Double Award PhD Degree in Electrical Engineering:

University of Nottingham & the University of Chile

Double Degree Award

- Between the Electrical Engineering Departments, University of Chile, University of Nottingham.
- Students successfully completing the programme will receive both UoN and UoChile PhD degrees.
- The University of Nottingham has three main research areas which will be described later.

Double Degree Award

- Students from the University of Chile can apply to this double degree program after the Qualification Exam.

Year 0	Qualifying year at UoChile. Students on this route will be registered at UoN at the end of this year of study.	
Year 1	UoChile	UoN
Year 2	UoN	UoChile
Year 3	UoN	UoN
	UoChile students route	**UoN HEU and International students route**

Students are expected to spend at least one year in each of the institutions.

Double Degree Award

- The main contact for the programme at the University of Nottingham is Professor Patrick Wheeler, Faculty of Engineering.

  Pat.Wheeler@ nottingham.ac.uk.

- The main contact for the programme at the UoChile is Roberto Cárdenas Dobson, Faculty of Physical and Mathematical Sciences, Department of Electrical Engineering.

  rcardenas@ing.uchile.cl.

How to apply

- Candidates must specify their proposed area of research, and supply academic transcripts and two academic references when submitting their application.

- Applicants should apply to the partner at which they wish to begin their PhD studies. Then the application material will be shared with the other partner.

How to apply

- Admissions standards and eligibility shall be in accordance with the University of Nottingham and University of Chile admissions policies.

- Students are expected to spend at least one year in each of the institutions.

- Both institutions must agree on the admission and recruitment of students into this double degree PhD programme.

How to apply

- Candidates will pay the fees associated with the time they will spend in each university. The minimum time is one year.

- It is possible to obtain a scholarship to cover part of the fees. e. g. from the UK side.

- From the year 2013, students with a scholarship from “Becas Chile” may apply for funding for this double degree program. (Maximum two years).

The University of Nottingham

Nottingham

The University of Nottingham
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City of Nottingham

Population 300,000

City of Robin Hood and Brian Clough

UoN Profile

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Top 1% worldwide and ranked 7th overall in UK in 2008 RAE exercise.

- University consistently ranked in the UK's top 10 universities
- Ranked 5th in Engineering
- Ranked in the world's top 70 universities by the Shanghai Jiao Tong and Times Higher

36,070 high calibre students with good completion record

- 31,972 UK based/12,848 international from 143 nations
- 5,974 post-graduate students
- One of the highest graduation employment rates in the country

7,000 staff – a major employer and regional citizen

- Contributes £400 Million annually to the local economy
- Campuses - 4 in Nottingham, 1 in China, 1 in Malaysia.

Engineering at Nottingham

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- 100 years experience of teaching engineering
- Research excellence underpins and animates all our teaching
- All programmes rated *excellent* in independent UK government review
- State-of-the-art laboratories
- World-leading research institutes
- Around 620 staff including ~ 210 academics

Engineering at Nottingham

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- 4,092 students includes:
  - 3,028 undergraduates

    (34% overseas)

  - 1,064 postgraduates

    (68% overseas)
- Total research portfolio ~ £100 million

Research

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2008 Research Assessment Exercise

- 97% of research in the Faculty of Engineering is of international quality, with over 75% defined as world-leading or internationally excellent

