics
- Image processing and interpretation
- Multimedia
Programmes with the leading and most innovative French graduate schools, universities, R&D

- ICT ... major factor of Innovation

- HEC, the best European Business school (*Financial Times* 2013)

- Polytechnique, the best French Engineering school (*Times Higher Education World University Rankings 2012-2013*, which includes teaching and research core missions)

- The 1st and 2nd French Universities classified in the ARWU 2014 (*top 50, on this Academic Ranking of World Universities based on research as major indicator*)

- National Centre for Scientific Research, the largest French governmental research organization - the largest fundamental science agency in Europe

- Alternative Energies and Atomic Energy Commission, is a prominent player in the European research area
Our strong partnerships with industry

- **Governance**
  - Representatives from industry in boards, working groups, etc.

- **Teaching**
  - > 500 part-time lecturers from companies
  - Internships and study projects in companies

- **Research**
  - 9 Teaching and research chairs
  - Member of Competitive Clusters
  - 9 Joint Laboratories
  - Joint projects

- **Entrepreneurship**

- **Continuing education**
Education strategy
towards the “engineer innovator”

- Active learning all along the cursus learning by project, joint teams engineers/marketing/designers…

- Regular encounters with industry and their young graduates: 50 encounters/year, speed-dating, forums, challenges, …

- Incubator: catalyst for innovation
Years 2 & 3

- **2 semesters of courses**
  - 120 scientific teaching units gathered into 13 learning tracks (Paris)
  - 5 learning tracks (Eurecom)
  - more than 100 non-scientific courses
    - Languages
    - Social sciences
    - Culture

- **1 semester of internship (professional thesis)**
  - Most often in a company
  - Sometimes in an academic research lab.

![Diagram showing courses and internship]

Year 2: track’s core curriculum

Year 3: track’s option
Which study track at Telecom ParisTech?

13 tracks:
- Human-computer interaction and 3D computer graphics
- Image
- Theoretical computer science and operational research
- Stochastic processes and scientific computation
- Networks
- Communication devices and systems
- Data science
- Embedded systems
- Signal and digital data: Models and applications
- Strategy, innovation, markets
- Distributed systems and software
- Security of computer networks and infrastructures
- Algebra, Coding, Cryptography, Quantum

Mainly in French

5 tracks:
- Data science and engineering
- Mobile communications
- Multimedia
- Smart objects
- Communication system security

In English

And also:
- foreign languages and cultures
- the personal skills and human relations
2 campuses for the same Engineer degree

Paris downtown

Sophia Antipolis, French Riviera;
Institut Eurecom

- On the French Riviera in Sophia-Antipolis in the very heart of the 1st European Technopole

- A network of prestigious academic partners
  Politecnico di Torino, Aalto University, Technische Universität München – TUM, NTNU - Norwegian University of Science and Technology, Chalmers University of Technology, Czech Technical University - CTU

- Multinational industrial partners
  • Swisscom, SFR, Orange, ST, SAP, BMW, Symantec, IABG, Monaco Telecom…

- A multilingual environment
  • 100 % classes in English, 70 % foreign professors, 60 % foreign students
In 2015, industries and services sectors of employment are:

- 35% in information technology
- 25% in consultancy firms
- 11% in telecommunications
- 29% in all other sectors, illustrating the wide diffusion of digital technology.

26.4% are working abroad.

93% of graduates have signed their contract within four months after leaving school.

The survey was conducted online between 19 February and 2 April 2015 with graduates of the latest batch 2014. The response rate was 66%.
Doctoral programme

- 3 years
  - cross-disciplinary scientific courses, professional training, etc.

- 4 specializations
  - Electronics and Communications
  - Computing and Networks
  - Signal and Image Processing
  - Information System Economics

- 80 theses awarded each year

- Strong links with industry

- Doctorate School:
  - EDITE (A+ accredited, international excellence / AERES)
  - STIC (from 2015)
2 UMR : Joint Research Lab CNRS & Telecom ParisTech

Reference Center in Europe for Pluridisciplinary Research in the Digital Field

Big Data : Dynamics of Data & Knowledge
Very Large Networks & Systems
Digital Trust : Safety, Reliability & Risks
Interactions Human - Virtual
Pluridisciplinary Approach to Innovation
Modelization

Digital Communications & Electronics

Social & Economical Sciences
I3 (with Polytechnique et Mines ParisTech)

Institute of Interdisciplinary Innovation
Inside Student life at Telecom ParisTech

- A library
  - >20000 documents
  - Shared interactive smart board, ..
- A language resource center
- WiFi everywhere ; 100s of free access PC (7:30 – 00:00)
- School’s restaurant

- Student accomodation
  527 beds located nearby, across three sites
  affordable students rents : ~ 380 € /month.
  Students may be eligible for an accommodation allowance.
  Life cost in Paris : from 600 € /month.
- Nice Neighbourhood
- attractive Paris area, rich environment and culture
- Local accommodation, tennis, student facilities…
- Intense student life
  - sports, nights, concerts, techno clubs, students trips, industrial Forum, Junior-Entreprises, challenge,…
More information?

- **web sites**
  - [www.telecom-paristech.fr/](http://www.telecom-paristech.fr/)
  - [international.telecom-paristech.fr/](http://international.telecom-paristech.fr/)
  - [www.paristech.fr/](http://www.paristech.fr/)
  - [www.mines-telecom.fr/](http://www.mines-telecom.fr/)
  - FACEBOOK, twitter, youtube
  - Newsletters

- **Contact us**
  - Information: [international@telecom-paristech.fr](mailto:international@telecom-paristech.fr)
  - PhD: [phd@telecom-paristech.fr](mailto:phd@telecom-paristech.fr)
  - Masters of science: [master.ict@telecom-paristech.fr](mailto:master.ict@telecom-paristech.fr)
  - Post-master’s degree: [masteres@telecom-paristech.fr](mailto:masteres@telecom-paristech.fr)
  - Research: [research@telecom-paristech.fr](mailto:research@telecom-paristech.fr)