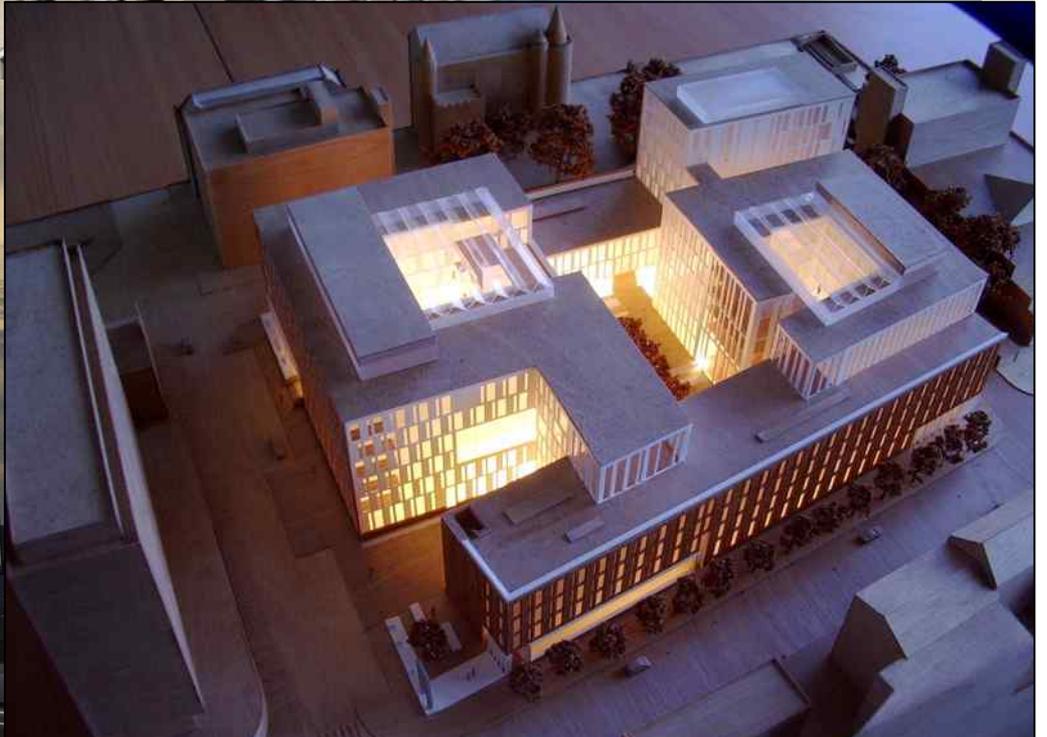




THE UNIVERSITY OF EDINBURGH
informatics

Welcome to Informatics





On the premises:

- ~ 100 Academic staff
- ~ 150 Postdoc researchers
- ~ 80 Support staff
- ~ 250 PhD students
- ~ 200 Masters students
- ~ 400 Undergraduates (200 1st year)

