

ÉCOLE POLYTECHNIQUE



Are you passionate about science and want to deepen your knowledge?



Fulfill your potential with the multidisciplinary scientific academic programs of École Polytechnique.

3 REASONS FOR STUDYING AT L'X

1

***Selectivity and
excellence***

*with a diversity of
career opportunities*

2

***International and
multicultural***

*higher education and
research institution*

3

Intense campus life

in the south of Paris

It all starts here






DISCOVER
L'X FROM EVERY
ANGLE



L'X FROM EVERY ANGLE



École polytechnique
is a **world-class** higher education and research
institution, founded on a **multidisciplinary approach**,
guided by **audacity**
and a sense of **public interest**.



A WORLD-CLASS INSTITUTION



1st (France)

**Best Grande École
for science and
technology**

In all French rankings



6th (world)

**Top university for the
number of Nobel prizes
per graduate**

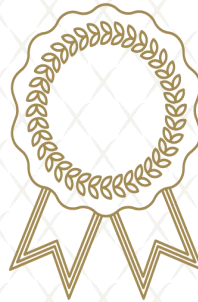
NATURE 2016



4th (world)

**University ranking
according to how many
qualifications they have
awarded to chief
executives of members of
Fortune magazine's
Fortune Global 500**

*THE Alma Mater Index – Jan.
2017*



5th (Europe)

28th (world)

**Best university for
graduate
employability**

QS Sept. 2017



MULTIDISCIPLINARY

Multidisciplinary scientific curricula

*Mathematics, physics,
computer science, etc.*

Fundamental & applied research

**INNOVATION RESULTS
FROM EXPOSURE TO
RESEARCH**

Openness to the humanities and social science

Multiple synergies

*between education, research
and entrepreneurship*

AN INSTITUTION THAT DARES...



to be international

30%
of students are
international



to be open

L'X promotes the transfer
of scientific and
technological research
to the business world



to push back limits

L'X is
*among the world's 8 most
innovative clusters*

MILITARY AND HUMANIST HERITAGE

1794

École Polytechnique is founded at the height of the Age of Enlightenment



A humanist and progressive approach to science **to address the key challenges of the 21st century**

1804

Military status



L'X under the authority of the **Ministry of the Armed Forces**

Civic and military training **to shape responsible and committed leaders**



THE 3 PILLARS OF L'X



Research

*Teaching
& Training*

Entrepreneurship

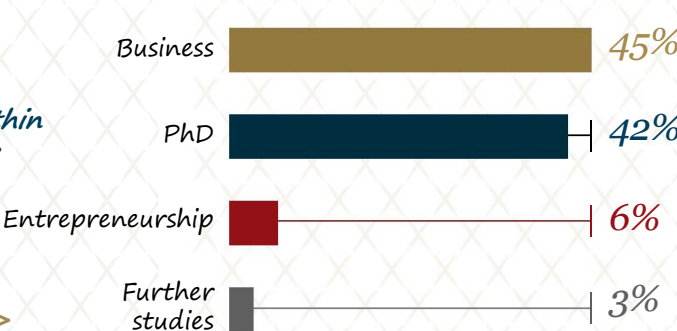
OUTSTANDING CAREER OPPORTUNITIES, GRADUATES IN HIGH DEMAND

99%

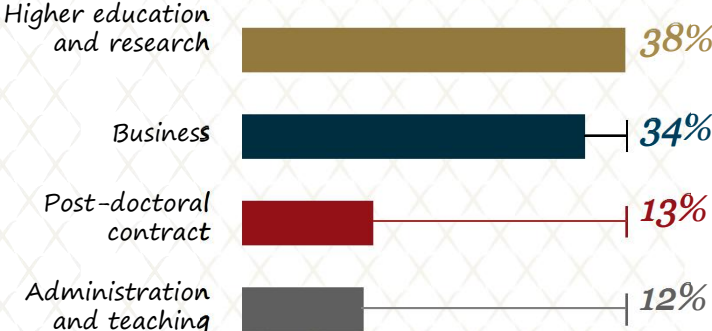
of Ingénieur Polytechnicien students find employment within 6 months after graduating



Graduates with a Master's from l'X



Graduates with a PhD from l'X



CUTTING-EDGE RESEARCH AT THE INTERSECTION OF SCIENCES...

