Southampton University Research e-Prints

Developing Open Access with Institutional Repositories in the UK

Conferência sobre o Acesso Livre ao Conhecimento
Universidade do Minho, Braga, Portugal
12th and 13th May 2005

http://tardis.eprints.org
http://eprints.soton.ac.uk
http://software.eprints.org

Dr Jessie Hey
Southampton University Library and School of Electronics and Computer Science
University of Southampton

JISC

TARDis

From National Oceanography Centre, Southampton, UK

Questing after Open Access

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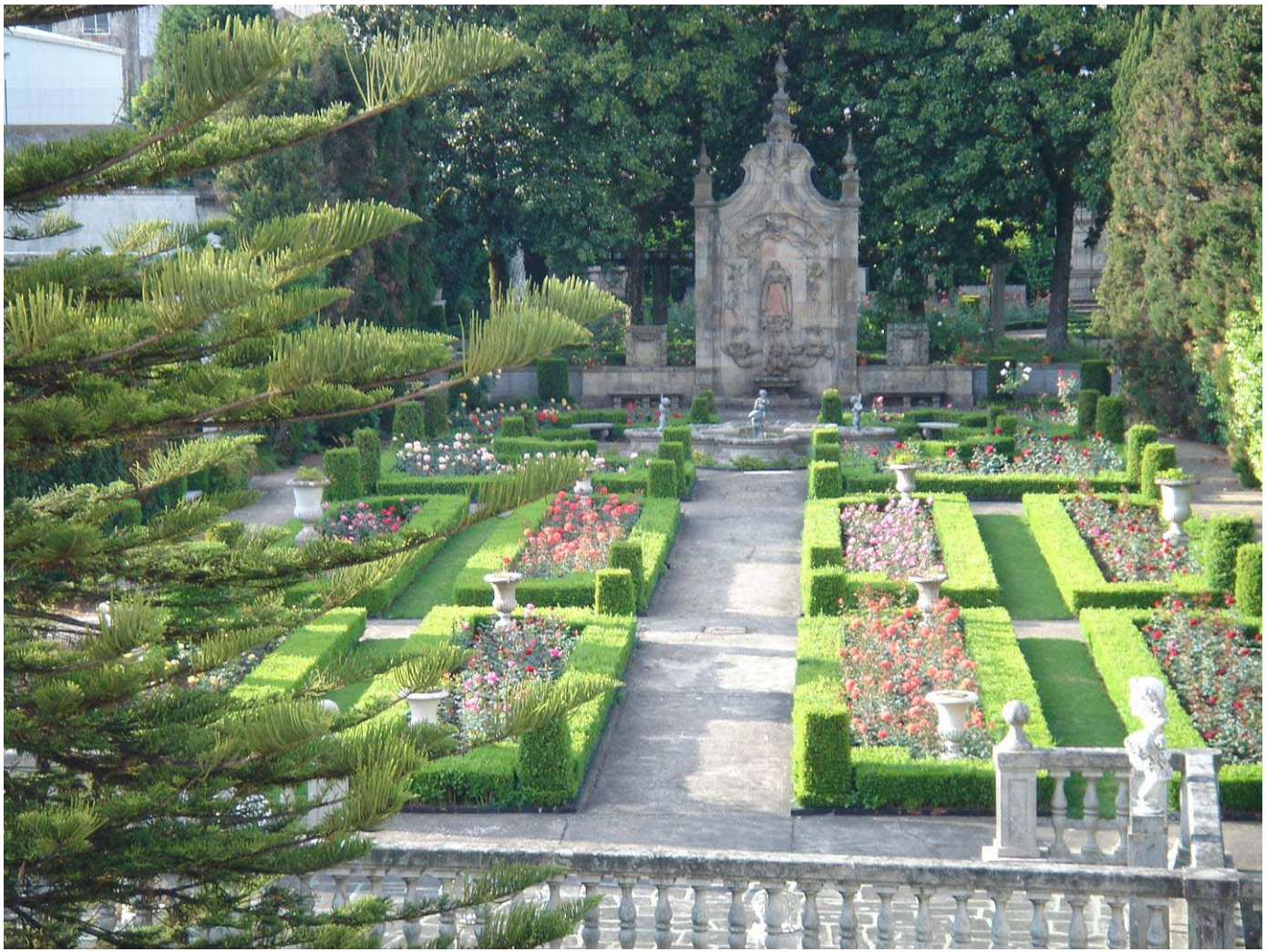
To the heart of Braga



