



**Discussion of the students and faculty members
of the School of Civil Engineering with professors
Alberto Montanari of the University of Bologna
and Christian Onof of Imperial College**

6 November 2015, 14:45,

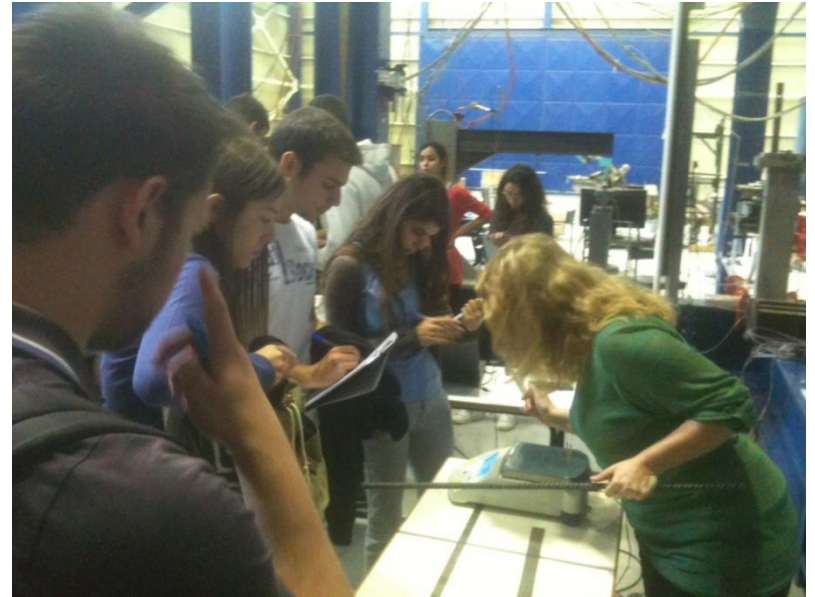
Events Hall of Civil Engineering

National Technical University of Athens

Background information for the School of Civil Engineering of NTUA

Structure and national & international presence

- **Comprises 5 departments** (structural, hydraulics, transportation, geotechnical, construction management) **and 15 laboratories**
- **Ranked #29 in the world and #8 in Europe** among Civil Engineering Schools according to QS World University Rankings (2015)
- No other School in Greece has such rankings



Curricula

- Main curriculum: 5-year studies leading to Integrated Master (Diploma); does not follow the Bologna process
- Diploma in Civil Engineering; includes specialization in one of four options: structural, hydraulics, transportation, geotechnical
- Two postgraduate programmes coordinated by the School of Civil Engineering: *Water Resources Science and Technology*, and *Design and Analysis of Earthquake Resistant Structures*
- Contribution in nine other postgraduate programmes coordinated by other Schools of NTUA
- Doctoral studies



Some statistics for the current situation

- **1850 students**—may see an obscure future: **youth unemployment rate = 58%**.
- **25% fewer professors** (no appointments of young professors after retirements); will **exceed 50%** in the next 5-6 years
- **50% dismissal** of administrative and technical personnel—but last year many of them were re-employed
- **40% reduction** in salaries
- **90% reduction** in School's budget
- **50% increase** of students' admissions (as a result of government's social policy; fortunately this was not repeated this year).
- Continuous changes in legislation (“reforms”, etc. imposed by the governments) contribute to chaos in our operation.

