

Mix things up.
Multidisciplinary
Research Week 2012
programme

6 – 10 February 2012

www.southampton.ac.uk/multidisciplinary



Multidisciplinary Research Week

6 – 10 February 2012

Multidisciplinary Research Week is a programme of activities aimed at showcasing different aspects of multidisciplinary work at the University of Southampton.

In this programme you will find information on the events that will be on offer during the week.

Research in the United Kingdom has changed dramatically in recent years, and the need to address today's big societal issues is a strategic focus for universities, government, research councils, business and industry.

Our aim is to integrate perspectives from the arts, humanities and social sciences with methods drawn from mathematics, engineering or the physical sciences to forecast, anticipate or predict the likely behaviour of complex systems (which may be social, natural or engineering systems) and develop appropriate mitigation or intervention strategies.

To register

To register for an event please email: multidisciplinary@southampton.ac.uk
or visit our website:

www.southampton.ac.uk/multidisciplinary

#multisoton

Programme of activities

Running throughout the week

The Seven Billionth Citizen Exhibition

Venue: Building 12 (Hartley Library) Level 4 Gallery, Highfield Campus

Time: 7.30am - Midnight (Monday - Friday)

“As we come to terms with the birth of the seven billionth person, we 77 have come together to explore our relationship with the other 6,999,999,923, and the earth we inhabit.”

This exciting display is organised by second-year Fine Art students from the Winchester School of Art and is a response to the announcement by the United Nations of the the birth of the seven billionth citizen. It addresses the sublime; the aesthetic quality of awe-inducing magnitude. Each student will contribute their own version of the well-known formula of the paintings of Caspar David Friedrich: *the lone figure gazing into a supremely bleak wilderness*.

The students are working with multidisciplinary champions Dr Amos Channon (Ageing and Lifelong Health), Dr Felix Eigenbrod (Living With Environmental Change), Dr John Gillett (Winchester School of Art), Dr Pauline Leonard (Work Futures Research Centre), Professor Gail Taylor (Energy), and Professor Guy Poppy (Director of Multidisciplinary Research Strategy), on pressing issues surrounding population growth, environment and global resources.

The exhibition is viewable whenever the Hartley Library is open and runs until 24 March 2012.

All welcome - please stop by!

Members of the public: please bring photo identification.



Variations on Friedrich's *Lone figure*

Monday 6 February



The Performance Sports Engineering Laboratory was awarded a Queen's Anniversary prize for their expertise

(Opening Lecture) Sustainable Consumption: Oxyoron or Opportunity?

Dr Peter White, Director of Global Sustainability, Procter & Gamble

Introduced by: Professor Guy Poppy, Director of Multidisciplinary Research Strategy

Venue: Building 52 (Turner Sims) Highfield Campus

Time: 10.30am – 11.30am

Dr Peter White is based at Procter & Gamble in Newcastle-Upon-Tyne. He helped to found P&G's Sustainable Development organisation, and created and led their Sustainability Leadership Council - the global, business-wide group responsible for developing and delivering their Sustainability Strategy and Goals.

Dr White is actively involved in the work of the World Business Council for Sustainable Development and is a Visiting Professor at the Institute for Research on Sustainability at Newcastle University, UK. A biologist by training, Dr White has worked at P&G for 20 years in the areas of Environmental Management, Lifecycle Assessment and Integrated Solid Waste Management. He has written and spoken widely on sustainability issues.

Refreshments will be available.

The Science of Music - H.A.W.K. Demonstration (Hand and Wrist Kinematics)

Professor David Owen Norris and Dr Cheryl Metcalf

Venue: Building 52 (Turner Sims) Highfield Campus

Time: 11.45am - 12.15pm

See how the same motion capture that was used to make *Lord of the Rings* is being used to understand the different

ways in which musicians use their hands to play the piano.

A light lunch will be available after the demonstration.

A Flick on the Bad Side: Understanding Underwater Fly

Dr Dominic Hudson and Professor Steven Turnock

Venue: Building 27, Room 2001, Highfield Campus

Time: 2pm – 3pm

On-going research in support of British Swimming has been applying Naval Architecture techniques to understand the science of human swimming. This work has applied techniques developed for evaluating ship self-propulsion as well as novel wireless sensor and synchronised video systems to capture the dynamic behaviour of the underwater phase of competitive swimming. Presented by the Performance Sports Engineering Laboratory.

Refreshments available from 3pm.

What can Crystallography do for you?

Dr Simon Coles and Dr Ivo Tews

Venue: Building 85 (Life Sciences) Room 2209, Highfield Campus

Time: 3pm – 5pm

Short presentations, laboratory tours and hands-on demonstrations reveal the activities and capabilities of the Southampton Diffraction Centre. This includes demonstrating the broad applicability of macromolecular structural research across the disciplines touching on the life sciences.

