

UNIVERSITY OF  
BIRMINGHAM

# School of Physics and Astronomy Community

Part of  
THE EPS COMMUNITY



## Winter 2014

### Greetings,

The autumn term has started with over 200 new students arriving, as the School reaffirmed in its position in the national League Tables: 6<sup>th</sup> in the Independent's Complete Guide, 3<sup>rd</sup> in the Guardian's table and 2<sup>nd</sup> in the Times' Good University Guide. Those approaching their final year will be reassured that the University is now fourth nationally in terms of graduate employability, reflecting in part substantial University investment in the Careers Service.

Within Physics and Astronomy a very popular autumn event is the Careers Fair, organised by Professor Peter Jones, with prospective employers covering the full spectrum of careers for physicists: from physics-based and engineering careers through IT and software houses to the financial sector, many being Birmingham alumni themselves.

The Metamaterials Research Centre has produced a number of striking results recently. In pure physics they have been exploring the properties optical "Parity-Time (PT) symmetric materials", which despite having absorbing optical components, sharply differentiate in terms of wave-length whether they absorb at all or not. They have designed a perfect optical absorber based on PT symmetric materials, and have produced a promising method to solve the long-standing problem of producing colour holograms.

Our determination, and achievements, to further equality of opportunity, irrespective of gender, has been recognized by an Athena Swan Silver being awarded to the School (only the second in the University after the Medical School). The award was presented to the School leads, Dr Nicola Wilkin and Prof Andy Schofield, at the Institute of Physics Awards Dinner. It was a double celebration, as Dr Elizabeth Blackburn received her Moseley medal which was mentioned in the last alumni newsletter. (The photograph below has Elizabeth pictured with Prof Ted Forgan and his Mott medal from 2004.)

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With best wishes,

**Professor Andy Schofield**  
Head of School  
Physics & Astronomy

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## News from the School of Physics & Astronomy

### High Temperature Research Centre reaches the top



Construction of the University of Birmingham's High Temperature Research Centre reached a significant milestone recently as the University and contractor Wates Construction celebrated the development's 'topping out'. [Read more.](#)

### Giant laser observatory makes progress



Researchers from the School of Physics and Astronomy have been involved in the building of the Advanced Ligo instrument, due to be operational in summer 2015. The first generation of Ligo ran between 2001 and 2010 and failed to produce any results but scientists have been developing a more sensitive detector, which is 30% more precise. [Read more.](#)

## Poynting Physical Society update



It's been a busy start to the new academic year for the Poynting Physical Society. President Tom Dack [tells us more](#).

## Rocketry Society launch Project Chamberlain



The University of Birmingham Rocketry Society (UBRS) is the newest student society within the College of Engineering and Physical Sciences. The group are embarking on the significant task of launching their own liquid fuelled rocket into the earth's upper atmosphere in a challenge known as Project Chamberlain. Terry Moorton, President of UBRS and Director of Project Chamberlain, [tells us more](#).

## Nuclear engineering students visit Xiamen for Clean Energy Summer School



Sponsored by EDF and the Schools of Metallurgy and Materials and Physics and Astronomy, four Nuclear Engineering students visited Xiamen, China, in June to participate in the Clean Energy Science and Technology Summer School. The Birmingham Centre for Nuclear Education and Research is forging links with the University of Xiamen in nuclear education and research and this three-week summer school programme was an important opportunity to strengthen ties and share expertise. [Read more](#).

## Birmingham physicist elected UK ATLAS Physics Coordinator



Dr Kostas Nikolopoulos, Birmingham Fellow in the School of Physics and Astronomy, has been elected UK ATLAS Physics coordinator at CERN. [Read more](#).

## Birmingham introduces new Visiting Professor of Power and Cold Economy



Toby Peters, long-time advocate of UK-based innovation in energy systems and founder of Highview Power and the Dearman Engine Company, has been appointed to the position of Visiting Professor in Power and Cold Economy at the University of Birmingham. [Read more](#).

## College of Engineering and Physical Sciences at the British Science Festival 2014: Highlights



The College shone at the British Science Festival this year with over 30 contributions to the Festival's main scientific events and workshops and the Young People's Programme. From new robot technology to HS2 and the big bang, our scientists and engineers addressed the big debates and offered interactive activity to engage young people in STEM futures. [See more.](#)

## Interview with Physics alumnus Mike Coupe



Mike Coupe, CEO of Sainsbury's and alumnus of the School of Physics and Astronomy (BSc Physics, 1982) was recently interviewed about leading one of the UK's largest supermarkets and his time at the University of Birmingham. [See more.](#)

## Giving back



Did you know that College of Engineering and Physical Sciences graduates make up approximately 22% of the University's alumni population and are among the most generous donors to the Circles of Influence campaign? [Read more.](#)

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## New staff in 2014

There have been a number of appointments in the School this term. [Read a summary of our new staff online here.](#)

## Your School needs you...

Would you be able to share some of your time, expertise or connections to help our students to succeed?

We're currently looking for help and support from alumni with the following:

- Work experience placements are invaluable for our students, allowing them to learn about the world of work first-hand and apply their knowledge in a real-life setting. If you work in industry and think you could offer a work experience placement to our undergraduate or postgraduate students, please [email us](#)

There are many ways in which you can give a little back, from providing a career profile, to mentoring a student. Please [email us](#) if you would like to get involved and we'll be happy to talk to you.

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## Events taking place shortly...