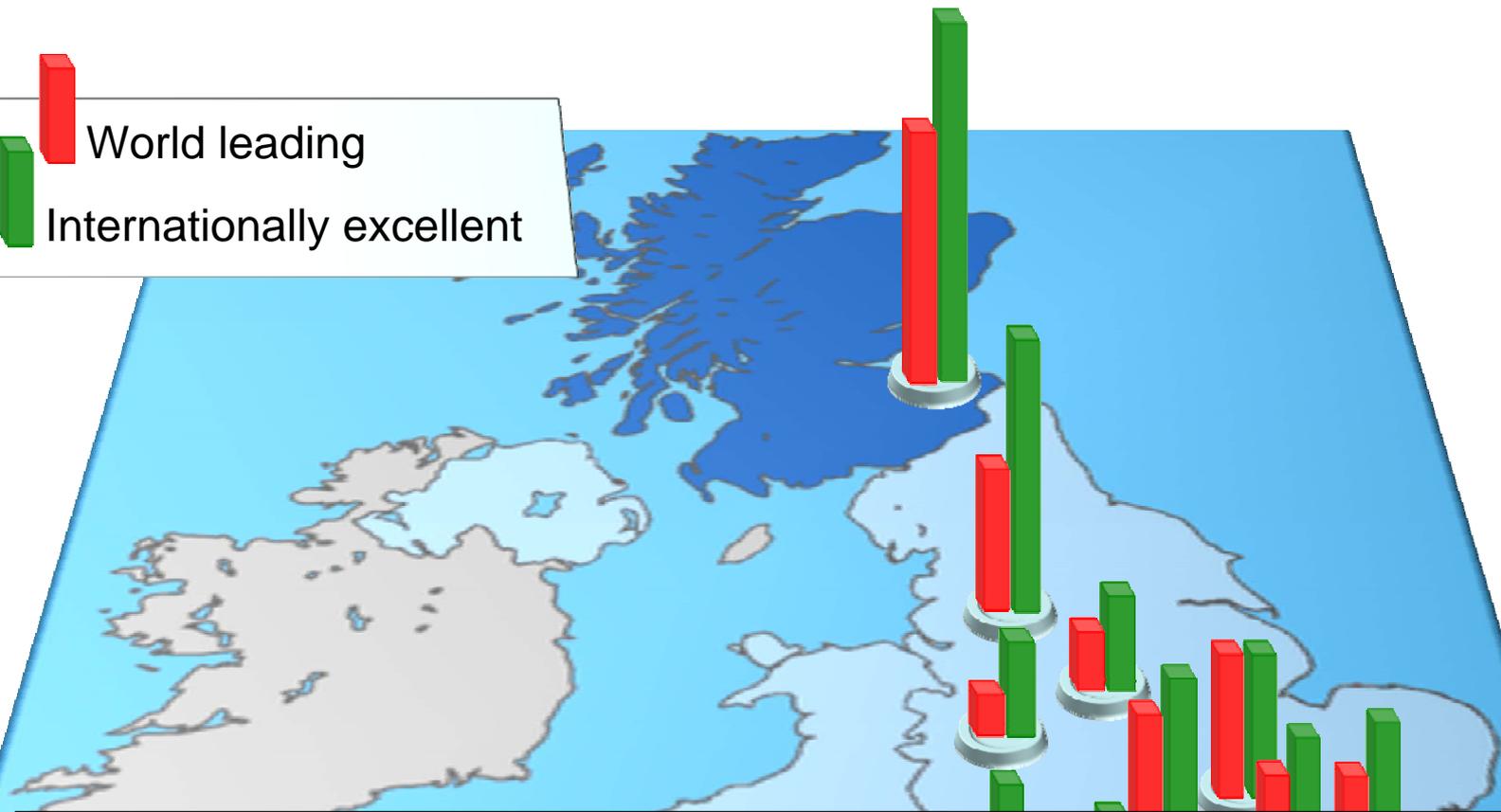
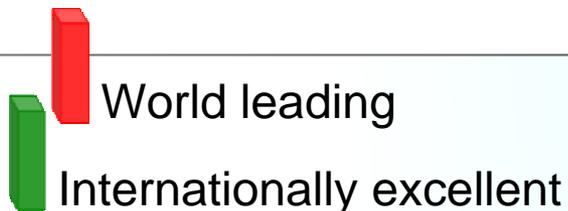
20% Software Engineering
50% Computer Science
30% Other joint programmes
(AI, Cog Sci, Maths, etc).

