

## News from Michaelmas Term Nov 2013

### Professor Harry Anderson Elected to the Fellowship of the Royal Society

Professor Harry L. Anderson, Tutorial Fellow in Organic Chemistry, has been elected to the Fellowship of the Royal Society. Fellows are elected by peer review from the most eminent scientists, engineers and technologists from the UK and the Commonwealth. Professor Anderson has been recognised for his work on the design and synthesis of supramolecular materials and molecular wire. He has taught undergraduates at Keble College for the last two years and was one of the founding members of the Advanced Studies Centre Imaging Cluster. From this term Professor Anderson will be a Professorial Fellow at Keble College.



*Prof. Harry Anderson,  
Professorial Fellow in Chemistry*

### Apala Majumdar awarded British Council Grant & Awarded Fellowship in Mathematics

**Apala Majumdar** has been awarded a "Researcher Link Workshop" grant from the British Council to organize a workshop on "**Soft Matter: Analysis, Applications and Challenges**" in South Korea, in early March 2014. The workshop grant will enable 20 British researchers to participate in the workshop, along with 20 local participants. The scientific programme will comprise four separate sessions on "Introduction and Theory of Soft Matter", "Modelling", "Simulations" and "Applications". The workshop will be led by Apala Majumdar and Jinhae Park (Chungnam National University, South Korea) and four senior professors from the UK and South Korea. The workshop discussion sessions will also include exchanges on long-term networking and collaborative ventures between leading British and South Korean universities.



**Dr. Apala Majumdar** is a leading member of the ASC Complexity Cluster and has recently become a Fellow of the Institute of Mathematics and its Applications.

## News from Michaelmas Term contd. ...

### Sir John Ball & Gui-Qiang Chen edit Philosophical Transactions of the Royal Society

**Prof. Gui-Qiang Chen**, alongside **Sir John Ball**, has recently edited an edition of the Philosophical Transactions of the Royal Society entitled *Entropy and convexity for nonlinear partial differential equations*.



This theme issue is devoted to fundamental questions concerning entropy, convexity, and related nonlinear methods designed to help understand the complexity posed by multi-dimensional, nonlinear PDE problems. In particular, it includes a discussion of several recent developments in nonlinear methods via entropy and convexity, the exploration of their underlying connections, and the development of new unifying methods, ideas, and insights involving entropy and convexity for important multi-dimensional PDE problems in fluid/solid mechanics and other areas. These new developments are at the forefront of current research.

### Professor Harry Allen, Senior Research visitor to the Creativity Cluster

During Michaelmas term, Keble and the ASC Creativity Cluster played host to Professor Harry Allen from the Department of Anthropology, University of Auckland, as a Senior Research Visitor. Prof. Allen's research has covered a wide range of topics including work on heritage management, early researchers, aboriginal technology, and the questions of material culture and human interaction.

Prof. Allen's work in Oxford has been focused on the technology of Tasmanian spears and their role in society. This research is one component of a much wider project entitled Australian Aboriginal Projectile Technology. In his research, Prof. Allen considers not only the physical and technological aspects of the spears, but also the difference between Tasmanian spears (which utilise one spear type over a long period of time) and those used on the Australian mainland (which develop a number of different types), as well as understanding how the spears contribute to wider questions concerning the creation of, and interaction with, Tasmanian material culture. Prof. Allen is also interested in the "Tasmanian effect", the idea that the Tasmanian culture remained stable over a long period of time, in some instances apparently losing aspects of their culture, and asks whether this is as unique a concept as thought. As part of his research, Prof. Allen has been making good use of the collection at the Pitt River's Museum and the British Museum, and has been visiting other areas of the UK.



**Dr Harry Allen,**  
*University of Auckland*

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## News from Michaelmas Term contd. ...

Prof. Allen's focus on the relationship of the Tasmanian's with their material culture dovetails with the research and questions asked by a number of ASC Creativity Cluster members. Both Prof. Chris Gosden and Dr. Lambros Malafouris are concerned with the creation of material culture and how people and objects interact.

Whilst visiting Oxford, Prof. Allen gave one lecture as part of the Institute of Archaeology's Barbarian Seminar Series entitled "Against the Tasmanian Effect: The Archaeology and Ethnography of Tasmanian Foragers".

