



ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

STI

SCIENCES ET TECHNIQUES DE L'INGÉNIEUR
SCHOOL OF ENGINEERING

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March 13, 2018

STI

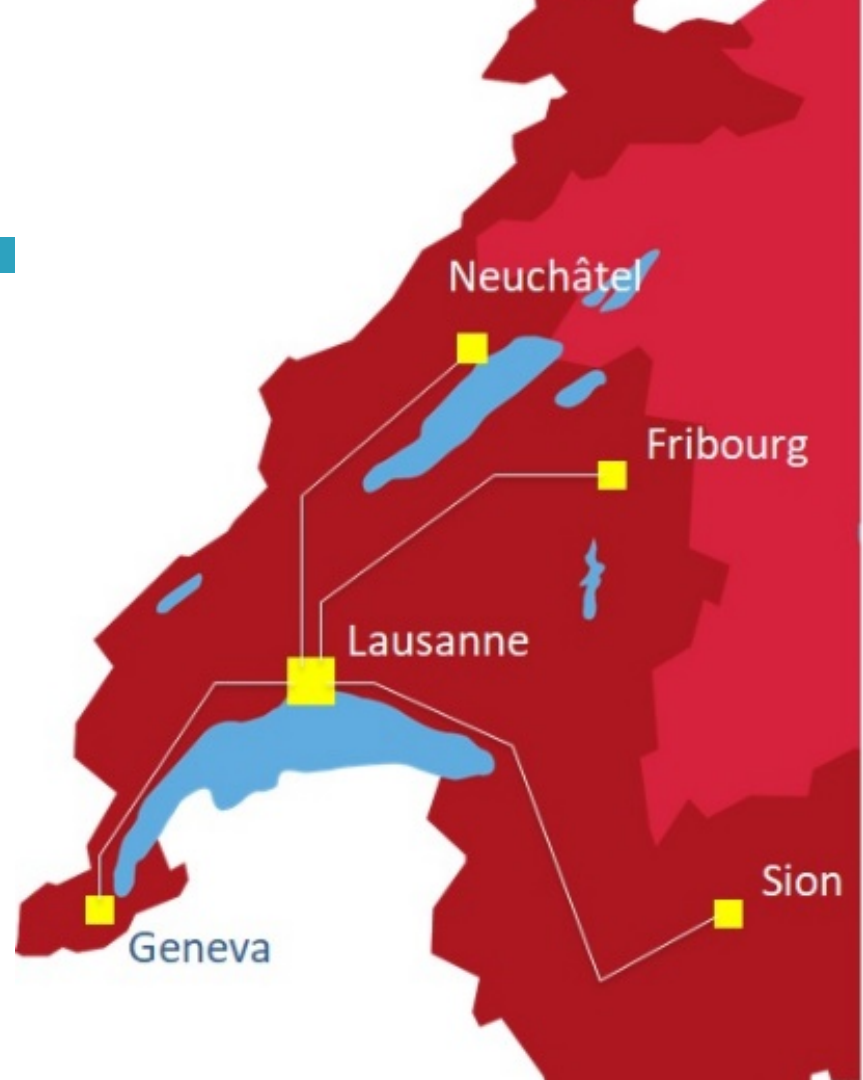


	IBI Bio	IEL EE	IGM ME	IMT Micro	IMX MAT	TOTAL
UG (3+2)		157	692	666	141	1656
MS (3+2)		167	271	231	118	787
PhD	165	256	109	195	146	871
Post-docs	91	49	39	73	84	336

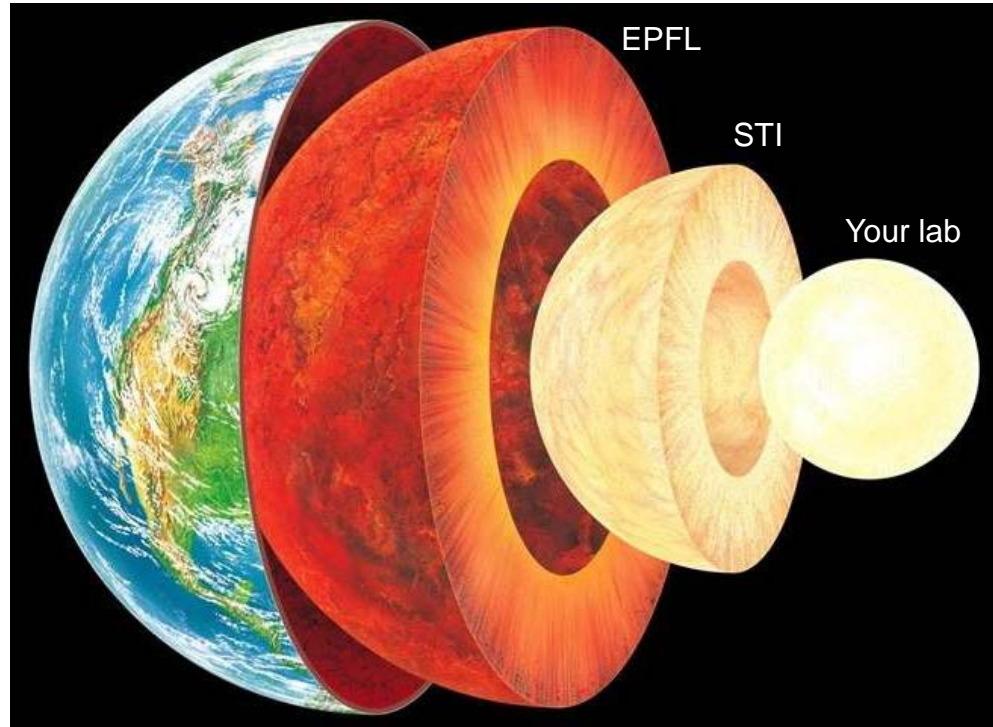
150 PATT, PA, PO, PT, MER; 1700 UG students;
2000 graduate students and postdocs; plus 100+ staff;
plus satellites (Neuchatel, Geneva, Sion, ...).

