

UNIVERSITY OF  
BIRMINGHAM

# School of Physics and Astronomy Community

Part of  
THE EPS COMMUNITY



## Summer 2014

### Greetings

We have just celebrated the graduation of our most recent new graduates (as well as the [inauguration of a new Chancellor](#)). It is a wonderful time of year as we recognise the achievements of our students at Bachelors, at Masters level and also our new PhD students too. It has been one of the largest cohorts we have had but, given our intakes this year and last, will soon appear to be a rather small one - such is the popularity of physics at Birmingham. It is particularly pleasing that our students are valuing their time with us in such a positive way - the most recent student satisfaction survey saw us ranked higher than any other physics department in the country!

As you will see from this newsletter, our academics have also been busy – not only with marking hundreds of exam papers, but with their own research, including [Dr Ilya Mandel's research into black holes which was recently published in National Geographic](#), and [Professor Kai Bongs' work on optical clocks and quantum technology](#). Indeed a team under Kai's leadership has been shortlisted to host a National Hub for turning quantum physics into practical applications within five years. Other results include Dr Carl Wheldon and colleagues recent discovery of a new state of carbon-12 using the cyclotron in Birmingham - a result published in Physical Review Letters which shows you don't always need the Large Hadron Collider to produce cutting edge research. [Dr Elizabeth Blackburn, Reader in Experimental Physics, has been awarded the 2014 Moseley Medal and Prize by the Institute of Physics for her ground-breaking research into superconductivity and magnetism.](#)

It has been a busy time in the School and across the College with a number of 'firsts', including the first annual [EPS Reunion](#), which took place on 14 June with over 170 alumni in attendance including a substantial group of physics alumni. We were delighted to achieve [Juno Champion status](#) - a recognition from the Institute of Physics of our support for women in physics through their Project Juno and one of only 10 such departments recognised in the country. We launched our Physics Role Models series of invited lectures where physics graduates with a career story to tell have come to inspire our current students, postdocs and also staff.

Lastly, but certainly not least, our student societies go from strength to strength. The Poynting Physical Society put on a fantastic "Gatsby Ball" which marked the 130th birthday of the Society. This, and other achievements were recognised in the first [EPS Societies' Awards](#) which was held on 6 June. With a live student band providing entertainment and 10 highly sought-after award categories, it really was a night to remember. Plus [AstroSoc committee member Callum Bellhouse won the Outreach Award!](#)

As the final curtain falls on the 2013-14 academic year, I'd like to wish you all a

### In this issue...

[News from the School](#)

[New staff](#)

[Your School needs you](#)

[Events taking place](#)

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pleasant and restful summer and I look forward to updating you with the latest news from the School and our new students in the Autumn Term.

With best wishes,

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

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## News from the School of Physics & Astronomy

### Congratulations Class of 2014!



On behalf of all academic and support staff in the School of Physics and Astronomy, we'd like to say huge congratulations to all our new graduates who received their degree certifications earlier in July after lots of hard work and dedication! [Read more.](#)

### 'A great day was had by all'



On Saturday 14 June 2014 we welcomed alumni from across the College of Engineering and Physical Sciences back to the University for a special day of celebrations and activities with fellow classmates and staff. Over 170 alumni and guests from as far back as 1946 up to our 2013 graduates attended this annual College Reunion, which was open to all graduating years for the very first time. Read about the day and access photographs [here.](#)

### A closer look at black holes...



Our star, the Sun, will one day die a quiet death. The Sun's outer layers will drift away and the core will eventually compact to become what's known as a black hole. Dr Ilya Mandel has contributed research to a feature published in National Geographic on black holes. [Read the full article here.](#)

### Optical clocks and quantum science



Professor Kai Bongs discusses his research into optical clocks with Electronics Weekly for a feature on Quantum Science following a recent event at the National Physics Laboratory, in conjunction with the Defence Science and Technology Laboratory. [Read more.](#)

### University of Birmingham launches the Rocketry Society



The University of Birmingham Rocketry Society (UBRS) is the newest and most explosive EPS group yet! Dan Lockett, Maths student and Deputy Director-General, [tells us more.](#)

### AstroSoc Update



It's been an exciting and enjoyable year for the Astronomical Society with a growing portfolio of events and projects. AstroSoc President Paul Carter summarises 2014. [Read more.](#)

## EPS Societies' Awards



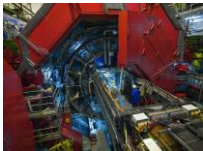
On Friday 6 June 2014 the College of Engineering and Physical Sciences celebrated the achievements of our student societies with the first ever EPS Societies' Awards. We have a strong tradition of outstanding educational success; from public astronomy events with AstroSoc to designing Formula Student cars with UBRacing, the societies do astonishing work not just in academia but also to promote careers opportunities, industrial visits and, of course, social events. Organising committee member and Mechanical Engineering student Daisy Partlow tells us about the night [here](#). Winners, nominations and photographs are also available on our [website](#).

## Physics student scoops prestigious award in the Telegraph UK STEM Awards 2014



Congratulations to first year Physics student Daniel Butterson on winning the Construction category, sponsored by Atkins, at the Telegraph UK STEM Awards. Each submitted entry was judged on their innovation, feasibility and benefit to society and the environment. [Read more.](#)

## An insight into CERN: Professor David Evans' Inaugural Lecture



Professor David Evans' inaugural lecture entitled 'Making Mini Big Bangs at the Large Hadron Collider' attracted over 140 guests in May. In this [video](#) Professor Evans provides an overview of his lecture and discusses his research at CERN. [Read more.](#)

## Birmingham goes 'Beyond the Boson' at the Royal Society



Physicists from the University of Birmingham are showcasing ground breaking research into the Higgs boson at the Royal Society Summer Science Exhibition 2014. [Read more.](#)

## National Women in Engineering Day celebrated at the University



In celebration of the UK's first ever National Women in Engineering Day on 23 June 2014, the College of Engineering and Physical Sciences organised a programme of events and activities, including a panel event discussing 'Engineering a sustainable future' with leading female engineers and academics. View interviews and videos from the day [here](#).

