

A model for international collaboration for a research-led university

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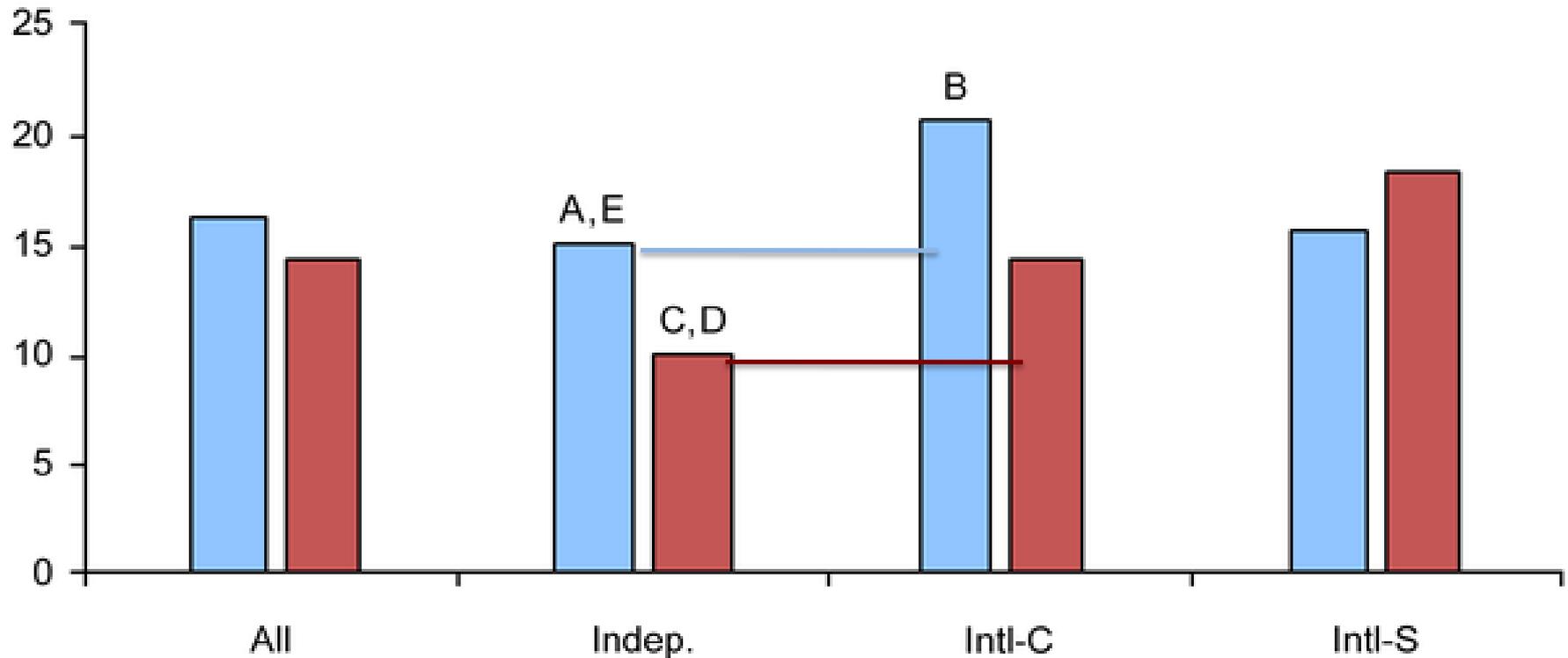


University of Liverpool – Key Facts

- Russell Group University, established 1881
- 8 Nobel Laureates
- *circa* 4,900 staff, 13% overseas, In 2008 RAE, a total of 53% of research staff were ranked in the highest categories of 4* (world-leading) and 3* (internationally excellent) for their research.
- 22000 students based in Liverpool, 16% overseas
- A comprehensive university with 3 Faculties, up to 17 Schools and >50 specialist centres with over £100M research expenditure per year



Does International partnership improve citation/impact? A specific example



Average number of citations for **US** and **UK** paper in Stem cell research
(PLoS ONE 6(3), 8th March 2011).