570

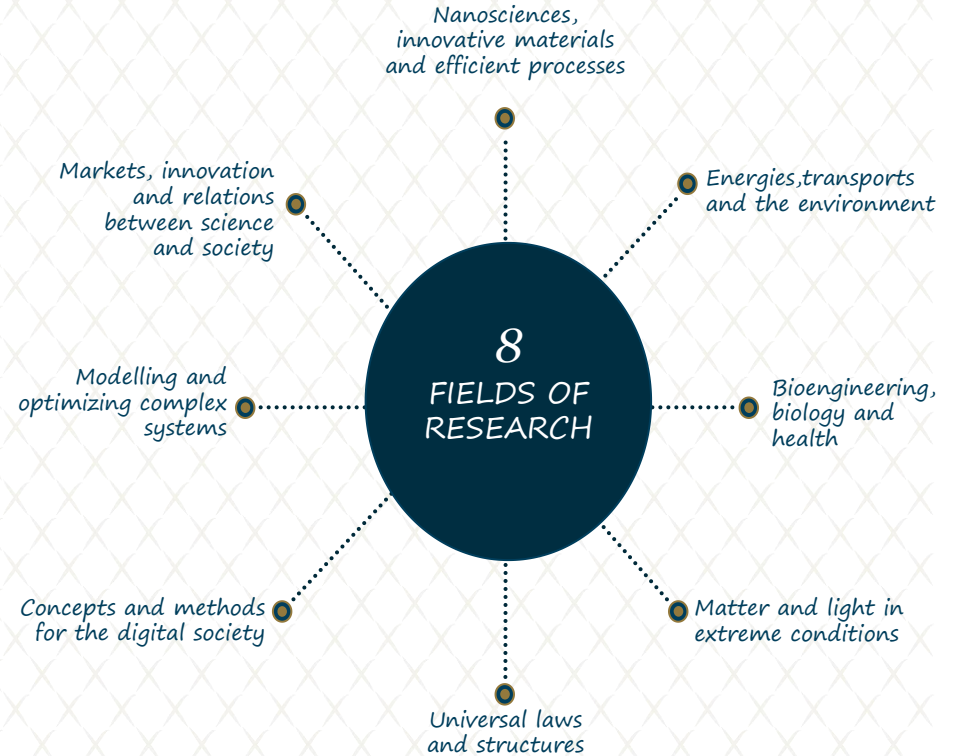
researchers and professors-
researchers

22

laboratories

1600

research staff



... AND ENGAGED WITH INDUSTRIAL CHALLENGES



research chairs
in partnership with
large corporations



**Group Science Projects
(PSC)**
proposed by businesses
each year



patent applications
submitted on average
each year

LA FIBRE ENTREPRENEUR – DRAHI X NOVATION CENTER

Support from start to finish for projects with a strong technological dimension

EDUCATION

3 masters

ACCELERATION

X-UP

INCUBATION

X-TECH

PROTOTYPING
& EXPERIMENTATION

X-FAB

NETWORKING

*Meetings with
investors,
coworking...*

DRONES

BIG DATA ENERGY IoT

DEEPLARNING CLEANTECH

START-UPS THAT TAKE OFF

2

*classes of
start-ups
accelerated
per year*

176

*start-ups
created since 2010*

4

*winners of MIT
Innovators under 35
awards
among alumni of I'X*

AN INTERNATIONAL INSTITUTION

30%

of international students

39%

of international teaching staff

+60

of nationalities present on the campus



THE POLYTECHNIQUE COMMUNITY

THE ÉCOLE POLYTECHNIQUE FOUNDATION

Funding development

*2nd fundraising campaign:
"X puissance vous"*

Forging connections with the business world

Academic and research chairs in association with private industrial partners

4
MISSIONS

Promoting innovation, entrepreneurship and research

Attribution of 4 prizes

Supporting students

Attribution of financial support (grants and loans)