- The results place us in the UK's top five universities for engineering

The Engineering Faculty

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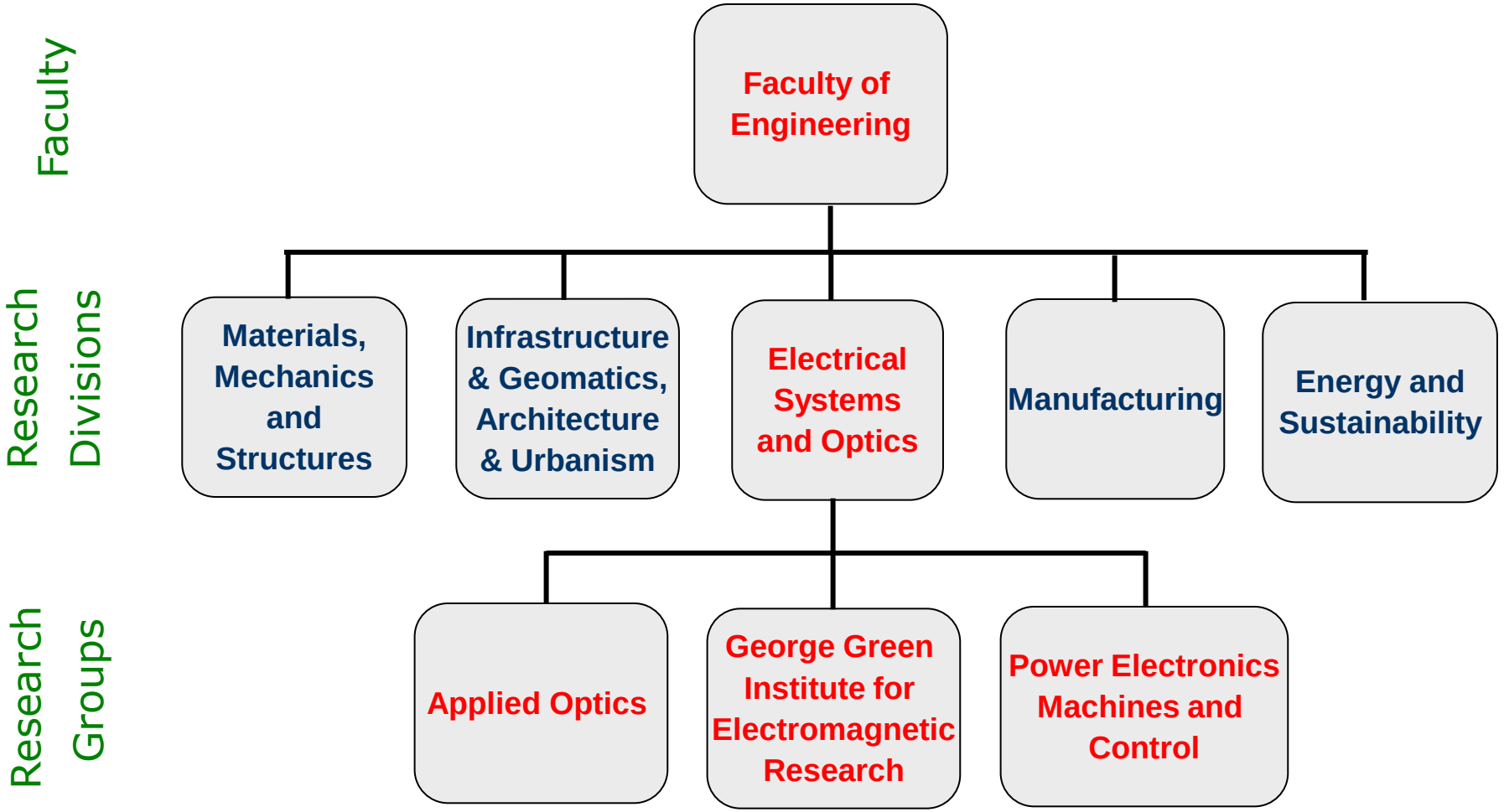

Electrical Systems and Optics Division

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Bringing innovation in science and technology to the generation and use of electrical energy, including renewable energy, to high speed information processing and pervasive computing.

Research strengths

- Power electronics/machines/control
- Biophysics
- Electromagnetic simulation
- Imaging and optical science
- Photonic engineering
- Ultrasonics

Electrical Systems and Optics Division

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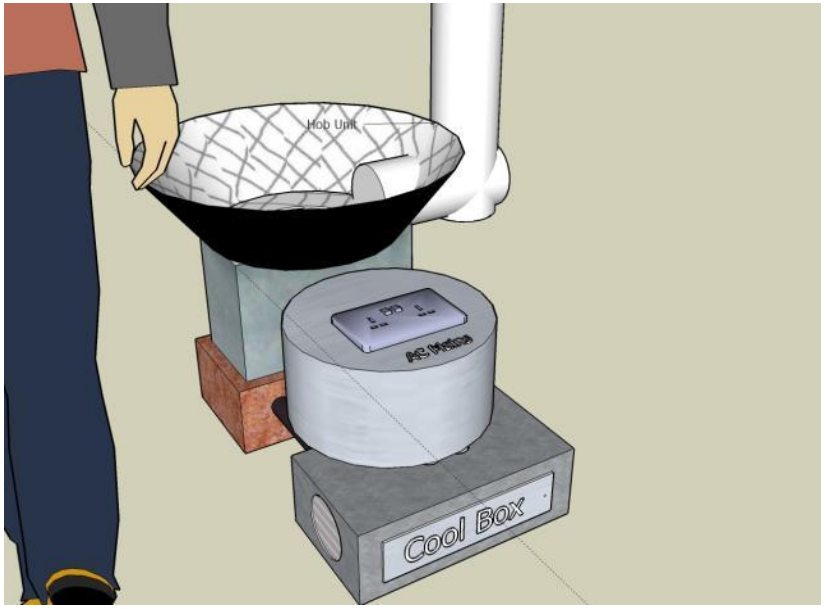
Neonatal heart monitor: Improving the quality of care of new-borns.



SCORE: Stove for cooking refrigeration and electricity.