Refreshments available from 5pm.

The Curriculum Innovation Stall: Preparing Students for their Future

Venue: Building 42 (Students' Union) Level 3 Bar Area, Highfield Campus

Time: 10am – 5pm (Monday and Wednesday)

Are you an undergraduate student who is keen to enhance your career prospects after you graduate? The University is developing an innovative approach to our curriculum allowing opportunities for students to exercise choice and personalise their learning if they wish to do so. Visit the stall and find out how to take control of your degree and enhance your employability with Graduate Attributes.

Tuesday 7 February



NIHR Wellcome Trust Clinical Research Facility Tour

Venue: C Level, West Wing,
Southampton General Hospital

Time: 10am – 12pm

The WTCRF is a modern, purpose-built research facility at Southampton General Hospital providing an outstanding environment for clinical research. With dedicated paediatric and adult inpatient facilities, extensive consulting rooms and state-of-the-art laboratories, it hosts a wide range of multidisciplinary studies with the support of highly-trained research nurses and facilitates research excellence in cancer, asthma, arthritis, infectious diseases, obesity and heart disease.

Free transport available, please email us.

Computational Modelling Group Annual Meeting

Venue: Building 67 (Nightingale) Room 1027,
Highfield Campus

Time: 9.30am – 1pm

At 10am Professor Hans Fangohr will introduce the invited speaker Professor Mark Nixon who will talk on: 'Gait and Soft Biometrics'. From 10.45am, there will be three brief presentations from the shortlisted entries for the Iridis PhD project competition. While the selection panel determines the winner of the competition, a poster session will show results and on-going work from across the University.

Light refreshments will be available from 9.30am and the meeting will close with a networking finger buffet lunch.

An Introduction to the Rehabilitation and Health Technologies Group

Professor Jane Burridge and Professor Neil White

Venue: Building 45 (Health Sciences)
Lecture Theatre 0045, Highfield Campus

Time: 10am – 11am

Embedded within the Institute for Life Sciences and the shadow Musculoskeletal Biomedical Research Unit, this cross-faculty group focuses on neurological and musculoskeletal conditions and brings together scientists, engineers, clinicians, psychologists and social scientists to answer current and future research questions. Understanding the basic mechanisms of disease, repair and regeneration underpins new technology that addresses clinical problems.

μ -VIS Laboratory Talk and Tour

Venue: Building 5 (Engineering Materials),
Highfield Campus

Time: 11am - 12pm (Tuesday and Friday)

The μ -VIS Centre is dedicated to advanced x-ray tomography, providing complete support for 3D imaging science in engineering, biomedical, humanities and environmental applications. These sessions will provide attendees with information on the activities of the Centre, and include a tour of the laboratory and visualisation suite.

Groups of up to 12.

Synthetic Biology: Ethical Challenges in Saving the World

Dr Ali Tavassoli, Dr Marcus Dymond and Daisy Ginsberg

Venue: Building 37 (Student Services) Room 4049
(Senate Room) Highfield Campus

Time: 3.30pm – 5pm

There is currently much excitement surrounding the rapidly growing discipline of synthetic biology, which utilizes the design and construction principles of engineering to develop, evolve and standardize biological components and systems. Ali Tavassoli will begin the session with an introduction to synthetic biology followed by a description of its potential future uses by artist, Daisy Ginsberg. Marcus Dymond will present a description of some of the ethical challenges of synthetic biology.

The presentations will be followed by a drinks reception.

Wednesday 8 February



Early Career Researchers Stall

Venue: Building 42 (Students' Union) Lobby,
Highfield Campus

Time: 10am – 5pm

Multidisciplinary research is an area of great growth for the University both internally, through the introduction of a new structure specifically designed to enhance collaboration, and externally, through funding opportunities from research councils and the success of projects crossing traditional borders. While this is recognised as an area of growing importance it is felt that this can be more difficult for ECRs. It is clear that the planning and execution of multidisciplinary research projects present particular challenges associated with the collaboration of individuals with widely varying backgrounds and interests. Stop by our stall to learn how ECRs interested in multidisciplinary research can develop new contacts and new ideas for future research projects.

For information on our February Multidisciplinary Research Forum email: SMuRF@southampton.ac.uk

The Curriculum Innovation Stall: Preparing Students for their Future

Venue: Building 42 (Students' Union) Level 3 Bar Area,
Highfield Campus

Time: 10am – 5pm (Monday and Wednesday)

Are you an undergraduate student who is keen to enhance your career prospects after you graduate? The University is developing an innovative approach to our curriculum allowing opportunities for students to exercise choice and personalise their learning if they wish to do so. Visit the stall and find out how to take control

of your degree and enhance your employability with Graduate Attributes.