ASSOCIATION OF FORMER STUDENTS AND GRADUATES OF ÉCOLE POLYTECHNIQUE



*Promote solidarity between
28,000 alumni*

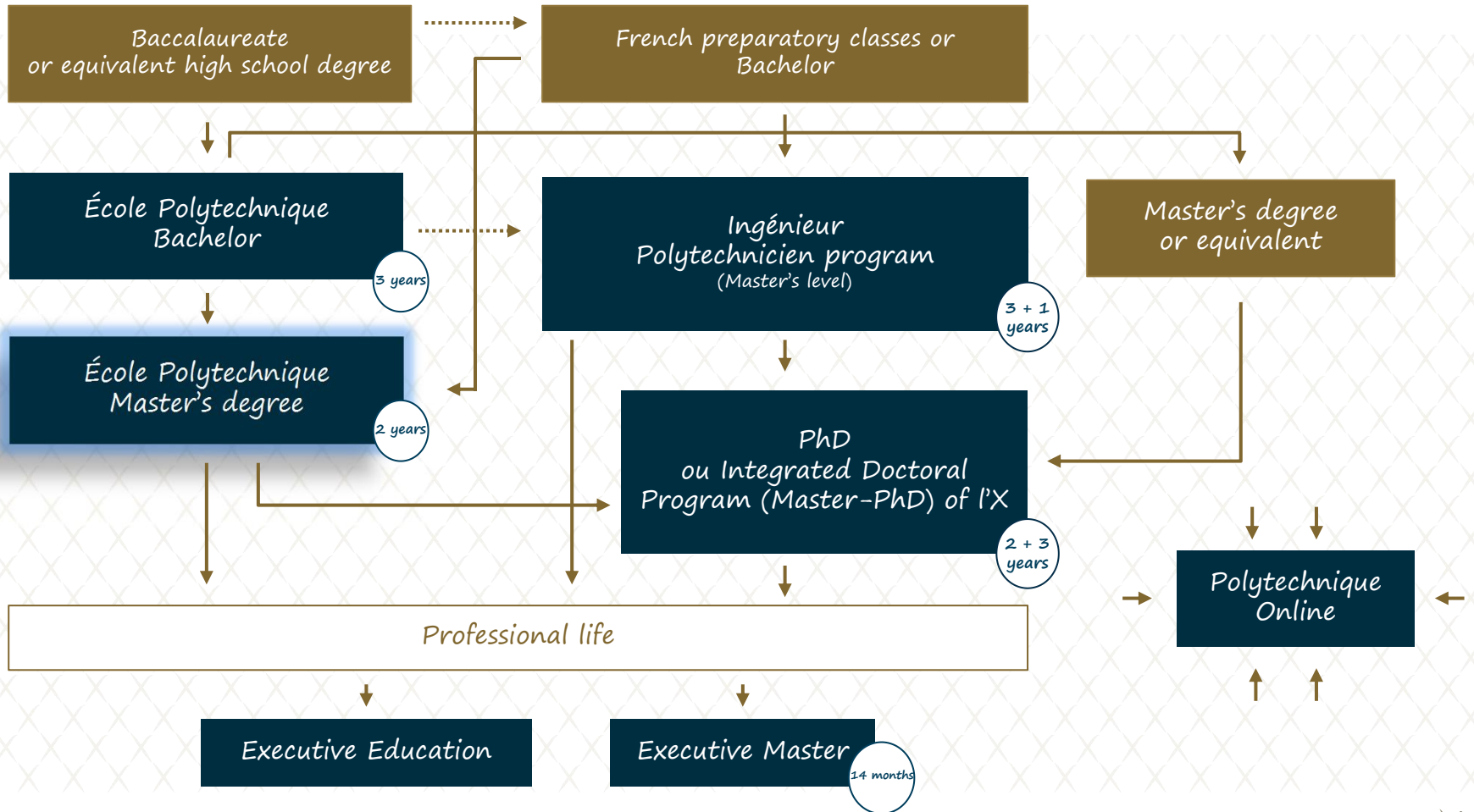
Sponsors international students



ACADEMIC OFFER OF L'X



ACADEMIC OFFER



MASTER'S PROGRAMS

MASTER'S PROGRAMS

Master's with a research focus



scientific fields



internships

Application-based admissions

2
Y
E
A
R
S

ÉCOLE POLYTECHNIQUE – MASTER'S*

- ↳ Created to meet technological challenges
 - ↳ 2 year programs
- ↳ On campus accommodation
- ↳ International student service
- ↳ Career advice and support



programs
(STEEM, Data analytics,
Smart cities, Data Science, IoT,
Ecotechnologies, Cybersecurity,
Artificial Intelligence -AVC)



in English

Programs at the intersection of
research, innovation and management

2
Y
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STEEM



WHY STEEM?

(Energy Environment: Science Technology & Management)

Requirement of an “energy transition”: a shift from fossil fuels towards more sustainable energies.



