The DI post 2011

Issues for us to think about (I think..)

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The DI is doing pretty well

- Ranked A+ by AERES
- One gold and two silver medals from CNRS
- Two members of the Academy of Sciences
- One member of the Academy of Engineering
- Three Sr. ERC grants
- Two Jr. ERC grants
- Five grand prizes from the Academy of Sciences
- 2010 budget of 2.5 M€

- Students ranked 1→8 are admitted (3/40 lost in 5yrs)
- Students ranked 9→25 all have excellent grades
- Alumni doing great (more scattered evidence)
The DI is doing great
(thanks, J. Stern & J. Vuillemin!)

• If it ain’t broke, don’t fix it

• But there are challenges and opportunities ahead

• Two missions: research and teaching
Priority I: more students

- Today: 8 élèves per year
- Objective: 20 per year
- This must happen
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- The PSL* IDEX project asks for 12 4-year fellowships per year
[Note: The EX Initiative]

- 22B for higher education and research
- A (royal) pain but (hopefully) an opportunity

LABEX Sciences Mathématiques de Paris
IDEX PSL* (preselected) 12B

An Institute of Higher Studies in Mathematical Computer Science is part of the LABEX/IDEX

EQUIPEX Geopast (soon to be resubmitted)
[Note: Le grand emprunt]

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EQUI PEX Geopast (soon to be resubmitted)
Priority II: being together

- An 8000 sq meter ENS/I NRI A building is planned at the Boulevard Jourdan ENS campus
- Half of it for DI (50% more than today), half of it for I NRI A
- Space for moderate growth
- This must happen
Objectives

- Excellence in research and education
- Offering the best working conditions to our students, research, support, and teaching staff
- Better department and laboratory life
- **Note:** Needs continuing support from CNRS, ENS, and INRIA
Education

- Students: more civil servant [élève(s)], improve recruiting of external French students and foreign students

- Good practices in place: mentoring, freedom, multiple internships, wide variety of classes, teachers from the best places in France and sometimes abroad, MPRI and MVA.

- From ENS to PhD student: what path?
Research: Hiring

- Research scientists: CNRS and INRIA
- Faculty: ENS

- New faculty:
  - ENS
  - Professors from Parisian universities
  - CNRS/INRIA/LABEX/DEX chairs
  - Industrial chairs

- Retain and improve our attractiveness
Research: Hiring, but whom?

- Opportunistic view vs strategic view
- Arguments for both in small departments
- Plenty of major areas not represented in DI
What model for the DI?

- US universities: single-PI teams
- I NRI A: Projet teams
- CNRS-university: UMRs

- Critical size issues
What model for the DI?

- US universities: single-PI teams
- INRIA: Project teams
- CNRS-university: UMRs

Note: The average size of top 12 US CS departments is 63 scientists including 75% tenure-track faculty, with 210 MS and PhD students (2009 Taulbee report)

- DI: 36 scientists, 55 PhD students
An identity for the DI?

- Mathematical computer science for the LABEX and IDEX
- Computer science and applied math might be more accurate
- The two are complementary, and also representative of our students
- The Institute of Higher Studies in Mathematical Computer is an opportunity

- What about interdisciplinary research within and without ENS?
Objectives

- Should we be happy with doing very well?

- **Education:** Be the best place for CS education in France

- **Research:** Be the French equivalent of (say) Princeton’s CS department