QUESTIONS—CATEGORY A

AN OVERVIEW OF YOUR UNIVERSITY

Q1. What are the general conditions of studies in your university?

e.g. number of students in the School and per class, number of professors, number of administration personnel, different curricula at undergraduate and postgraduate level, procedures for student admission

Imperial: Our people

Students

14,735 full-time (2013-14)

- 8,931 – undergraduate
- 2,926 – taught postgraduate
- 2,875 – research postgraduate

Staff

3,569 academic and research staff

3,454 support staff

Alumni

Over 170,000 alumni

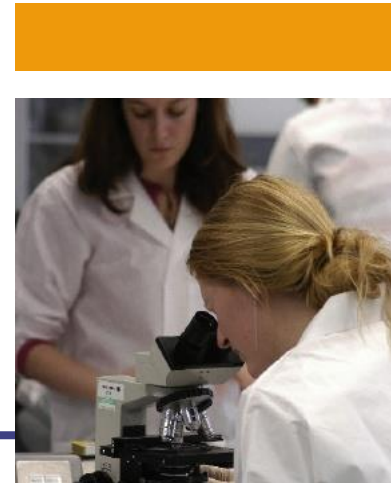
An international institution

Students from 126 countries

Top non-UK country (students): China

62% of full-time students non-UK nationals

35% of staff non-UK nationals



Staff

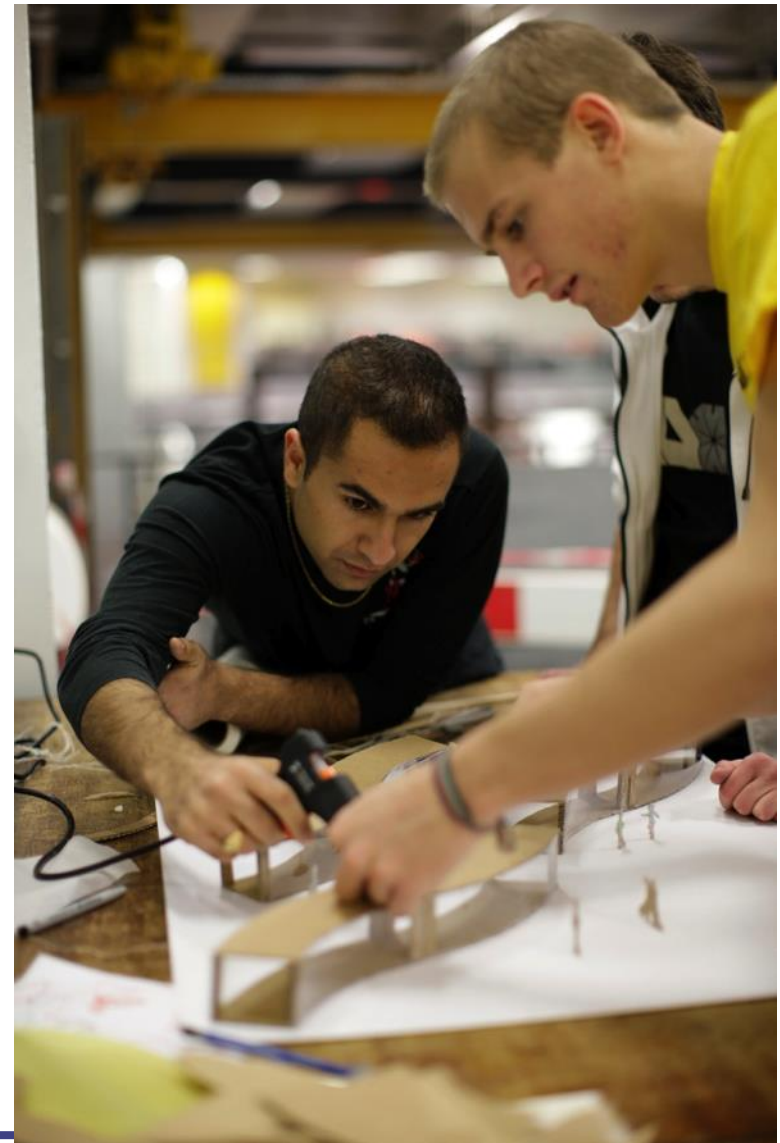
- 51 Full-time academic staff**
- >20 Visiting/Emeritus professors**
- >50 research staff**
- 14 technicians**
- 21 support staff**

Students

- 340 MEng students**
- 240 MSc students**
- 160 PhD students**

Sections

- **Environmental & Water Resources Engg**
 - **Fluid Mechanics**
 - **Geotechnics**
 - **Structures**
- **Centre for Transport Studies**



QUESTIONS—CATEGORY B
ADMINISTRATION AT YOUR UNIVERSITY

Q2. What is the administration model in your university? Do students participate in administration/elections and how?