Global consensus on the urgency to enact measures to mitigate climate change (COP21, Paris Dec. 2015)

STEEM key features:

- A 2-year program fully taught in English addressing the 21st century environmental challenges (i.e sustainable energy, climate change, etc)
- Close industry collaboration for real world education
- High level research training combined with innovation management know-how
- Multidisciplinary training



PROGRAM STRUCTURE

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A
R

1

Scientific basis of Renewable Energies and Environment

- *Core courses: Physics, Mechanics, numerical modeling and Management*
- *Overview of the energy-environment domain: resources, meteorology, photovoltaics, wind, power engineering...*
- *Projects, humanities, language, sport, conferences...*
- *Field trip to Grenoble (French Alps): lab , research centers & company visits*

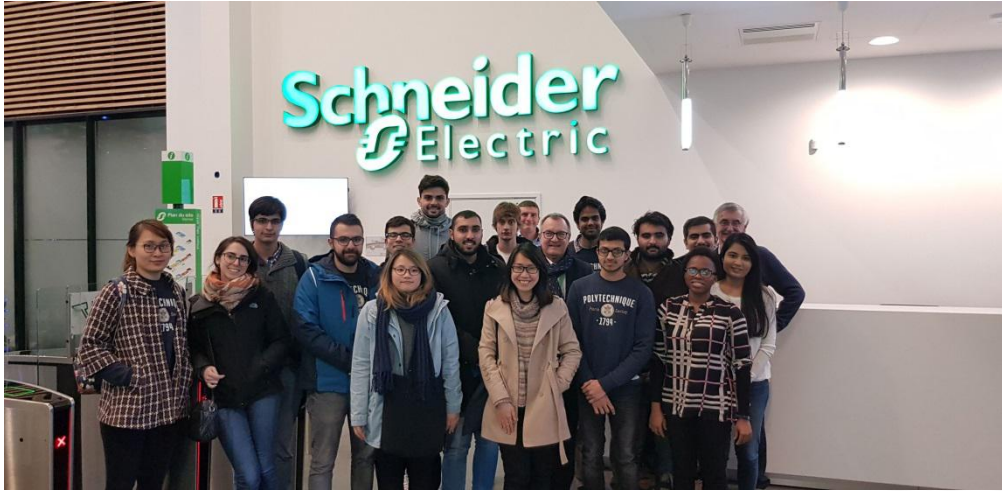
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2

Exploring the links between Renewable Energies and Environment

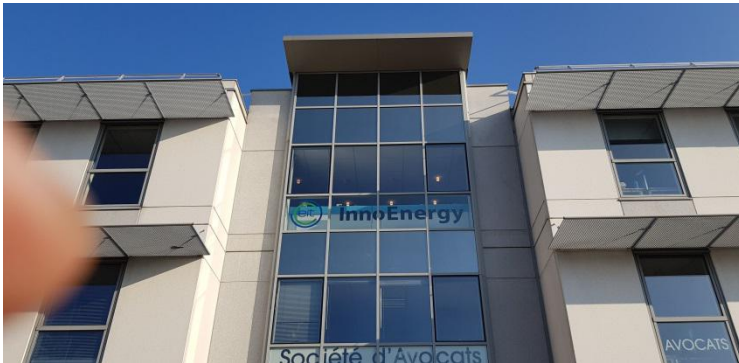
- *Courses on : Atmospheric and oceanic environments in the energy context / Renewable energies: science and technologies/ Vectors, storage and networks for energy / Wind and Hydro Power*
- *General courses : Socioeconomic Issues / Topical Seminar Series / Project Management / Innovation and Entrepreneurship*
- *Humanities, language, sport, conferences...*

Field Trip to Grenoble December 2017



4 days in the Alps visiting companies, start-ups and research centers:

- KIK InnoEnregy
- Grand'Maison dam – EDF production unit, Schneider Electric
- CEA – Atomic Energy Commission
- etc



A STRONG RESEARCH BASE

Ecole Polytechnique's laboratories:

*Laboratory of Physics of Interfaces and
Thin Films (LPICM)*

Hydrodynamics Laboratory (LADHYX)

Solid Mechanics Laboratory (LMS)

*Dynamic Meteorology Laboratory
(LMD/IPSL)*

Atmospheric observatory (SIRTA/IPSL)

Applied Mathematics Center (CMAP)

*Institute for Photovoltaic Energy Research and
Development
(IRDEP, CNRS / EDF / Chimie ParisTech)*

*Laboratory of Chemistry and Processes (ENSTA
ParisTech)*



THE LABORATORIES: IPVF



INSTITUT
PHOTOVOLTAÏQUE
D'ÎLE-DE-FRANCE

French National Project (Institute for Energy Transition)

Location: Ecole polytechnique campus (2017)