Digital Humanities: Where Digital Technology and Music Collide

Professor Jeanice Brooks, Dr Andrew Pinnock,
Dr Richard Polfreman, Dr David Bretherton
and Dr Ben Oliver

Venue: Building 52 (Turner Sims) Highfield Campus

Time: 10am – 11.30am

Come and hear how our music researchers exploit digital technology within performance, musicology and composition. For example, creating interactive systems aiding music rehabilitation for cochlear implant patients. After the presentations visitors will be invited to try out some of the systems for themselves and view the posters.

Refreshments will be available.

Speakers' Corner

Venue: Building 42 (Students' Union) Lobby,
Highfield Campus

Time: 12pm – 2pm

Some of our top multidisciplinary researchers meet at Speakers' Corner to shout about hot topics. Dr Tracey Newman and Professor Guy Poppy debate pollution and food security. Professors Aaron Ridley and Steve Turnock debate sustainable energy. Professor Jane Falkingham and Dr Craig Hutton debate population growth and the challenges it represents. Professor Mark Hanson asks 'Why are we losing the war against obesity?' Join the ruckus and let us know what you think!

Open to all - stop by!



Wednesday 8 February Keynote Speech

BBC Presenter and Senior Lecturer Dr Lucy Blue

Visions of the Sea: Expanding Horizons in Maritime Archaeology through a Multi-Faceted Approach

Dr Lucy Blue

Venue: Building 52 (Turner Sims) Highfield Campus

Time: 4pm -6pm (Lecture at 5pm)

Dr Lucy Blue is Senior Lecturer in Maritime Archaeology, Director of the Centre for Maritime Archaeology and presenter of the BBC's 'Oceans'.

This lecture explores the ways people view the sea, in the past and present, through the lens of material culture. Maritime Archaeology addresses themes, including landscapes, shipwrecks and seafaring. It is inherently multidisciplinary exploiting methodologies from oceanography and geography, ethnography and museology, and often employing cutting-edge technology. This talk will address some of the threats and challenges faced, particularly in developing countries, and will conclude by outlining a variety of means, from capacity building to commercial collaboration, that we pursue in an effort to change perspectives, expand research and reveal the value of our maritime past.

Refreshments will be available from 4pm.

Posters and artefacts from the department of Maritime Archaeology and the Dunwich Project will be on display.

Thursday 9 February



Energy from the Oceans examines the future prospects of ocean energy technologies

Offender Health Research Workshop

Professor Paul Roderick, Dr Julie Parkes and Dr Stacey Panozzo

Venue: C Level, South Academic Block, Dean's Committee Room, Southampton General Hospital

Time: 9am – 3pm

The new multidisciplinary Offender Health Research Group will explore aspects of offender health research in presentations that will include national and regional perspectives and future NHS commissioning and funding arrangements for offender health within prison and probation. Local and national researchers will be presenting snapshots of recent and current research. In these afternoon workshops we will explore how to take this agenda forward within the University.

Places are limited, for details and to register email:

s.panozzo@southampton.ac.uk

Refreshments and lunch will be available.

The Litmus Project: Science and Poetry

Professor Peter Middleton, Professor Robyn Bolam and Dr Will May

Venue: Building 85 (Life Sciences) The Observatory, Level 7, Highfield Campus

Time: 10am – 12pm

What can a writer learn from a scientist? Why would a poet visit a high-voltage lab? The Litmus Project answers

these questions. Come and meet science post-graduates and creative writers who will be presenting poems and short stories inspired by scientific research throughout the University. Come along and discover the innovative work which bridges literature and science.

Energy from the Oceans

Professor AbuBakr S Bahaj

Venue: Building 85 (Life Sciences) Room 2207, Highfield Campus

Time: 2pm – 3pm

Energy is one of the most fundamental components needed for our progress and development. Current resources exploited to satisfy our need are being depleted at an alarming rate with an unsustainable trend that will hinder developmental needs of the global population. The utilisation of oceans resources, such as waves and currents is gathering pace and offers one of the appropriate routes for the production of sustainable electrical power. This presentation conveys the status of wave and marine current energy conversion technologies and examines the future prospects of ocean energy technologies.

Complex Systems Simulation Doctoral Training Centre: Open Day Event

Venue: Building 67 (Nightingale) Room 1027, Highfield Campus

Time: 2pm – 4pm

Find out about the Complex Systems Simulation Doctoral Training Centre and its wide-ranging research:

Climate Change	Multi-Agent Systems
Complexity	Nanodevices
Drug Design	Pervasive Computing
Ecosystems	Quantum
Economics	Dynamics
Electrical Energy Systems	Social Systems
Evolution	Turbulence
Industrial Design	Transport
Markets	Tissues

Presentations 2pm, student Q&A Session 3.30pm.

