

Research and Knowledge Exchange Committee

First Report on School Research Activity for 2016/17

(Please append to this report a listing of all applications for funding made since 01 May 2016)

School:	MPS
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Executive Summary¹

The Income for 2015/16 is healthy at £5.8M. This is an increase on the previous year of about 16%. This is the same as the awards value for the same period. The awards are down on 2014/15. This mostly reflects the peak in awards in 2014/15 from e.g. the Quantum Technology Hubs.

Registered PGRs are above 2.65 per T&R FTE. This exceeds our minimum goal of 2 per FTE.

New recruitment (beyond what is in this summary) is anticipated, e.g. a new Quantum Technology Research group and more faculty in mathematics.

Key challenges for the next year are (a) to ensure that the development of the labs in Materials Physics and Quantum Technology can have the necessary work done quickly enough to establish their Impact and Research programs quickly (b) to create suitable space for increasing numbers of research staff (faculty, fellows and students).

Impact is still expected to be a key challenge for REF2020. (Hence priority on labs above). Also we need strategically targeted effort on Research Communication.

We need to ensure the research funding awards continue to rise. GCRF is an opportunity but one that is a challenge for MPS, we need to actively think how to take advantage of this. The possible impact of Brexit will need to be monitored and planned for.

To tackle some of these we are “restructuring” the school research committee into small sub-committees with focused remits.

Part 1: summary of current activity²

Staffing	Number	FTE
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¹ To include: goals met / achieved; challenges faced; goals set for current academic year and plan of how these will be met; summary of any interdisciplinary initiatives and collaborations

² Snapshot figures as on the day the report from the research dashboard is run. Anticipated numbers should not be included.

Academic staff	58	57.3
Research only	52	50.2

Research students	Number	FTE
Funded		
Self-funding		
New		
On continuation		N/A
Full-time		N/A
Part-time		N/A

Part 2: Research output

		2015	2016 to date
Peer-reviewed	Authored book		1
	Chapters	4	1
	Journal article	207	152
	Edited book	1	2
	Conference contribution	8	6
	Monograph		
	Other		
Total			
		Number	
Non peer-reviewed (where known)	Books		
	Chapters		
	Articles		
	Book reviews		
		Number	
Conferences hosted		7	>=7

Part 3: Summary of performance in 2015/16

	Number	Total amount (£)
External funding grants (for previous financial year)	20 (awards)	£5.8M
External consultations (awards/income)		£1k/£5k
		Number
Staff / research mentions in press (where known)		
Local		

National		
International		

Part 4: Activity since last reporting period, from 01 May 2016 to 30 September 2016

Research related appointments:	Madzvamuse, Anotida	Professor of Mathematical and Computational Biology					
	Duncan, Andrew	Lecturer in Statistics and Probability NEW APPOINTMENT					
	Koch, Gabriel	Senior Lecturer in Mathematics					
	Tsagkarogiannis, Dimitrios	Senior Lecturer					
	Lewis, Antony M	Professor of Cosmology					
	Sargent, Mark	Senior Lecturer In Astronomy					
	Wilkins, Stephen M	Senior Lecturer In Astronomy					
	El-Menoufi, Basem M	Postdoctoral Research Fellow NEW APPOINTMENT					
	Munshi, Dipak	Postdoctoral Research Fellow					
	Waterfield, James	Research Fellow NEW APPOINTMENT					
Details of key research grants received (i.e. in top decile of all research grants received over last 3 academic years):	<table border="0"> <tr> <td>AMERICAN EXPRESS UK</td> <td>20 Jun 16 00:00:00</td> <td>1</td> <td>24,000</td> <td>Kyrychko, Yuliya (100%)</td> </tr> </table>		AMERICAN EXPRESS UK	20 Jun 16 00:00:00	1	24,000	Kyrychko, Yuliya (100%)
	AMERICAN EXPRESS UK	20 Jun 16 00:00:00	1	24,000	Kyrychko, Yuliya (100%)		
Total (£):		£24k					
Highlighted awards and recognitions:	<p>Anotida Madzvamuse Royal Society Wolfson Research Merit Award</p> <p>Winni Hensinger “I was recently invited to present the US Department of Energy’s Cyber Distinguished Speaker Series lecture. A recording of the lecture is available here: https://youtu.be/fccSQHBssi0 . The lecture was given at the Department’s headquarters in Washington DC and broadcast via the internet to all DOE National Laboratories and facilities around the USA.”</p> <p>Bertram During “</p> <ul style="list-style-type: none"> • been a referee for the Italian MIUR programme "Progetti Ricerca di Interesse Nazionale" (PRIN) 2015 • been a reviewer for the Italian (REF-equivalent) Evaluation of 						