Collaboration Public Research / Private companies

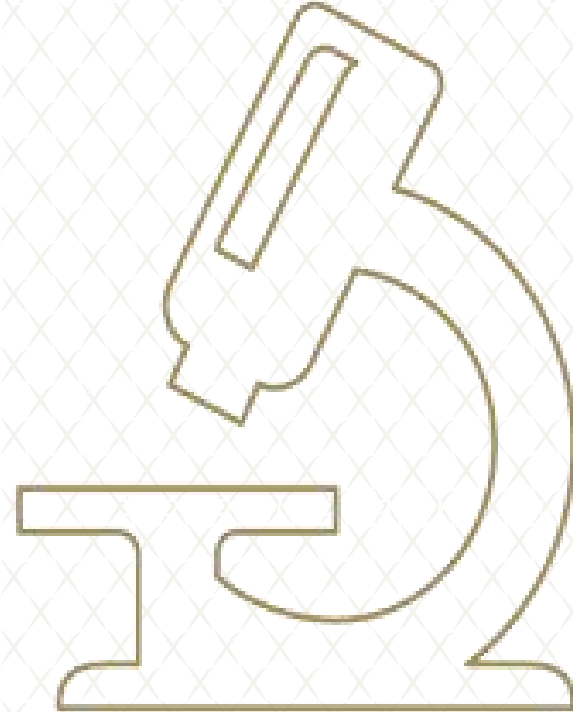


THE LABORATORIES: IPSL



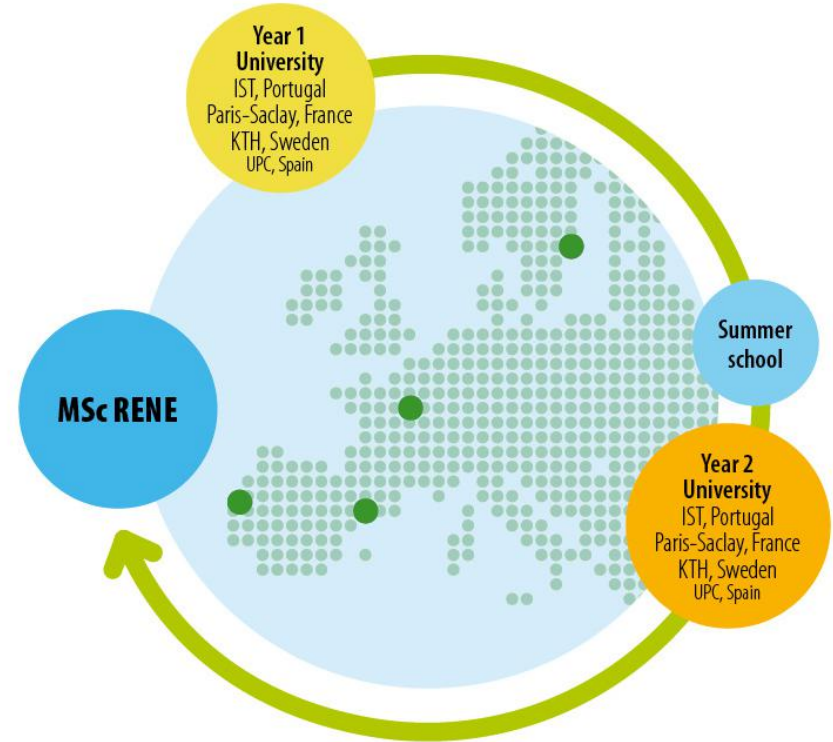
Institut
Pierre
Simon
Laplace

IPSL – Institut Pierre Simon Laplace – gathers 9 laboratories in the Paris area whose research topics concern the global environment and which develop a common strategy for the study of the Earth System as a whole