In an ideal world of scholarly communication – all research is freely available

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- June 27th 2004 10th anniversary of Stevan Harnad's 'Subversive Proposal' leading to the open access vision for scholarly material
- See also Harnad, S. and Hey, J. M. N. (1995) Esoteric Knowledge: the Scholar and Scholarly Publishing on the Net. In *Proceedings of Networking and the Future of Libraries 2: Managing the Intellectual Record, Proceedings of an International Conference, Bath, 19-21 April 1995*, 110-16. Dempsey, L., Law, D. and Mowlat, I., Eds.
- And journals become more and more expensive

Even the work of researchers in our own institution is still often unavailable to us

…… but we're making progress

Some Southampton influences

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- Original EPrints software created at Southampton to enable the vision - now used by over 160 institutions worldwide – also spawned other software choices

- Some Soton departments have culture of deposit (but not all OAI compliant and searchable together)
- Electronics and Computer Science use the software for school publications database – now a repository with daily deposits (will be incorporated in e-Prints Soton)

An Institutional Research Repository for Southampton

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- Institutional Repository for Research set up (e-Prints Soton) http://eprints.soton.ac.uk with TARDis project to investigate issues for new concept (within JISC funded FAIR programme)

Southampton University Research e-Prints - working closely with individual 'schools' – found that depends so much on publication culture and working practices

- TARDis project: Feeding back into EPrints software
  good citation and information management practice
  experimenting with best balance of assisted deposit

- has capacity for adding full text (e-Prints) if available
  - Electronic copies of any research output e.g. journal articles, book chapters, conference papers even multimedia

- TARDis: Targeting Academic Research for Deposit and Disclosure
- FAIR: Focus on Access to Institutional Resources

Reporting on University practices and needs

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Hey, Jessie M.N. (2004) *An environmental assessment of research publication activity and related factors impacting the development of an Institutional e-Print Repository at the University of Southampton.* Southampton, UK, University of Southampton, 19pp. (TARDis Project Report, D 3.1.2) http://eprints.soton.ac.uk/archive/00006218/

See also TARDis article in Ariadne

http://eprints.soton.ac.uk/8986/

Share the glory (interdisciplinary papers) and sell your book too

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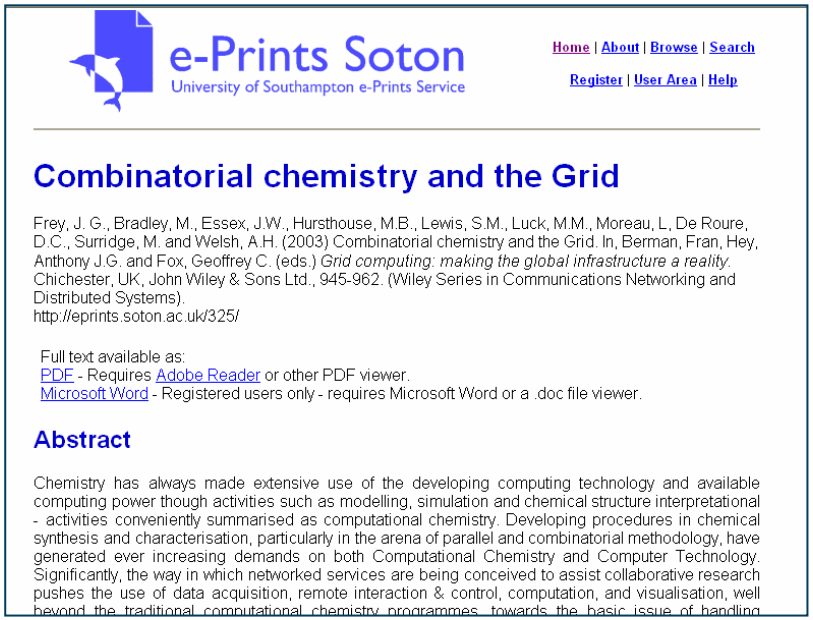

e-Prints Soton evolution

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- Original intent to provide secure storage for the full text of Southampton research output (e-Print Archive including post refereed pre published versions of papers deposited by researchers)
- Feedback: maximum benefit if the exercise also assisted researchers with time consuming research reporting tasks: Research Assessment (RAE), University Research Report, web pages, research proposals, CVs etc
- Evolved to 'hybrid' publications database for all research output with full text where available