STI

→ **Create a larger** sense of belonging, ownership, participation, sharing of information, open discussions, strategic brainstorming, ...



STI



Broad Goal for STI



Strengthen the standing of EPFL as a powerhouse in engineering education, research, and innovation.

STRATEGY:

- Establish a clear organizational **structure**.
- Instill a culture of **institution** building.
- Implement a **vision** for the School.
- Have clear **standards** and expectations.
- Promote **teamwork** and participation.



School Structure

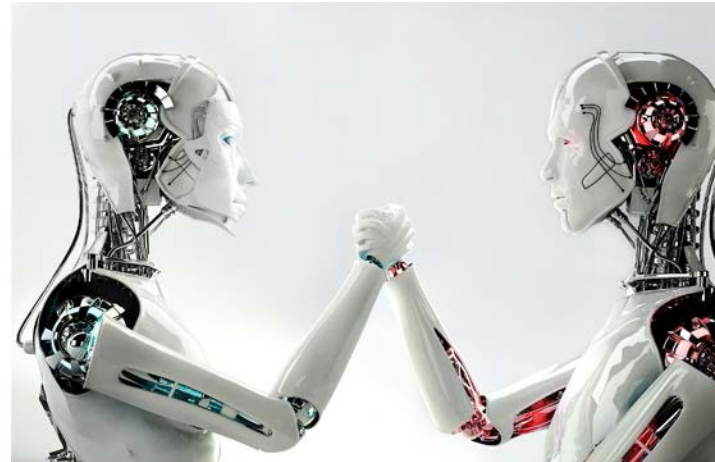


SCHOOL BOARD

	Associate Dean for Research	Associate Dean for Education	Associate Dean for Industry & Innovation	Chair, Committee on Academic Affairs	Institute Directors
Human Resources					
Budget & Finance					
Space & Infrastructure					
Information & Educational Technology					
Media & External Affairs					

Engineering in the 21st Century

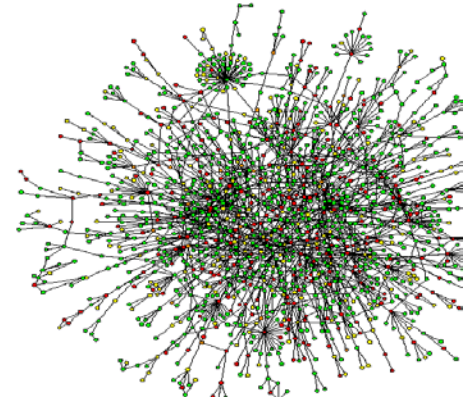
- Nontrivial transformations in the engineering field: **large complex problems involving multiple disciplines.**
- Successful engineering schools will be ones that not only encourage, **but also expect**, their faculty and students to step across boundaries.



Consequential Transformations

We can create a lasting impact for EPFL by contributing to disruptive trends in engineering:

- (1) **Convergence of life sciences & engineering;**
- (2) Blending of the **virtual/physical worlds; autonomous systems;**
- (3) **Smart & renewable resources/materials/energy;**
- (4) **Data & network sciences,** computing, security, and privacy.



Consequential Transformations

These trends:

- Create possibilities for **interactions** with other schools;
- Drive the creation of **new jobs** for our students.

As such,



(5) The **curricular activities** of our programs need to evolve in step with these developments.

An Opportunity...

Leadership in Engineering Education: including revamping the educational experience by exploiting the power of the online medium and data analytics, virtual experimentation, animation, virtual immersion, online tools, new assessment models, management and design opportunities, teamwork.

Training of engineering students needs to be enriched: *exposure to nano, bio, complex systems, cybersecurity, robotics, data & network sciences, energy, design and the arts, teamwork, entrepreneurship.*



Strengthen ties to:

2017

Computer Science: Computing paradigms, foundational data science, autonomous systems, personalized health, etc.