Graduating students:

- PhD: ~70 per year
- MSc: ~200 per year
- Undergraduate: ~100 per year



RAE Top 10 CS/Informatics Universities



69% more top rated research than nearest competitor
10% of all UK “world leading” research

www.rae.ac.uk



Recent Awards

- 2 Fellows of Royal Society
 - 1 Fellow of British Academy
 - 4 Fellows of Royal Academy of Engineering
 - 12 Fellows of Royal Society of Edinburgh
 - 3 Academia Europea
 - 10 Fellows of British Computer Society
 - 3 BCS Roger Needham Awards
 - 2 ACM Fellows
 - 1 Fellow of Cognitive Science Society
 - 5 AAI Fellows
 - 1 Herbrand Award
 - 1 IJCAI award for Research Excellence
-
- 4 Water Saver Award,
Stanford Global Enterprise Week:
 - 6 Young Scottish Software Engineer of the Year
 - 1 Google Anita Borg Scholarship
 - 1 Young Scientist Award, AMLaP
 - 3 RSE Enterprise Scholarship
 - 1 Shell Technology and Enterprise Program,
most enterprising student in UK Award
 - 3 Sir William Siemens medal



Depth and breadth:

Longest tradition of teaching in CS/AI in UK

One of the largest Masters ICT programmes in UK

Engagement:

Experience of joint provision with ICT Labs partners

Quality:

Half the Young Software Engineers of the Year in the last decade were from Informatics

Many MSc/UG theses lead to published results or innovation (e.g. Ian Clarke's thesis "*A Distributed Decentralised Information Storage and Retrieval System*" led to Freenet)

Innovation:

Routine: (e.g. lecture capture on video (23,000 video downloads))

New: (e.g. MOOCs – Coursera collaboration)



ProspeKT + Informatics Ventures

AspeKT + CGES + Design Informatics

Startups and spinouts:	33 generated £5M investment £3M sales
Hub effect:	250 companies 17 universities
Entrepreneurial training:	23,000 hours delivery 1000 participants £11M for 75 companies

Edinburgh holds UK record for number of university spinoff companies in last 10 years.
Informatics, if it was a university, would come 4th in UK.



Edinburgh Start-up Ecosystem



informatics
ventures



mobileacuity



SocialArtisan



feusd



Appleton Tower

Evo House



Re-Sounding

Trigah



relicarte digital
art & heritage

LUCKY FRAME

Quartermile



Silicon Walk



Waverley Gate



Administrate



neo

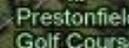
The Journal



MAKUR MEDIA



Techcube





Foundations for a new science

The science of information – how natural and artificial systems process, store and communicate information

A fundamental science underpinning all areas of life -
Academic, Industrial and Social.

Encompasses sub-disciplines such as Computer
Science, Artificial Intelligence and Cognitive Science

This view of informatics is necessary because:

Big technological problems are multi-disciplinary

Big societal problems demand integrative science



Roots of our science:

- State
- Logic

Led to major breakthroughs, including:

- Types and functional programming
- Logic programming
- Formal verification
- Natural language processing



Emergence of sub-disciplines:

- Many sub-fields
- Many institutes

80
OF EDINBURGH
DIVISION OF INFORMATICS
CENTRE FOR
INTELLIGENT SYSTEMS AND THEIR APPLICATIONS
AR

Led to major breakthroughs, including:

- Proof planning
- Algorithmic skeletons for parallel computation
- Modular speech synthesis systems
- 3D imaging



Technologies begin to scale:

- Internet scale
- Ubiquitous

Led to major breakthroughs, including:

- XML databases
- Peer to peer knowledge sharing systems
- Very large scale learning systems
- Proof carrying code



Maturing as a science:

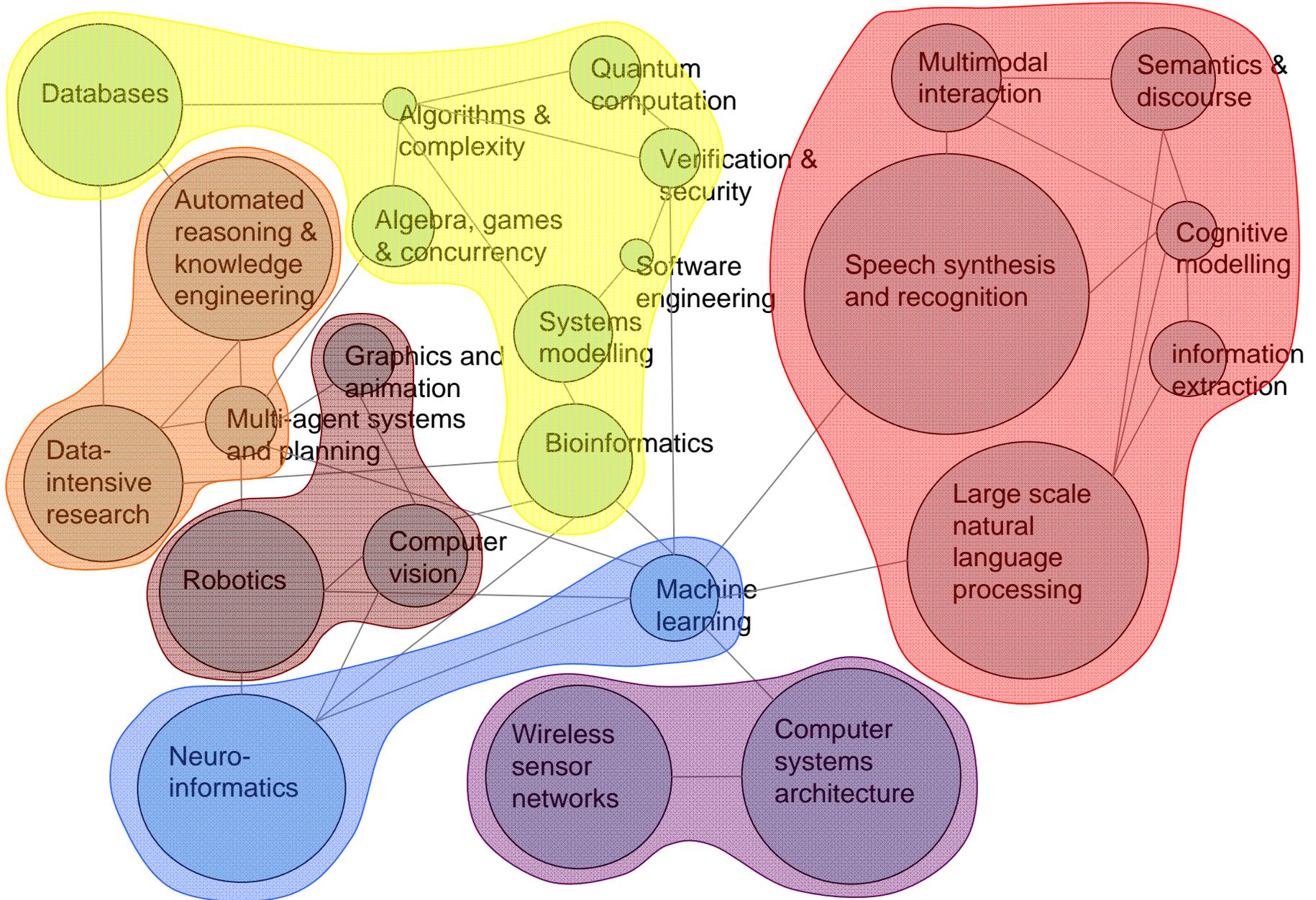
- Common core
- Computational scholarship
- Symbiosis with other sciences
- Impact on design and innovation

Leading to major breakthroughs, including:

- High performance, low power micro-architectures
- Humanoid robotics
- Network science
- Computational biomedicine