Add your metadata and full text if available and allowed: appropriate for Humanities too

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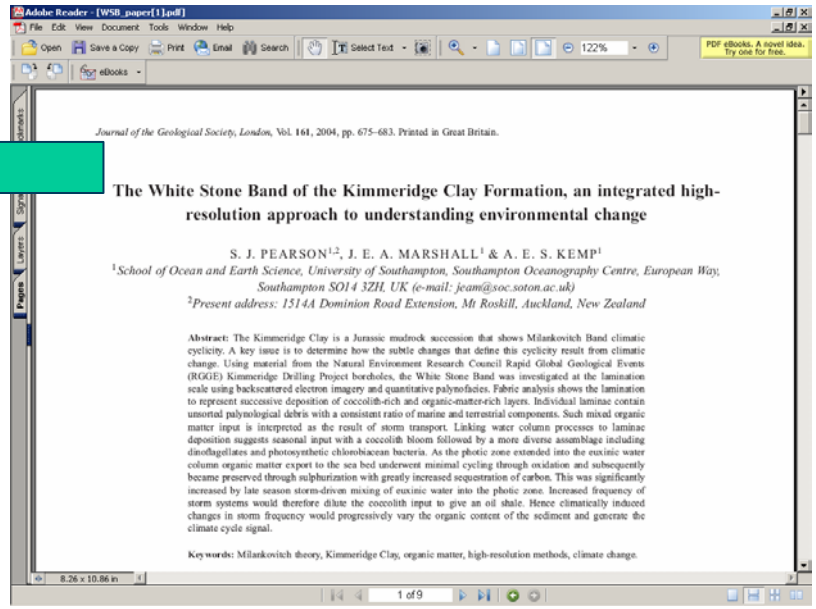

e-Prints Soton evolution: aiming for full moon at midnight

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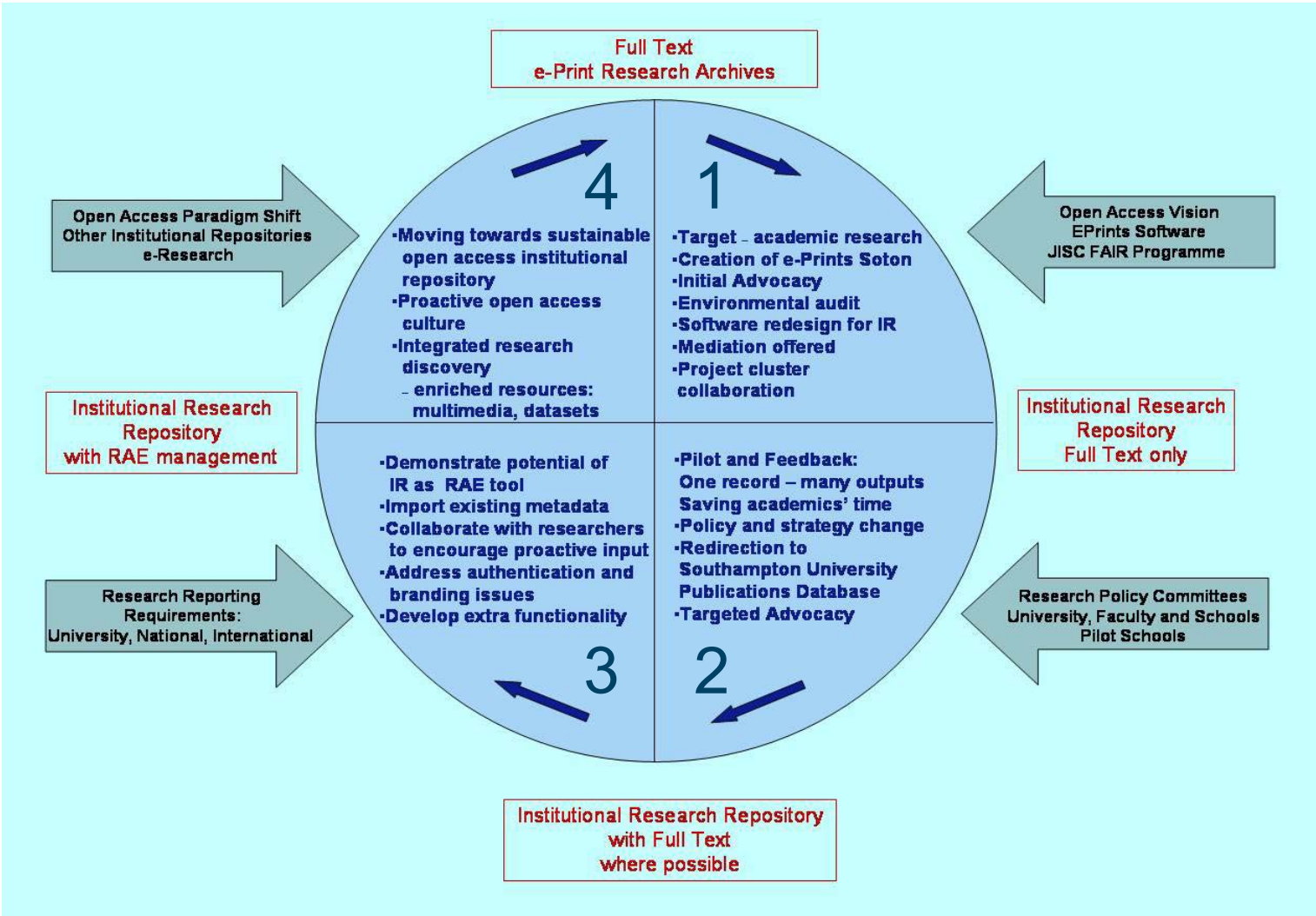