Poster session 4pm, tour of facilities 5pm.

Friday 10 February



μ-VIS Laboratory Talk and Tour

Venue: Building 5 (Engineering Materials),
Highfield Campus

Time: 11am - 12pm (Tuesday and Friday)

The μ-VIS Centre is dedicated to advanced x-ray tomography, providing complete support for 3D imaging science in engineering, biomedical, humanities and environmental applications. These sessions will provide attendees with information on the activities of the Centre, and include a tour of the laboratory and visualisation suite.

Groups of up to 12.

Developments in Digital Economy Research

Venue: Building 85 (Life Sciences) Room 2209,
Highfield Campus

Time: 1pm – 3pm

The Digital Economy Group will host a lunchtime seminar providing an insight into current Digital Economy activities at the University. Building on our existing Doctoral Training Centre in Web Science, we bring together researchers from across the whole university, including computer science, chemistry, psychology, mathematics, humanities, art, management, sociology, economics and law to uniquely research the social as well as technical aspects of the Digital Economy. This seminar will demonstrate some of the funded activities the group is currently engaged in and also provide an overview of the funding in this area as the United Kingdom's Digital

Economy Programme moves into a new phase. The seminar will also showcase some new developments at the intersection of the Creative and Digital Economies and the ways in which the Digital Economy is becoming integrated into University teaching.

Lunch will be provided and all are welcome.

Zine Event

Venue: Building 85 (Life Sciences) The Observatory,
Level 7, Highfield Campus

Time: 2pm – 5pm

A zine is a small-circulation, self-published magazine. This workshop offers researchers the opportunity to meet, exchange ideas about their research, and produce an instant zine together. No previous experience of art or graphics is required and all the materials are provided. This is a social and creative event, run by a Graphic Arts team from the Winchester School of Art, to develop new ways to promote and communicate multidisciplinary research. The focus is on enjoying yourself while exploring the challenge of finding new ways to describe your research creatively.

All are welcome but places are limited, please register. Refreshments from 4pm.

Global Challenges: Multidisciplinary Responses

Dr James Dyke

Venue: Charnock Lecture Theatre, National
Oceanography Centre (NOCS)
Waterfront Campus

Time: 4pm – 6pm

The perfect storm is coming. The global population is projected to reach 8 billion by 2050, food and energy costs are rising, all critically exacerbated by climate change. How will you, your family, and the rest of humanity not only survive but prosper in this world? This is arguably the greatest challenge that we and future generations face. Universities will play a key role in responding to these challenges both in terms of research and educating students.

Transport is provided from Highfield Bus Exchange at 3.30pm, returning at 6.30pm, please email us to book a place.

Refreshments will be available.

About us

In order to tackle today's big societal issues we must develop innovative approaches that bridge conventional boundaries between research disciplines.

By joining up our exciting and diverse areas of research and by partnering with external organisations in industry, charities, the public sector and other higher education establishments, we can make a significant contribution towards understanding and alleviating some of society's major challenges.

The University of Southampton has identified thirteen themes that build on our current areas of expertise. Each theme draws together researchers from across the University, combining our research in engineering, social sciences, biological and physical sciences, medicine and health technologies, as well as law, management and art.

The Multidisciplinary Research Strategy is led by Pro Vice-Chancellor Professor Philip Nelson and Director of Multidisciplinary Research Strategy Professor Guy Poppy. The staff of co-ordinators is based in Research and Innovation Services.

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Multidisciplinary Research Groups at the University of Southampton

Complexity in Real-World Contexts

Population Health

Computationally Intensive Imaging

Maritime Studies

Living with Environmental Change

Digital Economy

Work Futures Research Centre

Neurosciences

Ageing and Lifelong Health

NanoScience

Institute for Life Sciences

Energy

Health Technologies

Coming soon

Southampton Multidisciplinary Research Forum (SMuRF)

Venue: De Vere Grand Harbour Hotel, Southampton

Date: 16-17 February 2012

Multidisciplinary research is an area of great growth and it is clear that the planning and execution of these types of projects present particular challenges associated with the collaboration of individuals who have widely varying backgrounds and interests.

This conference is geared toward Early Career Researchers who are interested in developing their multidisciplinary research skills and will provide an atmosphere in which ECRs interested can develop new contacts and new ideas for future projects.

To register: <http://store.southampton.ac.uk>

For information email: SMuRF@southampton.ac.uk

Multidisciplinary Research Week 2013

If you have an event you would like to include next year, please get in touch!

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