## Physics leads the way on gender equality



The School of Physics and Astronomy has become the tenth Institute of Physics Juno Champion after displaying its determination and commitment to addressing gender inequities across its whole student and staff body. [Read more.](#)

## Industry-led campaign launched by the Chancellor to inspire more young people to study maths and physics



A new campaign to boost participation in science and maths at school and beyond has been launched by George Osborne, in partnership with leading entrepreneurs and organisations including the University of Birmingham. [Read more.](#)

## Remembering Professor Kenneth Gilbert Stephens (1931-2013)



The School of Physics and Astronomy would like to pay tribute to Ken Stephens, who graduated from the University of Birmingham with a BSc in physics and a PhD in nuclear physics before enjoying successful careers in both industry and academia at the University of Surrey. [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

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#### EPS Inaugural Lecture Series

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)

#### Physics and Astronomy Seminar Series

The Physics and Astronomy Seminar Series will restart on Friday 5 September with a lecture delivered by Dr. Ed Yelland of the Scottish Universities Physics Alliance. For more information on this and other events please visit <http://www.birmingham.ac.uk/schools/physics/news/physics-astronomy-seminars-all.aspx>

**Monday 22 – Saturday 27 September 2014**

#### ***Trusting Atoms: The Last Trials of Ludwig Boltzmann***

*Trusting Atoms: The Last Trials of Ludwig Boltzmann brings to life the passion, drama and suffering of one long-forgotten scientist of the 19th Century. Join Ludwig Boltzmann in his battle to save the dying theory of atoms, his equation and so his career in a hostile scientific environment.*

**Venue:** Cadbury Room, St Francis Hall, Edgbaston Campus

[http://www.birmingham.ac.uk/university/college/eps/events/Trusting\\_Atoms.aspx](http://www.birmingham.ac.uk/university/college/eps/events/Trusting_Atoms.aspx)

**Thursday 6 November 2014**

***EPS Distinguished Lecture: Professor Paul Cannon***

*Minor explosive eruptions of energy from the Sun that cause small solar storms on Earth are relatively common events. In contrast, extremely large events (superstorms) only occur very occasionally – perhaps once every century or two. Since the start of the space age, there has been no true solar-superstorm, but there have been a number of large storms and some of these have caused major technological damage, for example the partial collapse of the Canadian electricity grid in 1989*

**Venue:** EPS College, Edgbaston Campus

[www.birmingham.ac.uk/eps/distinguished-Nov14](http://www.birmingham.ac.uk/eps/distinguished-Nov14)

**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

[highspeedrail64@contacts.bham.ac.uk](mailto:highspeedrail64@contacts.bham.ac.uk)

**Wednesday 10 December 2014**

***EPS Christmas Lecture – Professor Jim Al-Khalili OBE***

*Please join us to hear from Professor Jim Al-Khalili, Presenter of The Life Scientific on Radio 4, British scientist, author and broadcaster as he delivers the inaugural EPS Christmas Lecture*

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

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

**March 2015**

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

*Prof Dr PE Seeram Ramakrishna is the Director of the Centre for Nanofibers & Nanotechnology at the National University of Singapore*

**Venue:** EPS College, Edgbaston Campus

[www.birmingham.ac.uk/eps/distinguished-Mar15](http://www.birmingham.ac.uk/eps/distinguished-Mar15)

**Tuesday 9 June 2015**

***EPS Societies' Awards Night***

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

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

[www.birmingham.ac.uk/eps/societies-awards-2015](http://www.birmingham.ac.uk/eps/societies-awards-2015)

**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

[www.birmingham.ac.uk/epsreunion2015](http://www.birmingham.ac.uk/epsreunion2015)

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**University events**

**Saturday 6 – Thursday 11 September 2014**

***British Science Festival 2014***

*The British Science Festival celebrates all things scientific and will be hosted by the University of Birmingham in September 2014. Organised by the British Science Association, the event offers something for everyone*

**Venue:** Birmingham City Centre and Edgbaston Campus

<http://www.birmingham.ac.uk/university/british-science-festival/index.aspx>

**Thursday 11 September 2014**

***Alumni Reception at the British Science Festival***

*Join fellow alumni for drinks and nibbles on the final day of the British Science Festival.*

**Venue:** Marquee, Chancellors Court, University of Birmingham

<http://www.birmingham.ac.uk/alumni/events/items/BSF-Alumni.aspx>

**Saturday 13 September 2014**

***GGAA 2014 Forum & AGM***

*Join members of the Guild of Graduates and Alumni Association (GGAA) for their 2014 Forum and AGM. This year's speaker is the Rt Hon Ann Widdecombe.*

**Venue:** Edgbaston Campus

<http://www.birmingham.ac.uk/alumni/events/items/GGAA-2014-Forum--AGM.aspx>

**Saturday 13 September 2014**

***Golden and 50th Anniversary Reunion***

*Alumni who graduated in 1964 or before are welcome to join for a special reunion lunch*

**Venue:** Edgbaston Campus

## Do we have the right details for you?

According to our records your current business details are as follows: **Position** at **Organisation Name**. If this is not correct, please visit [your.bham](http://your.bham) or email [alumnioffice@contacts.bham.ac.uk](mailto:alumnioffice@contacts.bham.ac.uk).

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