

## Newsletter from the Mathematical Sciences Theme at EPSRC

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Dear Subscribers,

Here is the Spring edition of the Maths@EPSRC email newsletter. This season we bring you news of new Fellowships awarded, new SAT members as well as a number of other matters that may be of interest.

We also have up-to-date contact details for the Mathematical Sciences Theme here at EPSRC.

We are happy to hear your thoughts and ideas and if there are any features that you would find particularly useful, please let us know. Send your thoughts to [Maths@epsrc.ac.uk](mailto:Maths@epsrc.ac.uk)

**Please pass this email on to other members of your department who might find it interesting.**

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### **Shaping Capability**

Phase 3 of Shaping Capability was published on 28<sup>th</sup> March, action categories and rationales for all the Mathematical Sciences research areas may be viewed on our website (<http://www.epsrc.ac.uk/ourportfolio/themes/mathematics/Pages/default.aspx>).

Modifications to the panel process were also announced (<http://www.epsrc.ac.uk/newsevents/news/2012/Pages/researchportfolio.aspx>), these will come into use in October 2012.

The Mathematical Sciences Theme would like to thank all those who have contributed to the Rationale Statements for EPSRC Shaping Capability.

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### **EPSRC Mathematical Sciences - Healthcare Technologies Sandpit**

**Sandpit event:** Predictive modelling for Healthcare technologies through Maths

At the event, research proposals will be developed which tackle genuine mathematical challenges capable of delivering benefits to predictive modelling for use in healthcare technologies. The event will encourage collaborations between mathematicians and researchers from other disciplines, including but not limited to healthcare. The event will provide the ideal conditions for cross disciplinary breakthroughs, and will be suited to those with an open mind searching for the 'new and different' rather than 'more of the same'. The sandpit is being delivered by both the EPSRC Mathematical Sciences theme, and the Healthcare Technologies theme. Up to £5 million funding will be available.

The date for the sandpit has now been confirmed as between the 10th – 14th September 2012, but the location is still to be agreed. If you are considering applying to attend, please ensure that you hold these dates. Attendance for the whole week is mandatory.

**Date of call:** Expected mid May 2012

**Contacts:**

**Nick Cook** (Mathematical Sciences theme): [nick.cook@epsrc.ac.uk](mailto:nick.cook@epsrc.ac.uk)

**Hannah Maytum** (Healthcare technologies theme): [hannah.maytum@epsrc.ac.uk](mailto:hannah.maytum@epsrc.ac.uk)

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**EPSRC Consortia for Exploratory Research in Security (CEReS)**

As part of their contribution to the RCUK Global Uncertainties Programme (see [www.globaluncertainties.org.uk](http://www.globaluncertainties.org.uk)) EPSRC and ESRC are jointly inviting proposals for research consortia to explore current and future cyber security challenges through a call named 'Consortia for Exploratory Research in Security (CEReS)' (<http://www.epsrc.ac.uk/funding/calls/open/Pages/ceres.aspx>).

EPSRC and ESRC have made available up to £4M to fund full proposals through the CEReS call.

Mathematics will be a key theme of the CEReS call; not in the sense of the utilisation of established mathematical techniques to solve known problems but with a view to developing genuinely new mathematics which may, or could reasonably be expected to, contribute in future to improving cyber security.

Initially, outline proposals will be assessed for their novelty and fit to the aims of the call. Successful outline applicants will be invited to submit full proposals later in 2012. We expect to commit a significant proportion of the available CEReS funding to projects with a strong novel mathematical component.

**Closing date for outline proposals:** 14 June 2012

**Contacts:**

**Alex Hulkes** (Global Uncertainties): [alex.hulkes@epsrc.ac.uk](mailto:alex.hulkes@epsrc.ac.uk)

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**Mathematical Sciences for Manufacturing the Future**

EPSRC intends to commit up to £4 million to fund cross-disciplinary research that create new links between its activities in Mathematical Sciences and Manufacturing the Future. It is expected that a Call for Proposals will be issued in the early Summer of 2012.

EPSRC is working with the Industrial Mathematics Knowledge Transfer Network and the High-Value Manufacturing Catapult Centre in order to develop a workshop which will

shape the EPSRC Call for Proposals. The workshop will generate new thinking for research at the interface of the mathematical sciences and manufacturing; explore links between mathematics and manufacturing; stimulate new collaborations, opportunities and cross-disciplinary research; provide ideas and examples for the EPSRC's planned Call for Proposals.

The date for the workshop will be May 2<sup>nd</sup> 2012 and all spaces are currently filled; however, please contact EPSRC for any further information regarding the workshop outputs or the Call for Proposals.

**Date of call:** Expected early July 2012

**Contacts:**

**Maisie Wong** (Mathematical Sciences theme): [maisie.wong@epsrc.ac.uk](mailto:maisie.wong@epsrc.ac.uk)

**Stephanie Lewis** (Manufacturing the Future theme): [stephanie.lewis@epsrc.ac.uk](mailto:stephanie.lewis@epsrc.ac.uk)

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**EPSRC Strategic Advisory Team**

We are pleased to welcome three new members onto the EPSRC Mathematical Sciences Strategic Advisory Team: Professor Patrick Dorey, Durham; Dr Gavin Davies, Laing O'Rourke; Professor Sir John Ball, Oxford and Professor David Abrahams, Manchester. These new members were selected from nominations given by Heads of Departments and the CMS, taking into account the balance of organisations and backgrounds across the SAT.