Our research landscape



An example of our breadth

Data from individuals

from “society”

and from the environment

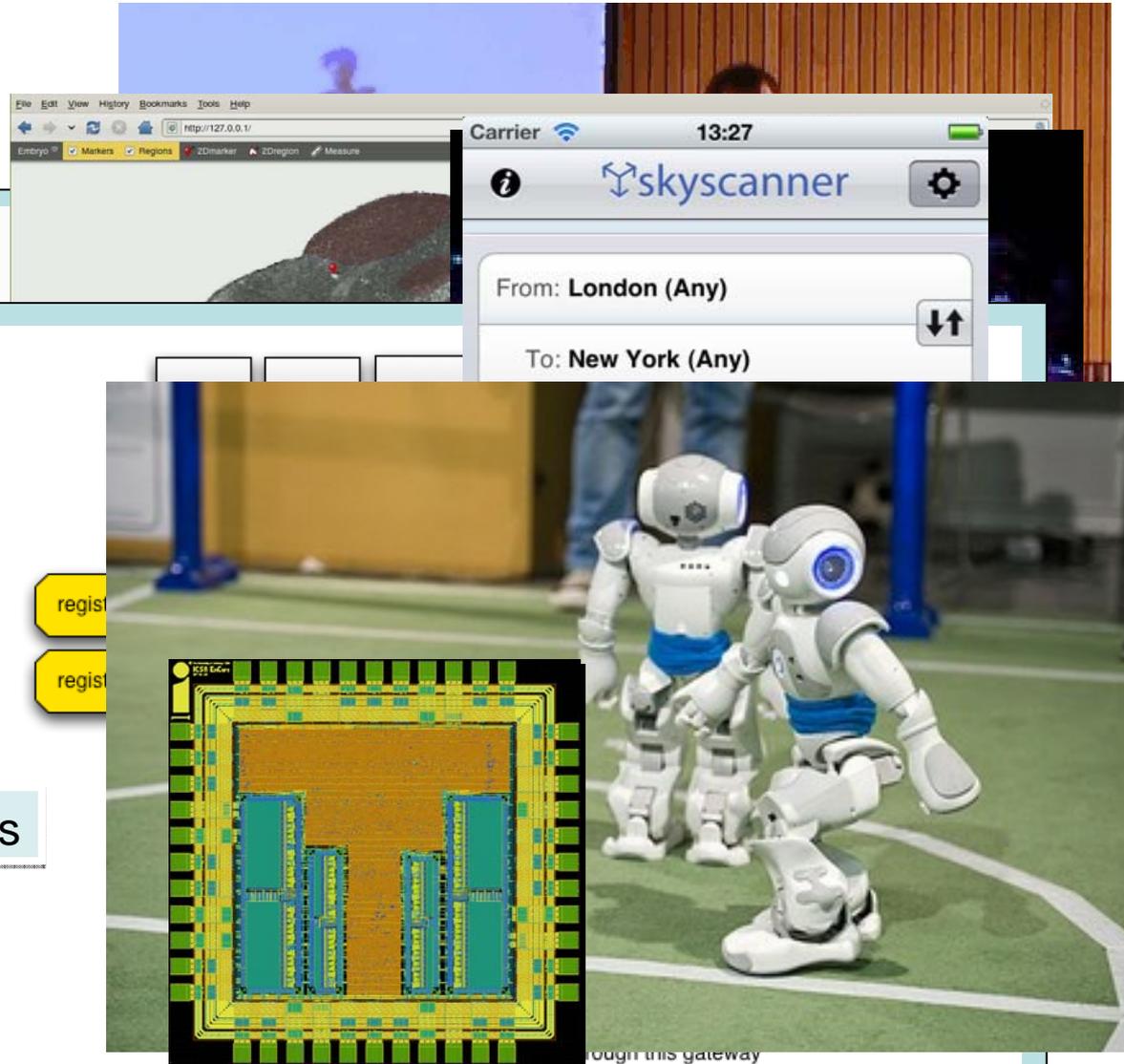
being curated

modelled

and coordinated

to return through new systems

that are more benevolent





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