Imperial: Leadership

President

- *Professor Alice Gast took up the role of President on 1 September 2014.*
- *The President is Imperial's Chief Executive.*
- *She leads the College's strategy, including the development of the new campus at White City, and its links to government, industry, philanthropists and alumni.*

Provost

- *Professor James Stirling became Imperial's first Provost in July 2013.*
- *Responsible for our core academic mission: education, research and translation.*

- *Reports to the President*



QUESTIONS—CATEGORY B

ADMINISTRATION AT YOUR UNIVERSITY

Q3. Do students pay tuition fees and are there facilities offered to students for free?

Note: in NTUA students do not pay any fees; textbooks are given for free to all students; poorer students also receive accommodation and meals for free.

QUESTIONS—CATEGORY B
ADMINISTRATION AT YOUR UNIVERSITY

Q4. What are the main principles for electing new faculty members and promoting existing ones?

QUESTIONS—CATEGORY B

ADMINISTRATION AT YOUR UNIVERSITY

Q5. Do you have a choice regarding the administrative employees working at your department, or are they allocated to your School centrally by the university?

If you do have a choice, on the basis of which qualifications do you hire/select administrative employees? Do you have an administrative manager in your department? With what responsibilities?

QUESTIONS—CATEGORY B

ADMINISTRATION AT YOUR UNIVERSITY

Q6. Who decides on the salary of the faculty members and administrative employees? Is it related to any type of evaluation?

QUESTIONS—CATEGORY C
EDUCATION AT YOUR UNIVERSITY

Q7. Does your university follow the Bologna Process and what is your opinion about it?

QUESTIONS—CATEGORY C
EDUCATION AT YOUR UNIVERSITY

Q8. Could you describe 2-3 important changes during the last 5-10 years in your civil engineering curriculum and the rationale behind them?

QUESTIONS—CATEGORY C
EDUCATION AT YOUR UNIVERSITY

Q9. Could you describe any important recent changes in the way courses are delivered (teaching and learning methods used)?

**QUESTIONS—CATEGORY D
OF PARTICULAR INTEREST TO OUR STUDENTS**

Q10. What is your opinion (if you have one) about our School and its graduates?

**QUESTIONS—CATEGORY D
OF PARTICULAR INTEREST TO OUR STUDENTS**

Q11. Are there opportunities for our students to visit your university (e.g. Summer Schools, student exchanges)?

**QUESTIONS—CATEGORY D
OF PARTICULAR INTEREST TO OUR STUDENTS**

Q12. Are there opportunities for our graduates to continue their studies in your university at postgraduate level or to participate in your research projects?