Power Electronics, Machines and Control Group

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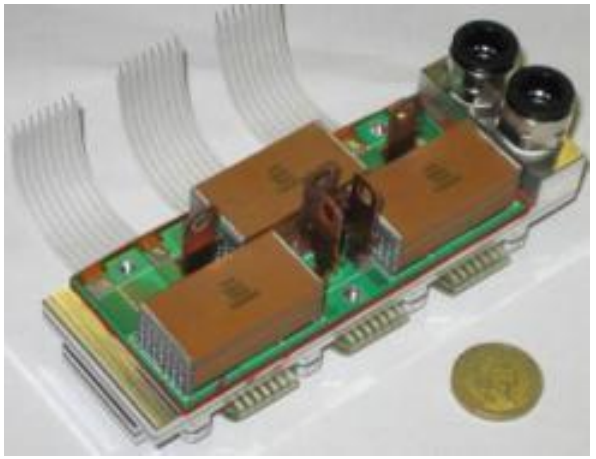
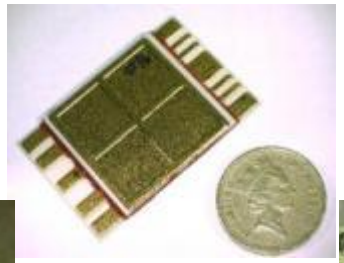
The Group

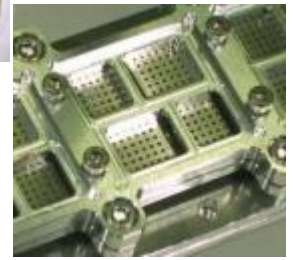
- 11 Academic Staff (7 full Professors)
- ≈100 researchers
  - ≈36 research fellows
  - ≈60 PhD students
  - 32 Nationalities
- £24m Research Budget



Focus Areas:

- Electrical Energy Conversion, Conditioning and Control
- Power Electronics Integration, Packaging and Thermal Management
- Motor Drives and Drive Control
- Electrical Machines





PEMC: Some Examples…

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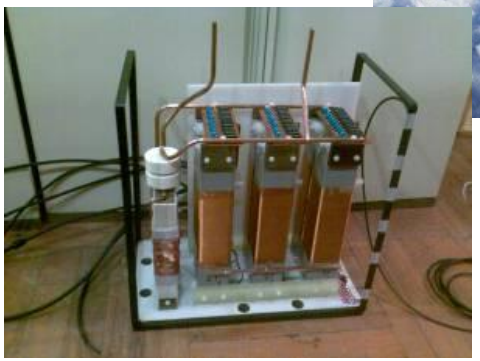
Electrical Energy Systems

- Transmission applications (HVDC)
- Smart grids/Smart buildings
- Energy storage interfacing

Transport

- More electric aircraft
- Road/rail vehicles
- Marine systems



Industrial Drive Systems And High Voltage Converters

- Physics (CERN etc.)
- Industrial microwaves
- Electrostatic precipitators

George Green Institute For Electromagnetics Research

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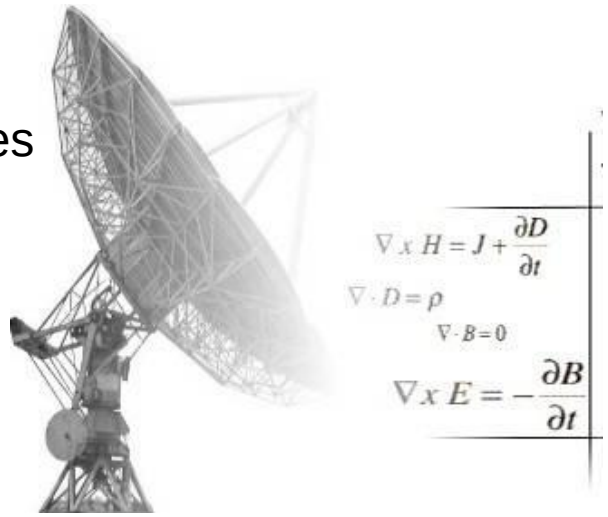
- Named after the Nottingham Scientist George Green.
- Focus on Electromagnetic Design in all its aspects.
- Characterization, Modelling and Simulation of the electromagnetic behaviour of systems.
- 40 members (6 academic staff, 35 research fellows, visitors and PhD students)
- Expertise:
  - Electromagnetic modelling and simulation
  - Electromagnetic Compatibility and Signal Integrity
  - New materials and technologies
  - Complexity in design
- Examples of current projects:
  - Interaction of radiating systems with biological tissues
  - Magnetic resonance imaging
  - Signal propagation in PCBs
  - EMC modelling for aerospace applications
  - New aerospace technologies



Summary

- The joint PhD in Electrical Engineering between UoN and UoChile is an exciting opportunity to engage in research in two different environments
- There are various options for areas of study- and this is likely to expand when the final agreement has been signed (imminent)
- Some initial support funding is available and this is currently being further investigated by both Universities

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Questions about Nottingham?

For the PhD programme:

Pat.Wheeler@nottingham.ac.uk

In general (Nottingham, UoN life, PhD experience opinions, PEMC group questions etc.):

Alan.Watson@nottingham.ac.uk