UK corresponding authors gaining 40% increase when co-authored with international partner
US corresponding authors also gaining 30% in number of citations for papers with international partners.

Projects and Collaborations that aim to bring Nations together by creating unique research resource where excellence is the only currency in trade.

CERN (Geneva) and SESAME (Jordan)

Two projects where University of Liverpool plays a significant role and our young generation learn to work as a Global Citizen

SESAME : A centre of excellence modeled on CERN – bringing nations together through Science
UK now the second largest contributor by in-kind contribution



SYNCHROTRON LIGHT FOR EXPERIMENTAL SCIENCE AND APPLICATIONS IN THE MIDDLE EAST

SESAME

An international centre for research and advanced technology under the auspices of UNESCO



The SESAME building at Allan (Jordan), where installation of the accelerator complex has begun.



NEW OPPORTUNITIES

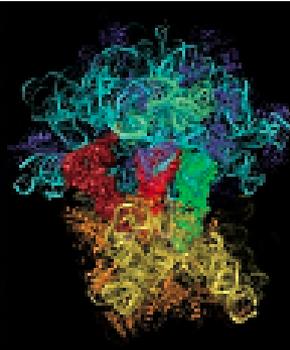
Chemistry

Biological / Medical sciences

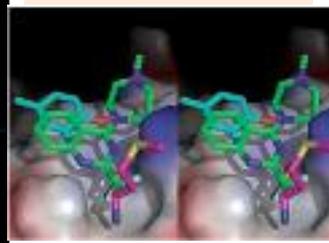
Materials Science

UK represented by Samar Hasnain (University of Liverpool)

- Seeing better with synchrotron light
- The SESAME synchrotron light source
- SESAME users
- New opportunities
- Schematic overview of SESAME
- A closer look for scientists
- The SESAME story
- The SESAME Council and Committees
- The SESAME staff



Nobel prize (2009)



Designing drugs



Ancient pigment technology revealed by synchrotron X-rays : A non-destructive approach to reveal ancient chemistry

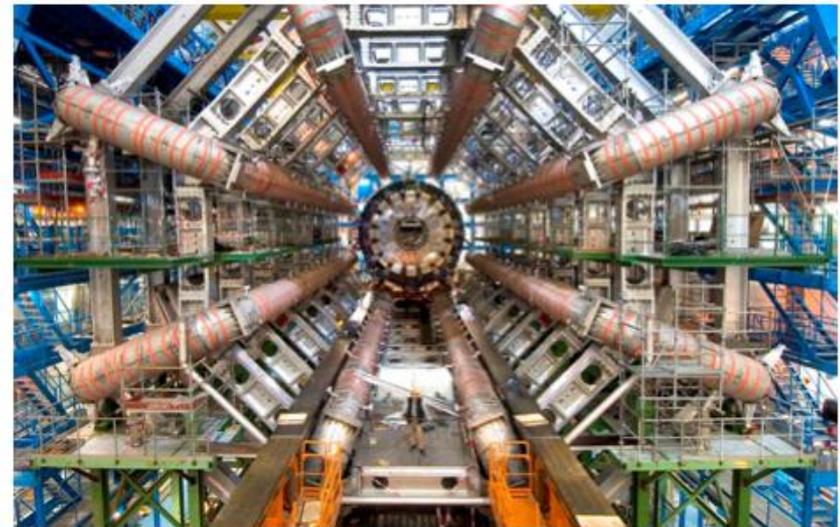
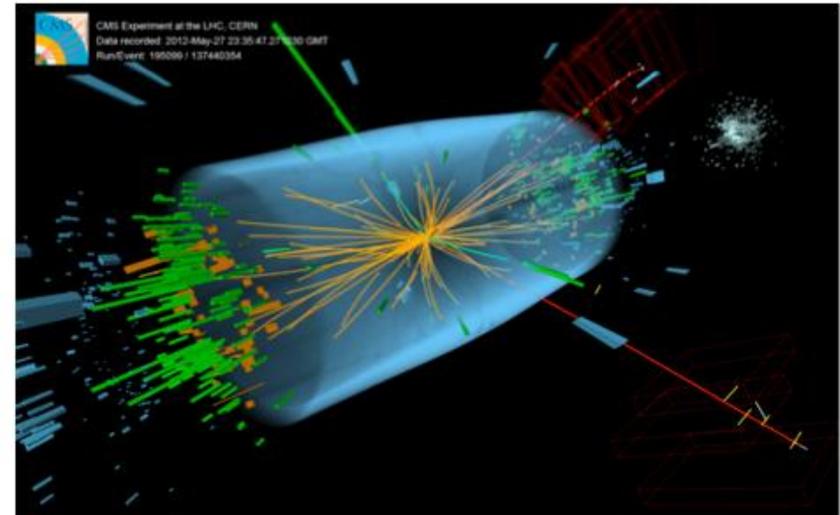