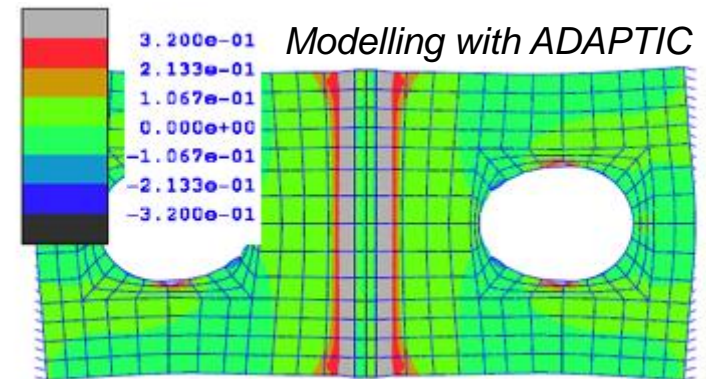
Structures Section

PRINCIPAL RESEARCH AREAS

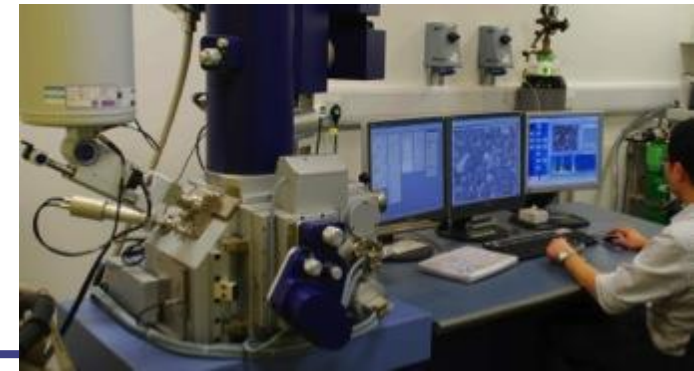
- *Structural engineering*
- *Structural mechanics*
- *Extreme loading*
- *Durability*

MSc COURSES

- *Concrete structures*
- *Structural steel design*
- *Earthquake engineering*
- *General structural engineering*



Structural Engineering Laboratories

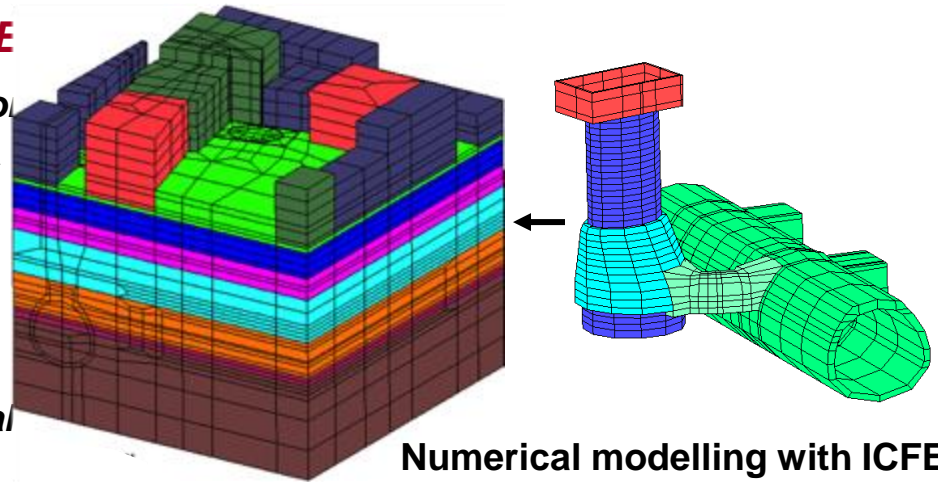


Concrete durability – Microscopy suite

Geotechnics Section

PRINCIPAL RESEARCH ARE

- *Soil-structure interaction*
- *Offshore geotechnics*
 - *Tunnelling*
 - *Seismic hazard*
 - *Geothermal energy*
 - *Nuclear waste disposal*



MSc COURSES

- *Soil mechanics*
 - *Soil mechanics & engineering seismology*
 - *Soil mechanics & environmental geotechnics*