More information on Prof. Allen's research is available at his university website: <http://artsfaculty.auckland.ac.nz/staff/?UPI=hall007>

## Michaelmas Term Meetings and Events

### Medieval and Renaissance Cluster Lectures

On 28th September, the Medieval and Renaissance Cluster held its first colloquium on the theme of Textual Cultures in Early Modern Europe. The Colloquium explored several aspects of the production, dissemination and uses of manuscript and print in Renaissance Europe. The first panel explored the relationship between image and text. A second panel explored how texts shape, convey and are shaped by identities, with speakers. In the afternoon the panels focused on the public attitudes towards the texts and responses to them. The Colloquium was well attended by scholars and graduate students from across the UK. We hope it will be the first of many!

**Dr Heather Dalton** (University of Melbourne) gave a talk this term entitled 'A Sulphur-crested Cockatoo in Fifteenth-century Mantua: Rethinking Symbols of Sanctity and Patterns of Trade' focussed on one picture: Andrea Mantegna's *Madonna della Vittoria*. She examined the presence of the Cockatoo in the painting, suggesting that Asian and Eurasian trade networks were more complex than originally thought and that the parrot was chosen to demonstrate the exoticism of the Gonzaga, and to convey sanctity.



**Dr Heath Dalton,**  
*University of Melbourne*

On the 22<sup>nd</sup>-23<sup>rd</sup> November the International Conference **Machiavelli's Prince: Tradition and Translation** was hosted by the ASC at Keble, organised by **Dr. Nicola Gardini** and **Dr. Martin McLaughlin**. The conference aimed at exploring the "double" tradition of *The Prince*, by focusing on two fundamental aspects: the textual tradition, including the philological history of the *Prince* and translations of it into foreign languages; and *The Prince's* own ways of appropriating ancient and modern traditions of political thought.



## Michaelmas Term Meetings and Events contd. ...

### Complexity Cluster Workshop and Lecture

**Prof. Jose Francisco Rodrigues**, from the University of Lisbon, delivered the Complexity Cluster Public Lecture this term on "Some Mathematical Aspects of Planet Earth". The lecture focused on the history of mathematics, with emphasis on key developments in functional analysis and partial differential equations and how these developments are relevant for solving geo-physical problems in climate modelling, earthquake predictions, glacier movements, navigation etc. Professor Rodrigues concluded by giving a lucid account of the contemporary issues in geo-mathematics, such as free boundary value problems in nature, and exciting open areas for future interdisciplinary research in geo-physics centred around mathematical modelling.

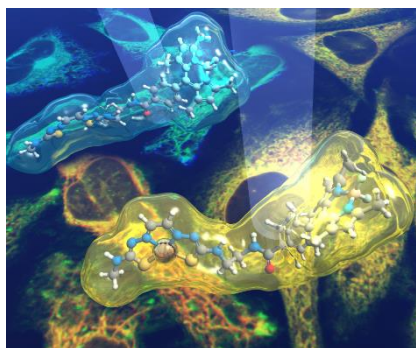


*Left to right: Prof. Gui-Qiang Chen, Prof. Jose Francisco Rodrigues, and Dr. Apala Majumdar*

The lecture was preceded by a workshop with papers by **Prof. Richard Washington**, **Dr Piotr Orlowski**, **Gregory Wyatt**, and **Prof. Stephen Cameron** covering the use of Mathematical modelling as a bridge between disciplines.

*This talk is available as a podcast on the ASC website. [www.keble-asc.com](http://www.keble-asc.com)*

### Imaging Cluster Workshop and Lecture



A half-day Young Researchers Meeting was held on Tuesday 12 November, on the theme "Developing New Probes and Methods for Imaging." Speakers included **Dr Manuel Tropiano** (Dept of Chemistry, Oxford), **Dr Rebekka Hueting** (Dept of Chemistry, Oxford), **Dr Bart Cornelissen** (Gray Institute for Radiation Oncology and Biology, Oxford) and **Dr Robert Pal** (Dept of Chemistry, Durham University).

**Prof. Stephen Faulkner** (Tutorial Fellow) delivered the Richardson Lecture, entitled "Boxing Clever, or Just Boxed In? Developing Metal Complexes for Biological Imaging", on Friday 15 November.

## Michaelmas Term Meetings and Events contd...

### Creativity Cluster Lectures & Book Launch

**Lord Renfrew of Kaimsthorn** gave a lecture on the 25th of October in the O'Reilly theatre entitled 'Material engagements: from early prehistory to contemporary art'. Professor Renfrew's talk explored human creativity and the engagement between the individual and the material world. He examined the relationship between material engagement and important social innovations that one detects in the archaeological record from the Lower Palaeolithic period, around 2 million years ago, onward. He continued this theme towards contemporary art.