INTERNATIONAL PARTNERSHIPS

RENE PROGRAM



INDUSTRIAL SUPPORT AND SCHOLARSHIPS

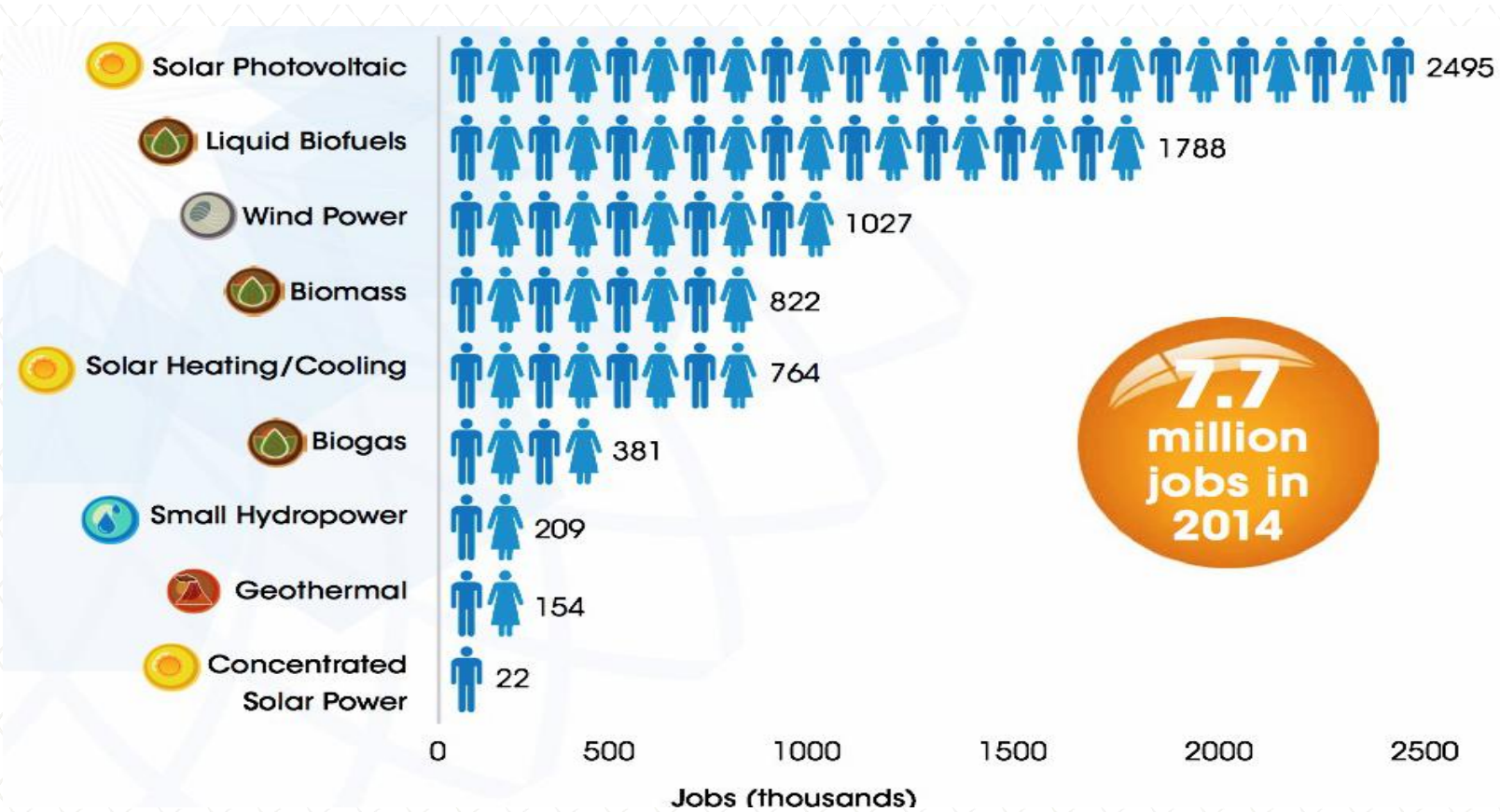


GE Renewable Energy



- Program tuition fees for 1 year: 12K€
- Industrial grants for tuition fee waivers (10K€ /year)
- Industrial grants for students' living expenses (4K€ /year)

STEEM CAREER OUTCOMES



Contact us

Admission and Student Services Team



Ms. Anne Chrétien
Head of the Graduate Degree Program



Mr. Nicolas Clercy
Academic Coordinator (STEEM)



Ms. Cristina Rotaru
Admissions Manager

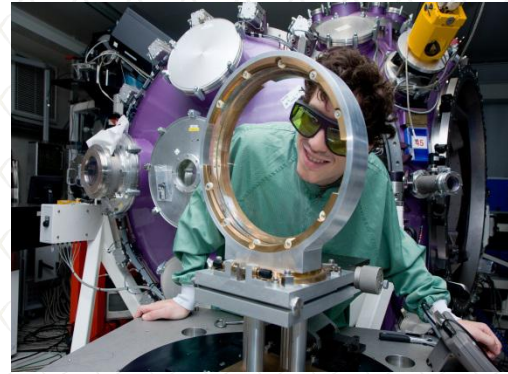
Faculty - Program Directors



Pr. Bernard Drévilion



Pr. Claude Basdevant





www.polytechnique.edu