Achieving a slower but more sustainable model – the TARDis road

- To achieve the original vision we are moving around the clock face
- Collaborating with academics to provide tailored valued services for different disciplines (needing extra functionality)
- Aided by a fast moving shared international movement

All rising to great place is by a winding stair
Francis Bacon

External climate e.g. Copyright issues changing fast

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Common e-Print deposit:

Postprint = postrefereed pre-journal version

We provide link to published version for joined up picture

Transition to University integrated service – shared ownership

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Southampton University management (agreed Nov 2004) to support the next stage of a library managed repository for key role in research recording and visibility tasks

Collaboration with both Information Systems Services and School of Electronics and Computer Science will continue although TARDis is completing its transition to invisibility.

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Southampton Press Release 15 Dec 2004

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'We see our Institutional Repository as a key tool for the stewardship of the University's digital research assets,' said Professor Paul Curran, Deputy Vice-Chancellor of the University. 'It will provide greater access to our research, as well as offering a valuable mechanism for reporting and recording it.

House of Commons Science and Technology committee

- Inquiry into scientific publishing
- Written evidence Feb 2004 (127 submissions)
- Oral evidence March-May 2004
- Report 20th July 2004
- Government response Nov 2004

Report….

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- 82 recommendations

- Improving current practice
- Author-pays publishing model
- And Institutional Repositories
  - UK HEIs to set up IRs
  - Response – up to institutions
  - British Library to be supported to provide digital preservation

RCUK position statement

http://www.rcuk.ac.uk/whatsnew.asp
19 April 2005

RCUK Consultation on access to and dissemination of the outputs of research

RCUK has agreed a position statement on access to and dissemination of the outputs of research funded by the Research Councils.

This information was circulated to Vice-Chancellors in March, to give them an opportunity to comment before the document is finalised. RCUK expect to formally release the statement in its definitive form in mid-May 2005.

RCUK….

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- But deadline for replies from Vice Chancellors was 11th May
- Generated lots of responses – generally favourable
- Expect to make some detailed changes and issue before end of month

Key points in draft

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- Reflects the view of 8 research councils

Key points in **draft**:

- Deposit publications for research council funded work in OA repository where one exists, at earliest opportunity and taking notice of copyright
- Engage with stakeholders to develop effective copyright arrangements
- Will allow applicants to include predicted cost of author-pays journals in project costings

Currently 20+ UK IRs starting but set to increase

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SHERPA network plus….