	<p>Research Quality exercise (VQR 2011-2014)</p> <ul style="list-style-type: none"> • organised a minisymposium at the European Congress of Mathematics (ECM7) in Berlin • been interviewed by Plus magazine who wrote an article about my research on modelling opinion formation: https://plus.maths.org/content/what-do-you-think <p>Marco Peccianti “from Nov 1st , I will be associate editor of Optics Express.”</p> <p>Istvan Kiss “</p> <p>2.a. INVITED TALK: "Pairwise models for non-Markovian epidemics on networks" in Network Models for Disease Spread at The Annual Meeting of the Canadian Society of Applied and Industrial Mathematics (CAIMS 2016) will take place from June 26 to 30, 2016 at the University of Alberta in Edmonton, AB.</p> <p>2.b. INVITED TALK: "Generation and analysis of networks with a prescribed degree sequence and subgraph family: higher-order structure matters" at Stochastic models of the spread of disease and information on networks, Jul 04, 2016 - Jul 08, 2016 ICMS, Edinburgh.</p> <p>Prof James Hirschfeld was one of two invited speakers at a conference at the University of Perugia to celebrate the 70th birthday of his mathematical colleague, Giorgio Faina.</p>
<p>Highlighted areas of Knowledge Exchange:</p>	<p>Prof Alan Dalton, are at an advanced stage of developing alternative silver nanowires technology to overcome the shortfall in the traditional touchscreen display, phone and tablet material that relies on electrodes made from indium tin oxide. Two press releases and a variety of media coverage has resulted https://rsc.altmetric.com/details/9069137/news https://www.altmetric.com/details/7299276/news</p> <p>Press coverage for the Wellcome Trust funded project ASTRODEM, applying astronomical data analysis techniques to dementia studies. Dr Philip Rooney, Research Fellow in Astrophysics, will conduct much of the data analysis for a study, led by Dr Elizabeth Ford (BSMS), that aims to improve the early diagnosis of dementia.</p> <p>www.sussex.ac.uk/staff/newsandevents/?page=2&id=36744 www.sussex.ac.uk/staff/newsandevents/?page=1&id=36856</p> <p>Jillian Scudder “Award: University of Sussex Impact & Research Award (Public Engagement): Special commendation Impact: press release statistics: https://www.altmetric.com/details/7270042/news</p>

	<p>Since May 01, I have published 20 articles on Forbes, & been quoted in Business Insider 1x.</p> <p>“</p> <p>Mark Hindmarsh “Impact: visualisations of my computer simulations of the very early universe featured in "The Warped Side of the Universe", performed at the Starmus Festival in Tenerife, with Kip Thorne, Hans Zimmer and Paul Franklin (Interstella visual FX). My simulation also featured in the LIGO press announcement of the discovery of gravitational waves.”</p> <p>Sussex astronomers, Dr Stephen Wilkins and Dr Mark Sargent - working with an international team - have observed the Hubble Ultra Deep Field - our deepest view of the Universe.</p> <p>www.sussex.ac.uk/staff/newsandevents/?id=37110</p>
<p>Key activities (not covered by the above categories):</p>	<p>Jeff Hartnell “The NOvA neutrino oscillation experiment released exciting new results in summer 2016 and two papers are about to be submitted to PRL.</p> <p>The next generation DUNE long-baseline neutrino oscillation experiment is now an approved project with \$300 million dollars for construction of the far detector site.”</p> <p>Astronomy Centre’s 50th Anniversary celebration in Bramber house on 15th October a great success with about 90 guests including 2 Templeton Prize winners and 2 Gruber Prize winners.</p>
<p>Any other issues:</p>	<p>Our head of School resigned.</p>

Name:	Seb Oliver	School:	MPS
		Date:	17 th October 2016