*Prof. Colin Renfrew and Dr Lambros Malafouris*

Immediately following the lecture, **Dr Lambros Malafouris'** new book 'How Things Shape the Mind: A Theory of Material Engagement' was officially launched. The book continues the major themes he is exploring in his wider research on aspects of creativity and the links with the material world, particularly a new theoretical approach termed 'Material Engagement Theory'. The MIT Press has published the book and it has been critically acclaimed.



*Margalit Fox*

The ASC also partly- sponsored a lecture given by **Margalit Fox** entitled "The Riddle of the Labyrinth: The decipherment of Linear B", based on her acclaimed new book *The Riddle of the Labyrinth: The Quest to Crack an Ancient Code and the Uncovering of a Lost Civilisation*. Margalit Fox is an award-winning journalist and linguist, and is a senior writer for the New York Times.

### Creativity Seminar by Robin Geffen

On 5<sup>th</sup> December Honorary Fellow Robin Geffen hosted a Creativity Seminar entitled "What are the wellsprings of creativity? How does one decided to have a career as a writer, painter, or poet?" Guests included University Professor of Poetry, Sir Geoffrey Hill and the acclaimed artist Keith Grant. Together they discussed the creative process of their respective fields.

*Have you missed an ASC lecture? Many of the lectures are available as podcasts. You can find these and other Keble recordings at: <http://podcasts.ox.ac.uk/units/keble-college>*



# Coming events

ASC events: (all ASC events are listed on [www.keble-asc.com](http://www.keble-asc.com))

## Medieval & Renaissance Cluster: Lecture Series

Prof Lina Bolzoni, 'Memory Palaces: the Renaissance and the Contemporary World, 28<sup>th</sup> January 2014

**Prof. Lina Bolzoni** will give a lecture entitled 'Memory Places: the Renaissance and the Contemporary World' in the Roy Griffiths Room. Giulio Camillo appears to be quite an eccentric figure. He was a poet and master in the art of rhetoric, a magician and an alchemist, and a friend of many poets and great artists (among which Titian) who in mid-Cinquecento devised a utopian project: a theatre of memory meant to contain all the existent knowledge and offer models for the production of new texts and new images. What were the grounds for that project? And why is it still alive, for some aspects, in several 20th Century projects, such as The Encyclopaedic Palace of Marino Auriti, which opened up the Venice Biennale in 2013?



*Allegory of Prudence,  
Titian*



*Dr. Jason Peacey*

Dr Jason Peacey, 'Fanatics in Foreign Lands: Diplomacy and Print in Seventeenth Century Europe, 25<sup>th</sup> February 2014

**Dr Jason Peacey** will give a lecture on 'Fanatics in Foreign Lands: Diplomacy and Print in Seventeenth Century Europe'. Scholarship on the last years of Charles II's reign – between the Popish plot and the succession of James II – has often concentrated on tension between Tories and Whigs (including the exclusion crisis and subsequent plots); on intelligence and espionage relating to Whig exiles in the Low Countries; and on print culture and public politics. Sometimes these themes have overlapped – in analysis linking intelligencers and newsmongers, and in evidence about Whig printing in the Dutch republic – but even here scholarship has remained somewhat Anglocentric, in terms of a concentration upon prominent plotters, and on the production and circulation of English texts for an English public. The aim of this paper is to highlight ways of overcoming this problem, involving evidence relating to the scale and ambition of, and the thinking behind, the intelligence and surveillance operation, and involving insights that can be gained by exploring the diplomacy of print, the transnational dimensions of print culture, and the interlocking nature of European publics.

## Medieval & Renaissance Work-in-Progress seminar

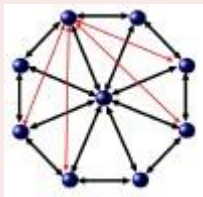
The Medieval & Renaissance Cluster would like to announce a new work-in-progress seminar to meet once a term. This is an opportunity for graduates to meet and share their work. Further information will be available on the ASC website.

## Coming events contd. ...

### Networks Cluster

#### CABDyN Seminar Series

In Hilary Term 2014, Keble College will continue to host the well-established interdisciplinary CABDyN (**'Complex Agent-Based Dynamic Networks'**) seminar series on networks and agent-based modelling. Seminars will take place in the Roy Griffiths Room on Tuesdays (12.30-2pm) in weeks 1-8 of each term. Sandwiches and beverages will be provided. For previous talks, see [http://www.cabdyn.ox.ac.uk/complexity\\_seminars.asp](http://www.cabdyn.ox.ac.uk/complexity_seminars.asp).