### College and School events

#### School of Physics and Astronomy talks and seminars

For more information on the talks and seminars within the School in the next seven days please visit <http://www.birmingham.ac.uk/schools/physics/news/physics-astronomy-seminars.aspx>

### **EPS Inaugural Lecture Series**

**Thursday 27 November 2014**

#### **Professor Jeremy Wyatt, Professor of Robotics and Artificial Intelligence, School of Computer Science**

*Robotics is reaching a tipping point. The intelligence and robustness of robots increased hugely in the past fifteen years. This has allowed them to leave the lab and carefully controlled environments like the factory floor and enter our world. In this public lecture, aimed at the non-specialist, Professor Jeremy Wyatt will explain the achievements of intelligent robotics to date. He will also highlight some of the challenges we must meet to bring robots into our everyday lives. Finally, Professor Wyatt will highlight some of the work carried out at Birmingham over the past decade, particularly breakthroughs in robot planning, robot learning and robot manipulation. The lecture should be accessible to people from age 12 up.*

*Live robot demonstrations will be included during the evening.*

**Venue:** Leonard Deacon Lecture Theatre, Medical School Building, followed by a drinks reception in the Wolfson Common Room, Edgbaston Campus

**For more information on other lectures in the EPS Inaugural Lecture Series please visit**

**[www.birmingham.ac.uk/eps/inaugural](http://www.birmingham.ac.uk/eps/inaugural)**

**Friday 28 – Saturday 29 November 2014**

#### **The National Engineering & Construction Recruitment Exhibition**

*Supported by the University of Birmingham, this is the largest engineering recruitment exhibition in the UK and with top companies including Network Rail, Amey, Canary Wharf Contractors, The Royal Air Force, Carillion and many more in attendance, this is your opportunity to find job vacancies, find answers to all your career-related questions and meet employers.*

**Venue:** NEC, Birmingham

**Monday 8 – Wednesday 10 December 2014**

#### **International Conference on High Speed Rail - 8th-10th December 2014**

*2014 marks the 50th anniversary of the first Shinkansen high speed line in Japan. The University of Birmingham is marking this historic occasion by holding an international conference on High Speed Rail*

**Venue:** Edgbaston Campus

**Tuesday 10 March 2015**

#### **EPS Distinguished Lecture: Prof Dr PE Seeram Ramakrishna**

*Longer life has always been a dream of human beings. Except for the recent one hundred years, the average life span was below forty for the past 10,000 years. Noticeable aging effects kick in as early as mid-twenties! More than a million medical devices have been invented to improve the quality of human life. What promise do they hold for humans to live beyond 100 years healthily and perhaps happily?*

**Venue:** EPS College, Edgbaston Campus

**Tuesday 9 June 2015**

#### **EPS Societies' Awards**

*Come and celebrate with our student societies as we recognise their fabulous achievements in 2014/15*

**Venue:** The Great Hall, Edgbaston Campus

**Saturday 20 June 2015**

#### **EPS Alumni Reunion**

*As a graduate of one of the nine schools in the College of Engineering & Physical Sciences (EPS), you are invited back to campus for a Summer Reunion to get together with your fellow alumni to celebrate your experiences, accomplishments and friendships at the University of Birmingham*

**Venue:** Edgbaston Campus

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## **University events**

**25 November – 3 December 2014**

#### **The Edward Cadbury Lectures 2014**

*The theme for 2014 is 'Is the New Testament Anti-Jewish?' and will consist of a series of lectures given by Professor Amy-Jill Levine, Vanderbilt University USA.*

**Venue:** Edgbaston Campus

**Thursday 27 November 2014**

#### **Chaplaincy lecture - A Quaker astronomer reflects on the Universe and us**

*This year's Chaplaincy Lecture will be given by Dame Jocelyn Bell Burnell, a prominent astrophysicist and Quaker.*

**Venue:** Elgar Concert Hall, Bramall Music Building, Edgbaston Campus

**Monday 8 December 2014**

**[Festive Drinks at the University Carol Service](#)**

*Organised by the University Chaplaincy and Department of Music, this is a joyful Christmas celebration for alumni, staff, students and families followed by mince pies and mulled wine in the Rotunda at 7.30pm.*

**Venue:** Great Hall, Aston Webb Building, Edgbaston Campus

**Thursday 19 February 2015**

**[Alumni vs Students vs Staff Quiz, 6.30-9.00pm](#)**

*Put your general knowledge to the test at an informal quiz in Joe's Bar, Guild of Students.*

**Venue:** Joe's Bar, Guild of Students, Edgbaston Campus

**Saturday 12 September 2015**

**[Golden and 50th Anniversary Reunion](#)**

*Alumni who graduated in 1965 or before are welcome to join for a special reunion lunch*

**Venue:** Edgbaston Campus

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## Do we have the right details for you?

Please visit [your.bham](http://your.bham) or email [alumnioffice@contacts.bham.ac.uk](mailto:alumnioffice@contacts.bham.ac.uk).

**You have received this email from the University of Birmingham because we believe that it is relevant and of interest to you.** If you would like to opt-out of receiving information from your College, School or Department by email, please opt-out by visiting [your.bham](http://your.bham), emailing [alumnioffice@contacts.bham.ac.uk](mailto:alumnioffice@contacts.bham.ac.uk), or telephoning +44 (0)121 414 2773 / 2744 / 4724. In order to further tailor the communication we send, all emails are tracked and processed; further information regarding our use of data, is available by looking at our [data protection statement](#)