Life Sciences: Bioengineering, Neuroengineering, etc.

The arts, sports, and design: Engineering in the Arts & Sports.



Where do we Stand?

- Ranked in top 5 in Engineering in Europe (TIMES Higher Education, QS University Ranking).
- Ranked #16 worldwide (2017 US News)

Brand recognition and by academics:

#71 in the World by academics (QS; ETHZ #19)

#60 by employers (QS; ETHZ #28)

#41 in brand recognition (by TIMES)

EPFL Engineering Anytime Anywhere

Ranking	University	Score
8	Stanford	85.9
12	Imperial	84.4
16	EPFL	82.8
17	ETH Zurich	82.2
22	Delft	80.3
31	KTH	77.8
42	Cambridge	74.6

2017 [US News Ranking](#) of Best Engineering Universities Worldwide

Other Schools at EPFL

EPFL School of Engineering (A. H. Sayed)

IC

Computer
& Commun.
Sciences

doctoral
program



EDIC



section

SB (Basic Sciences)

Physics



EDPY



section

Chemistry &
Chemical
Engineering



EDCH



section

Mathematics

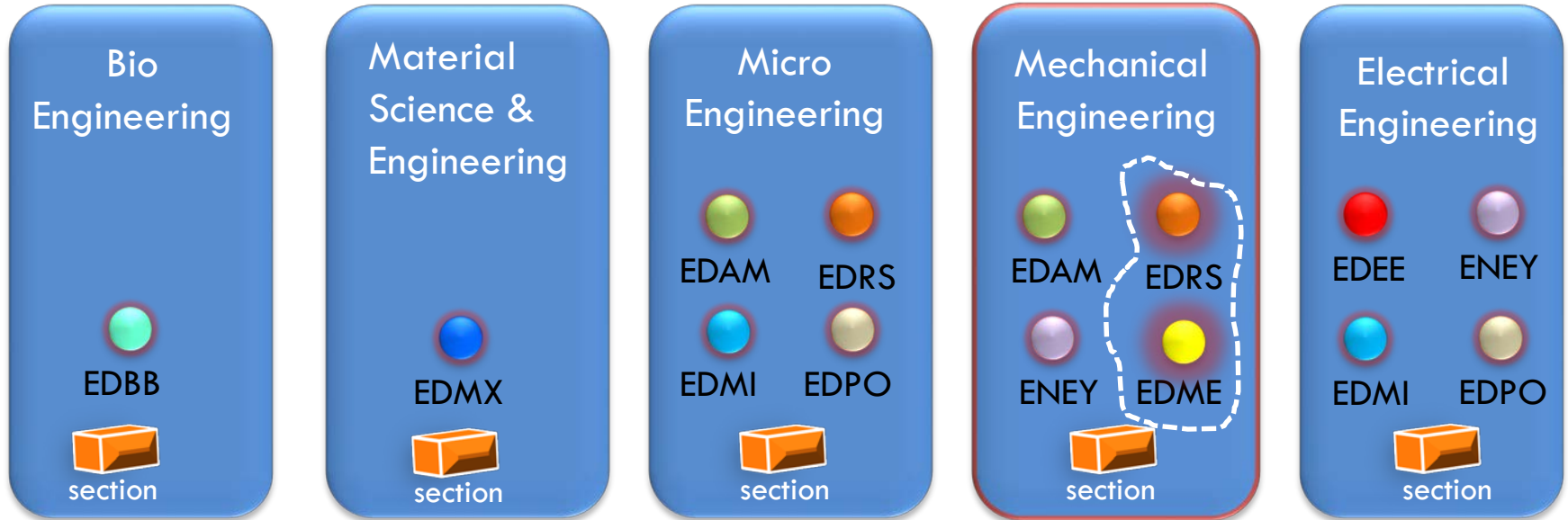


EDMA



section

Existing STI Structure



EDAM: advanced manufacturing
EDEE: electrical engineering
EDRS: robotics, control, & intelligent systems
EDME: mechanics

EDBB: biotechnology and bioengineering
EDMI: microsystems and microelectronics
EDMX: materials sciences & engineering
EDEY: energy
EDPO: photonics

Admissions: Current Situation

- 6 different dates.
- Multiple admission cycles.

Doctoral program	Deadline(s)
EDAM: advanced manufacturing	Jan 15, Apr 30, Sep 15
EDBB: biotechnology and bioengineering	Apr 15, Nov 1
EDEE: electrical engineering	Jan 15, Apr 30, Sep 15
EDMI: microsystems and microelectronics	Jan 15, Apr 30, Sep 15
EDRS: robotics, control, intelligent systems	Jan 15, Apr 30, Sep 15
EDMX: materials science & engineering	Jan 15, Jul 31
EDME: mechanics	Jan 15, Apr 30, Sep 15
EDEY: energy	Jan 15, Apr 30, Sep 15
EDPO: Photonics	Jan 15, Apr 30, Sep 15