Environmental and Water Resource Engineering Section

PRINCIPAL RESEARCH AREAS

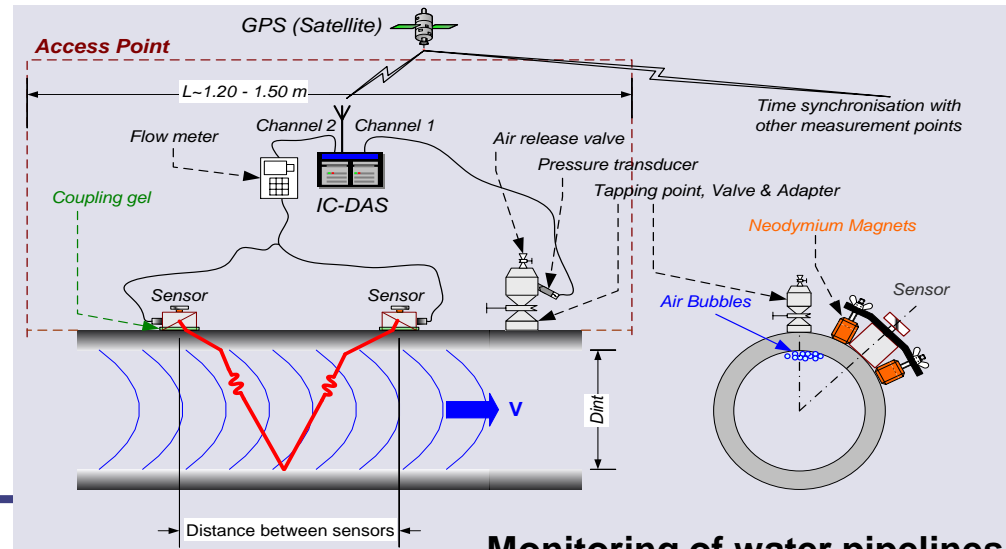
- Hydrology & water resources
 - Urban water systems
 - Water/Wastewater treatment
 - Waste management