Guardian March 14, 2005:

Scottish universities sign open access deal
The declaration commits each of its 16 university signatories to setting up online libraries of research findings and doctorate papers which all academics can access

The UK vision: a national and international development of IRs

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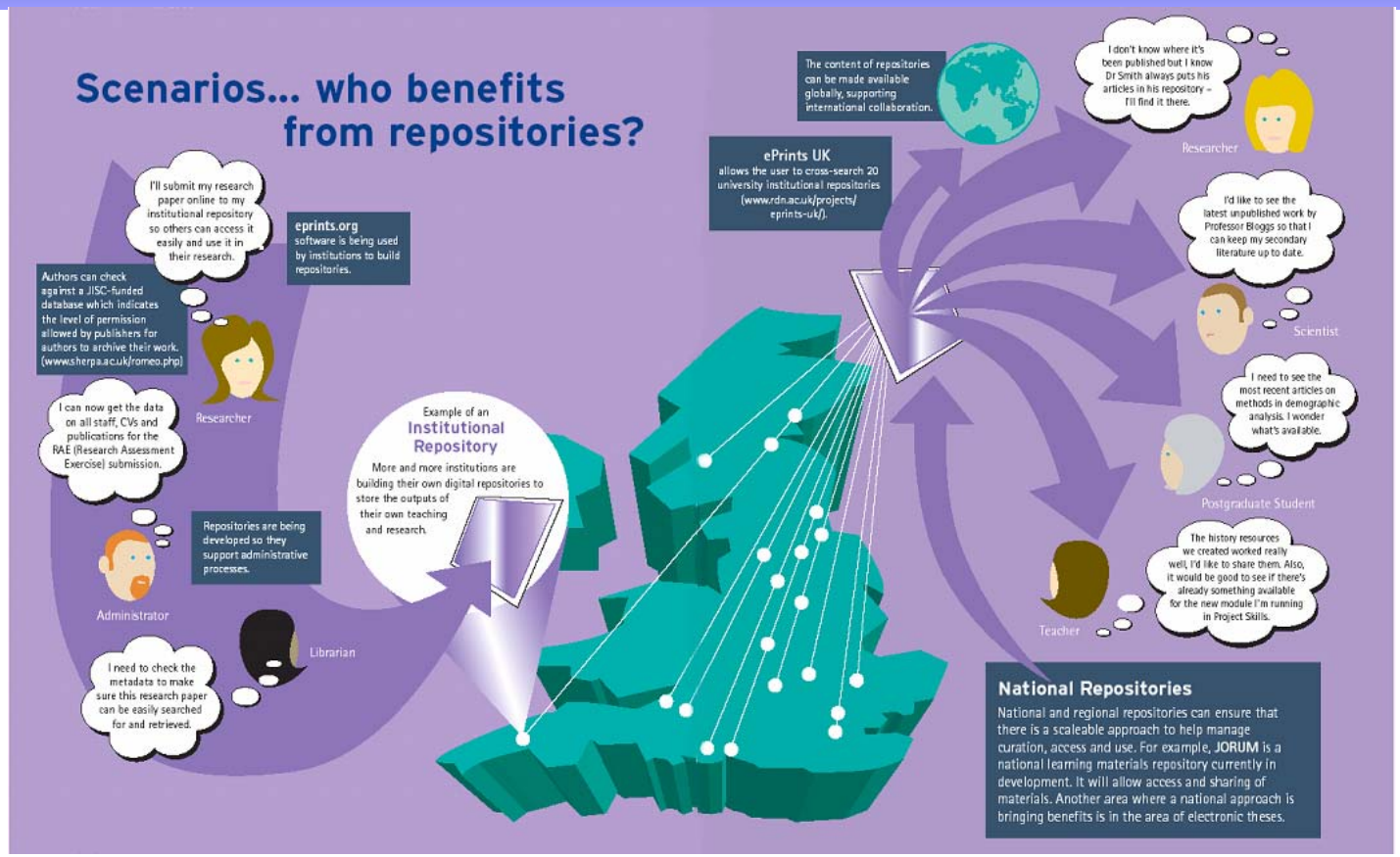

