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 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 : 200 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, ..
Some famous alumni

- Patrick Drahi, president of Altice (Numericable, SFR, HOT...)
- Jean Bernard Lévy, chairman of Thales Group
- 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
Some alumni success in ICT innovation

- 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)
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, 101 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 15 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.
In 2014, industries and services related to information technology and consultancy firms account for 75% of jobs (1/3 each).

The last quarter of the jobs represents all sectors, illustrating the wide diffusion of digital technology.

23% are working abroad.

The survey was conducted online between late February and late April 2014 with graduates of the latest batch 2013. The response rate was 78%.
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 12 of the Shanghai international ranking
www.universite-paris-saclay.fr

20,000 students
2,600 PhD students
2,900 faculty
200,000 alumni

The Paris Institute of technologies gathers 12 Graduate schools, each one being the best in its domain in France
www.paristech.fr
2 campuses for the same Engineering Degree

Paris downtown

Sophia Antipolis, French Riviera;
Which graduation at Telecom ParisTech?

- **French Engineer:** *Ingénieur Grande École Télécom ParisTech*
  - Engineer Double-degree

- **Master of Science** in Engineering

- Manager-Engineer **Double-degree**

- **Doctorate**

- **Post-master’s degree**
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

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Institut Mines-Télécom

01/07/2015

Institut Mines-Télécom

Institut Mines-Télécom
Years 2 & 3 in Paris

- **2 semesters of courses**
  - 120 scientific teaching units gathered into 13 learning tracks
  - A track is a 2-semester set of courses.
    - The validation of one track is required.
    - The internship is associated with the track to be validated.
  - 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.

Year 2: track’s core curriculum

Year 3: track’s option
The tracks offered on Paris campus

- 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
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 & Radiofrequencies
- Circuits and Communication Systems
- Optical communications

Signal & Image

- Statistics and Applications
- Audio, Acoustics and Optics
- Image processing and interpretation
- Multimedia
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)
LTCI & I3 (2015),
2 UMR : Joint Research Lab
CNRS & Telecom ParisTech

Reference Center in Europe for Pluridisciplinary Research in the Digital Field

Signal, Image, 3D Processing
LTMI

Networks & Computer Science
LTMI

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

6 Strategic Axes

Digital Communications & Electronics
LTMI

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

Institute of Interdisciplinary Innovation

March 2015
Telecom ParisTech
Research Key Figures

People

- 210 Professors, Researchers & Engineers
- 1100 Grad & UnderGrad Students
- 290 Ph.D St.
- 50 PostDoc & Invited Researchers

2014 Production

- 72 Defended PhDs
- 19 Patents (filed)
- 630 Publications
- 12 M€ Contracts
- 9 Chairs
- 9 Joint Labs

Partners

- BNP PARIBAS
- EDF
- TOTAL
- RENAULT
- PSA PEUGEOT CITROEN
- DASSAULT SYSTEMES
- THALES
- SAFRAN
- EADS
- Google
- Alcatel-Lucent
- Accenture

Research Activities Overview

March 2015
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 accommodation
  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
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  - Post-master’s degree: [masteres@telecom-paristech.fr](mailto:masteres@telecom-paristech.fr)
  - Research: [research@telecom-paristech.fr](mailto:research@telecom-paristech.fr)
The international cursus in EURECOM

- 100% classes in English
- 70% foreign professors, 60% foreign students
- 7 tracks: mobile communications, multimedia, networks, embedded systems, security, internet applications, transmission technologies, humanities
- Same Choices for Dual skills
- A new campus of 3000 students
  - with Univ. Nice-Sophia Antipolis, INRIA, CNRS..
  - In the 1st European technopole for digital