#### Rydberg Atoms Workshop, 9-10<sup>th</sup> January

January 2014 will see the ASC Networks Cluster host the workshop, "Networks of Ultra-Cold Rydberg Atoms". Organised by **Prof. Dieter Jaksch** of the Networks Cluster and **Dr. Martin Kiffner**, the workshop is set to take place at Keble College on the 9th and 10th January, 2014.

Networks of Rydberg atoms offer diverse applications ranging from quantum information theory to simulation of condensed matter models. This workshop aims to foster both experimental and theoretical advances and should provide exciting insights into this rapidly growing field.

Talks are expected to run from 2-7pm on Thursday 9th and from 9am-1pm on Friday 10th. A provisional schedule detailing speakers and content is now available on the workshop's website, <https://sites.google.com/site/oxfordrydberg/> as well as practical information regarding timings, registration and travel directions.

Registration for day delegates is now open; prospective participants should sign up using the form on the workshop's website.

## STUDENT ACTIVITIES

### Networks Cluster Dissertation News

Undergraduate dissertation (2013) by **Irving Shark** on "Role Classification of the World Trade Flow Network." Supervised by **G. Reinert** and **Pierre-Louis Giscard**.

The world trade flow network is a crucial network that has a huge impact on the economies of all countries. We analyse this structure and classify countries in terms of their trading activities using a role classification methodology put forward by Guimerà and Amaral. The methodology involves finding the modular structure behind a network, and to classify the vertices based on its inter-module and intra-module links. By classifying countries in a world trade flow network, we can gain insight into which countries are important in world trade.

Doctoral thesis by **Zheng Choo** on "Probabilistic Analysis of the Prime Factorisation of Walks with Application to the Shortest Paths". Supervised by **G Reinert** and **D Jaksch**.

Our goal is to develop and analyse a probabilistic algorithm which recovers all shortest paths between two vertices with high probability, from the prime factorisation of a randomly picked (long) walk on the graph. The prime factorisation of such walks has been developed by Pierre-Louis Giscard and Dieter Jaksch. Such an algorithm would find a number of applications in Physics and beyond.

# ASC updates

## Senior Research Visitors for 2014

We are pleased to announce details of the visits of several distinguished researchers, who will be contributing over the next academic year to the activities and work of our clusters. During their visits they will be engaged in different activities including public lectures. All are welcome to these talks. Details of the visits of further Senior Research Visitors will be posted on the ASC website once they have been confirmed.

- **Professor Lesley Head**, University of Wollongong, will visit Keble for a month during Michaelmas 2014. Prof. Head holds the Australian Research Council Australian Laureate Fellowship and is Director of the Australian Centre for Cultural Environmental Research. Her research interests lie in the long-term changes in the Australian landscape and the interactions of both prehistoric and contemporary peoples in this environment.
- **Professor Andrew Barbour**, Emeritus Professor of Mathematics at University of Zurich and Honorary Professorial Fellow at the University of Melbourne, will visit Keble during March and April 2014. Prof. Barber has strong collaborative links with the Networks Cluster, particularly focusing on the study of the spread of epidemics on networks.
- **Professor Larry Goldstein**, a Professor of Mathematics at the University of Southern California, will be collaborating with the Networks cluster and researching the asymptotic behaviour of statistics in free probability, which is an area of research of relevance to quantum computation. Prof. Goldstein will be at Keble in June/July 2014.
- **Professor Yoo Sang Choo**, from the Department of Civil and Environmental Engineering at the National University of Singapore. Prof Choo is an expert on the design and reassessment of off-shore structures, a former President of the Institution of Marine Engineers, Scientists and Space Engineers (IMarEST), and Singapore's representative on various international engineering committees. He will be visiting Keble for four weeks in Hilary Term.
- **Professor Stefan Friedl**, University of Regensburg, is a mathematician and an expert in the field of topology, and was involved in the recent breakthrough in 3-manifold topology. He will continue his long-standing collaboration with Dr Juhasz and be involved with other members of the Complexity Cluster.
- **Professor Elijah Millgram**, University of Utah, will visit Keble at the end of Trinity Term. Prof. Millgram is a philosopher of some distinction, whose current research interests are in Mills and Nietzsche.

## ASC Administrators

On a very happy final note, the ASC sends its warmest congratulations to Dr Laura Morley, who has recently given birth to a son, Rowan. During Dr Morley's maternity leave, the administration of the ASC will be undertaken by Elizabeth Brophy until May 2014. Elizabeth, a student of Keble, has recently successfully completed her DPhil in Archaeology.