MSc COURSES

- Hydrology & water resources management
- Environmental engineering



EWRE Chemistry Lab



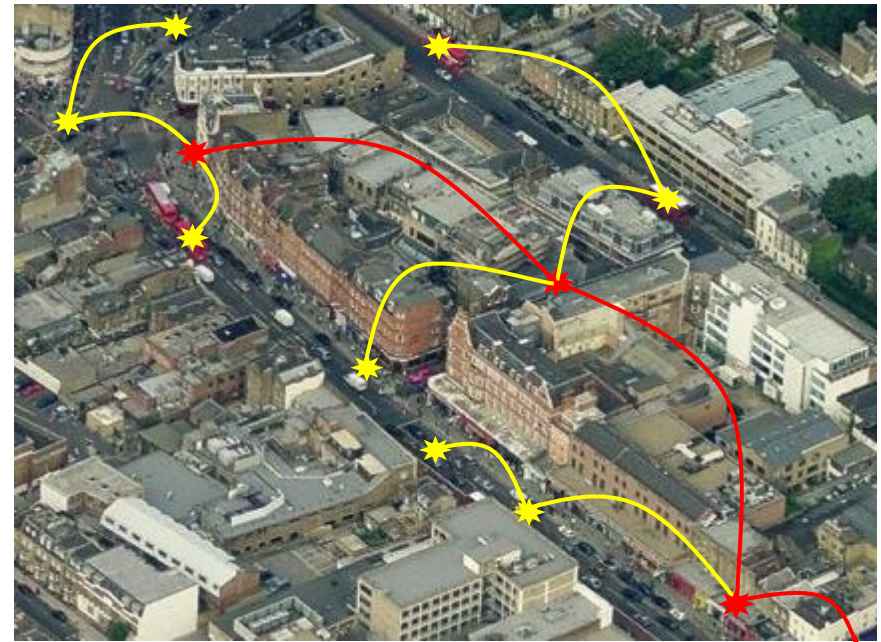
Monitoring of water pipelines

Centre for Transport Studies

PRINCIPAL RESEARCH AREAS

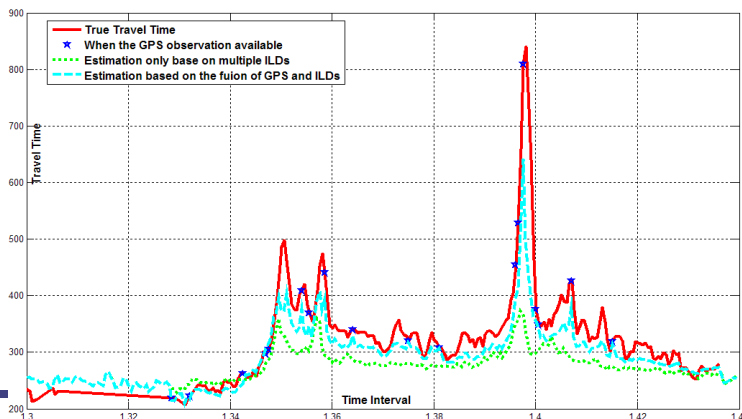
- Travel demand, policy & economics
 - Safety and risk management
- Air transport - operations & planning
- Railways - operations & management
 - Transport and the environment
 - Geomatics
 - Urban Engineering

MSc COURSE *Transport (joint with UCL)*

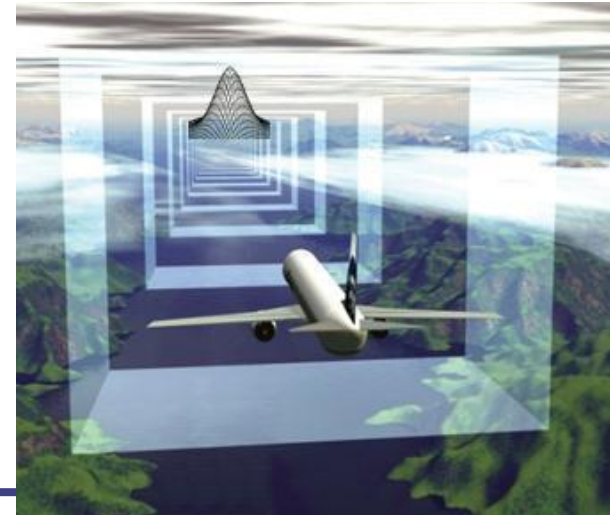


Managing traffic related emissions - MESSAGE

Intelligent Infrastructure & Transport Systems Lab



Network state estimation & prediction - FREEFLOW



Modelling aircraft trajectory with HIPER-TP

**QUESTIONS—CATEGORY D
OF PARTICULAR INTEREST TO OUR STUDENTS**

Q13. Which items do you think are important in the CV of a graduating civil engineer applying for postgraduate studies in your department?

Or is it mostly numbers (e.g. average grade and GRE scores) that count in a decision?

QUESTIONS—CATEGORY D OF PARTICULAR INTEREST TO OUR STUDENTS

Q14. Which top three skills do you think graduating civil engineers (without prior working experience) should have that would make them attractive to employers?

**QUESTIONS—CATEGORY D
OF PARTICULAR INTEREST TO OUR STUDENTS**

Q15. Does your university have links with the labour market and how beneficial are they for new graduates?

Recent developments

Dyson School of Design Engineering

- This new department aims to combine the best of technical expertise with creative problem solving. The School will teach a new four year MEng in Design Engineering from October 2015.
- Launched in March 2015 by Sir James Dyson and UK Chancellor George Osborne, the School has been established thanks to a £12m donation from the James Dyson Foundation.



Brevan Howard Centre for Financial Analysis

- This new research hub aims to help understand and prevent financial crises, supported by a £20.1 million donation from hedge fund Brevan Howard.



Lee Kong Chian School of Medicine in Singapore

- A second cohort, of 78 medicine undergraduates, have begun their studies at Imperial's joint medical school



New White City Campus

- New 25 acre site in White City will be at the heart of London's new research quarter. It will co-locate world class researchers and businesses with the ambition to create Europe's leading innovation district.
- Grad Pad, accommodation for 600 postgraduates, is now open.
- Construction has begun on the £200m Research and Translation Hub.
- The Michael Uren Biomedical Engineering Hub will house Imperial scientists working alongside spin-out companies on life-changing research into new and affordable medical technology following a £40m gift from Michael Uren OBE and his foundation.



Above: Research and Translation Hub – under construction.



Left: Grad Pad now open.