- The JISC vision reflecting the individual repositories (JISC Inform no. 8)

ePrints UK

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- Harvesting
- Providing simple national search services
- Added value services

Developing complexity

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- Research council IRs eg CCLRC (Physics etc)

National Oceanography Centre, Southampton

- Will contribute to Southampton Research Repository
- UK NERC repositories
- Global Marine Science repositories

A new UK advocacy campaign

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- JISC Briefing paper on Open Access April 2005

www.jisc.ac.uk/publications JISC

To start next week under SHERPA banner:

- Framework: leaflets, guidelines etc to chief librarians to distribute
- Guidance for good advocacy campaigns eg template for organising events
- List of topics and speakers

What can you do once you have the Institutional Repository? e.g. News release on new research

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Electronics and Computer Science
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University of Southampton > ECS > News > **Butterflies' wings dazzle with science**

Butterflies' wings dazzle with science

The brilliant dazzle of butterflies' wings could hold the key to a new type of optical material, called photonic crystals. Over the past 15 years, photonic crystals have attracted the attention of a vast international community, as scientists have begun to realise their potential applications in the field of optoelectronics and telecommunications.

Morpho Rhetenor butterfly

According to Dr Luca Plattner, who undertook research in the School of Electronics and Computer Science at the University of Southampton, our understanding of the way that light is reflected from the wings of butterflies could lead to the fabrication of new photonic crystals.

Dr Plattner investigated the optical properties of a periodic nanostructure found on the wings of a tropical butterfly, Morpho rhetenor. Several decades of scientific investigation had shown that understanding the source of the butterfly's dazzling blue coloration required the use of the most advanced techniques employed in optical engineering.

Dr Plattner's study explored the remarkable properties of the nanostructures and the physical mechanisms that produce them, both experimentally through optical measurements which complemented those reported by other scientists, and theoretically via cutting-edge simulation techniques developed for photonics. This enabled him to fabricate optical structures inspired by the butterfly microstructure using silicon-based materials and processes that are common in microelectronics. The work was carried out under the supervision of Professor Greg Parker.

'The reason for studying the structure on the wings of that particular butterfly was that it has strong similarities to the photonic crystals already fabricated in the ECS Microelectronics Research Group,' said Luca Plattner. 'I was able to explore a biomimetic process, one in which we can learn new lessons from nature which are beneficial to both engineers and entomologists.'

Dr Plattner's work will be published in the first print issue of the Royal Society's Interface magazine, due out on 22 November.

More Information.
Posted by *Joyce Lewis* on 04 Nov 2004.

Tel: +44 (0)23 8059 6000 | Contact ECS | Site map | Intranet | © 2004 University of Southampton

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e-Print promoted via the link: his other work gets read too!

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University of Southampton > ECS > **Publications**

A study in biomimetics: nanometer-scale, high-efficiency, dielectric diffractive structures on the wings of butterflies and in the silicon chip factory.

Plattner, L. (2003) ***A study in biomimetics: nanometer-scale, high-efficiency, dielectric diffractive structures on the wings of butterflies and in the silicon chip factory.*****. PhD, School of Electronics and Computer Science, University of Southampton.**

Downloads

File type	File size
PDF - Requires Adobe Acrobat Reader or other PDF viewer.	3Kb

Abstract

Nature is an invaluable source of inspiration for engineers, who draw upon the solutions evolved by species over millions of years, to design new devices or perfect existing ones. The process of transferring nature s designs into man-made devices is called biomimetics.

This thesis reports on a biomimetic study in quantum optics. The microstructure found on the wings of a tropical butter y holds the secret of its famous structural coloration. The intricate arrangement of low-index dielectric material achieves, in the short wavelength regime of the visible spectrum, an extremely high re ection with a very large angular spread of the back-scattered light and acts as a very e cient low-pass lter. Devices exhibiting these properties may be desirable for applications in a range of elds of optical engineering.

An experimental investigation of the scattering of light was performed on the butter y microstructure. This revealed a more complex phenomenology than previously thought. In order to carry out the measurements, a novel experimental method for the spectroscopical analysis of the scattering from nanostructures surfaces was developed. This method required the construction of an experimental setup involving supercontinuum generation by means of a photonic crystal bre and alignment tools with submicron accuracy.