Biggest UK group at CERN including Nuclear and Particle Physics

Key discoveries/measurement at CERN

- W/Z (Nobel 1984)
- Number of Neutrino Generations (1989)
- Direct Observation of Microscopic Arrow of time by T-violation (1995)
- Study of anti-hydrogen for 1000s (2011)
- Discovery of Higgs Boson (2012)
- Unique limits on Supersymmetry from B_s decays (2012)

We now have a scholarship agreement to be signed in May to bring 5 joint funded PhD students per year to Liverpool to study physics and engineering



Collaborating with national research organisations

Getting early career researchers engaged with global agendas and presenting them with the opportunity to appreciate “*other ways of doing things*”.

Creating new research partnerships with peer organisations and widening funding opportunities.

Adding value by the “pooling” of research capabilities (X-ray free electron laser, rapid throughput materials science & etc)

Nearly 50 PhD students in all science disciplines across the University



CREATING GROWTH. ENHANCING LIVES.



RIKEN

RIKEN was first organised in 1917 as a private research foundation, and reorganized in 2003 as an independent administrative institution under the Ministry of Education, Culture, Sports, Science and Technology.

MoU signed in Q1 2009 (with SPring-8)

Institutional visit in Q3 2010

Agreement signed in Liverpool in Q4 2010

Two students begin joint PhD in Q4 2010

Now 4

Agree to hire in 3 students per year in STEM subjects

Joint PhD programme



A*STAR



CREATING GROWTH. ENHANCING LIVES.

A*STAR is the lead agency for fostering world-class scientific research and talent for an innovation-driven Singapore. It oversees 14 biomedical sciences and physical sciences and engineering research institutes, and six consortia & centres, located in Biopolis and Fusionopolis.

Co-funded/supervised PhD programme

Structure and property study of the porous structural materials for energy storage

Integrated Atomic Layer Deposition (ALD) layers for GaN-on-8" Silicon Technology

Developing a multi-scale simulation capability, with application to amyloid formation in neurodegenerative disease



CIC bioGUNE & *biomaGUNE*

These two life-science based research laboratories are located in the Basque region and are administratively part of the same organisation. Both are located adjacent to enterprise parks in San Sebastian and Bilbao.

First contact made in 2009 with research talk

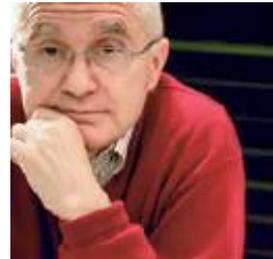
Institutional visit to Liverpool in Q1 2010

Institutional visit to Spain in Q3 2010

MoU signed in Q1 2011

Two students enrolled on
PhDs in Q4 2010

Joint PhD programme



Vision & drivers

Focussing on the societal grand challenges, the University is using this initiative to develop its young researchers to become outstanding researchers who will have a better cultural and social awareness of other nations.

Create new multi-national interdisciplinary research groups.

Develop international research leadership.

Forge new relationships with academic and industrial partners and establish triangular relationships.