We would like to give our thanks to retiring SAT members - Alastair Fitt, Elizabeth Mansfield and Francis Clarke, for all their advice and support. We have had an unusually large number of meetings over the last year, and have discussed some important but difficult topics, and we are very grateful to all SAT members for their valuable input, advice and feedback.

Summaries of SAT meetings are available on our website:

<http://www.epsrc.ac.uk/ourportfolio/themes/mathematics/strategy/Pages/sat.aspx>

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**EPSRC Mathematical Sciences Fellowships**

The first batch of applications submitted to the new EPSRC Fellowship scheme has been concluded with the interview panel held in Swindon on 13<sup>th</sup> March 2012. Fellowships were awarded to:

Professor Mark Girolami, UCL – Established Career

Dr Richard Samworth, Cambridge – Early Career

Dr David Woods, Southampton – Early Career

Congratulations to all successful candidates!

The Mathematical Sciences Theme have also recently awarded two of the Science and Innovation awards in statistics, £600k each to support postdoctoral fellowships. The Centre for Research in Statistical Methodology ([CRISM](#)) at the University of Warwick and Statistics underpinning Science, Technology and Industry ([SuSTain](#)) at the University of Bristol will use these awards to support activities, such as workshops, to benefit the wider UK community.

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### **Large Grants Recently Funded**

The Mathematical Sciences Theme awarded two large grants at a recent panel in March 2012. The grants were awarded to:

- Professor James Howie at Heriot-Watt University for [“International Centre for Mathematical Sciences Programme 2012-2016”](#) (£1.3M)
- Professor Sanju Velani at the University of York for a programme grant [“New frameworks in metric Number Theory: foundations and applications”](#) (£1.6M)

Programme grants are a flexible mechanism to provide funding to world-leading research groups to address significant major research challenges. They are intended to support a suite of related research activities focusing on one strategic research theme. Further information about Programme Grants is available [here](#).

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### **Mathematical Sciences Economic Impact Study**

The mathematical sciences Economic Impact Study will show the impact maths and mathematicians have on the UK economy. It will focus on two different indicators of impact:

- a) An attempt to draw reasonable conclusions about the industries most closely aligned (maths using and maths producing) with the knowledge outputs of the research community, thus determine percentages of interaction/use of knowledge outputs for these sectors and then conduct relevant economic analysis.
- b) Determine measures of the sectors which employ mathematicians and derive similar proportions of academic impact on these sectors and subsequently apply economic analysis.

The mathematical sciences Economic Impact Study is due to start in autumn 2012.

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### **Changes to DTG Allocation Process**

EPSRC is developing a new process for the allocation of Doctoral Training Grants (DTG). The intention is to ask universities to submit bids which will be assessed against a number of criteria; it is likely that the new process will also involve allocating longer DTGs, with greater interaction between universities and EPSRC. The Mathematical Sciences Theme will pilot

the new DTG process for students starting in 2013 and 2014. The new process will be implemented across the breadth of EPSRC for students starting in autumn 2015.

Heads of Mathematical Sciences Departments will be written to in early summer with further details.

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### **Isaac Newton Institute – Call for proposals**

The Institute is now inviting proposals for 1-, 4- and 6-month research programmes in any branch of the mathematical sciences. The **deadline for submission is 31 July 2012**, for consideration at the meeting of the Scientific Steering Committee in October 2012. Details on submitting proposals are at [www.newton.ac.uk/callprop.html](http://www.newton.ac.uk/callprop.html). Anyone interested in making a proposal is encouraged to contact the Director, by telephone or email, for advice and informal feedback.

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### **Contacts**

The Mathematical Sciences team is always happy to hear from you about any questions you might have. To make things easier, please contact the most suitable person to deal with your query. If you're not sure who to contact, we are happy to pass on messages or may even be able to answer questions on behalf of others in some instances.

Current Theme responsibilities are:

#### **Theme Lead – Philippa Hemmings**

Responsibilities include: Theme budget and strategy. Contact:

[Philippa.Hemmings@epsrc.ac.uk](mailto:Philippa.Hemmings@epsrc.ac.uk) Tel: 01793 444 378

**PA:** Jeanna Gowland. Contact: [Jeanna.Gowland@epsrc.ac.uk](mailto:Jeanna.Gowland@epsrc.ac.uk) Tel: 01793 444 384

#### **Senior Portfolio Manager**

- **Claire Tansley**. Responsibilities include: Programme Grants, Complexity Science.

Contact [Claire.Tansley@epsrc.ac.uk](mailto:Claire.Tansley@epsrc.ac.uk) Tel: 01793 444 318

#### **Portfolio Managers**

-**Vivienne Blackstone**. Responsibilities include: Statistics, Operational Research and Mathematical Physics, Small Grants, Education and Training, Fellowships, First Grants.

Contact [Vivienne.Blackstone@epsrc.ac.uk](mailto:Vivienne.Blackstone@epsrc.ac.uk) Tel: 01793 444 066

-**Maisie Wong**. Responsibilities include: Applied Mathematics, Maths and Manufacturing the Future. Contact [maisie.wong@epsrc.ac.uk](mailto:maisie.wong@epsrc.ac.uk) Tel: 01793 444 196

-**Nick Cook**. Responsibilities include: Pure Mathematics, Maths and Healthcare Technologies. Contact [nick.cook@epsrc.ac.uk](mailto:nick.cook@epsrc.ac.uk) Tel: 01793 444 162

Details of all the activities within the Mathematical Science Theme can be found [here](#) on our webpage.

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