To explain the optical phenomenology of the butter y microstructure, modelling techniques, which are at the forefront of research in the eld of photonic crystals, were used. A theoretical investigation of the band structure of previously unreported crystal lattices occurring in the microstructure was carried out using the plane wave method. A novel numerical method was developed, which enabled computation of the diffraction e ciencies of twodimensional periodic arrangements of low-index dielectrics. The theoretical investigation accounted correctly for the experimental results.

Using common microelectronic processing techniques, two- and threedimensional photonic crystals were fabricated, which were inspired by the butter y microstructure and which shared some of its optical properties.

- **EPrint Type** Thesis
- **Research Group** Nano-Scale Integration Group
- **Deposited On** 15 October 2004 by Gutteridge, Christopher
- **Alternative Locations** http://utenti.lycos.it/lucaplattner/
- **ID Code** 10031

Authors

- Luca Plattner

Metadata available via OAI as: oai_dc (unqualified dublin core)

ECS Staff Only: edit this record

Adding more functionality with 'Latest feeds' – by web site and screen at entrance

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Screen in foyer – is my paper there?

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Hot off the screen

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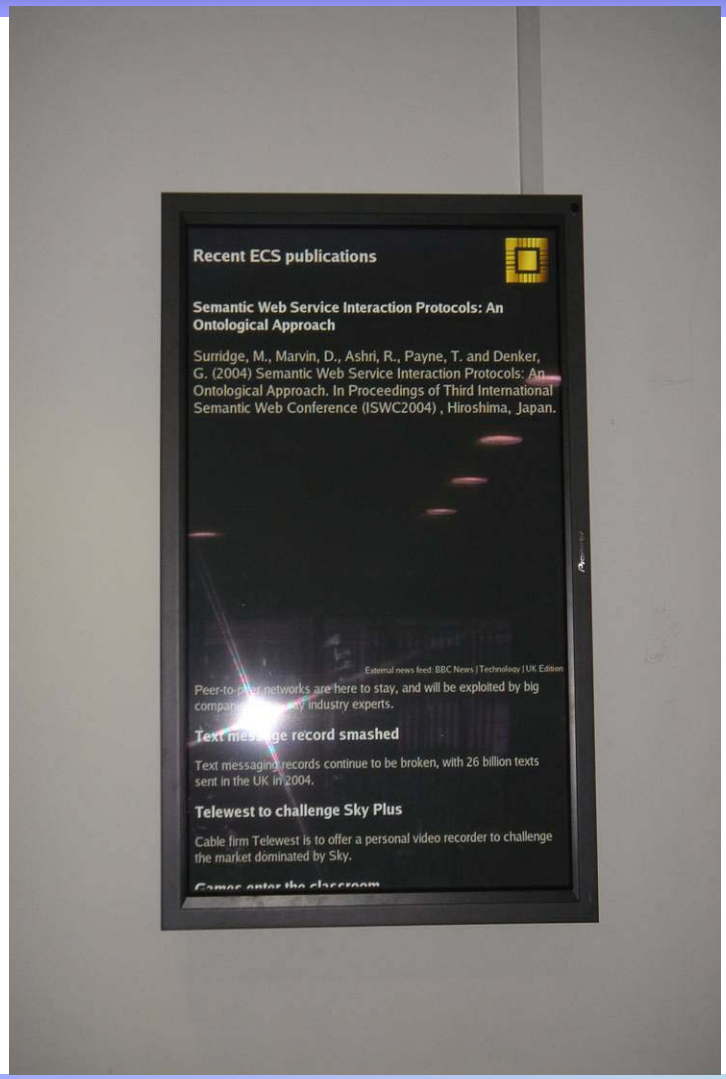

Developing Open Access with Institutional Repositories in the UK

Thank you,

Jessie Hey (jmnh@ecs.soton.ac.uk)

TARDis Project leading to
Southampton University Research Repository
http://eprints.soton.ac.uk

Now building services for the repository and working on the next stage of development of repositories generally with

PRESERV (PReservation Eprints SERVices) Project

Lessons learnt from FAIR programme:

FAIR synthesis on JISC web site

Best wishes for your own individual and national projects!