



# Lichfield Science & Engineering Society

**CHAIRMAN**  
Carol Hannam BSc

**PATRON**  
Ian Dudson CBE  
H.M. Lord-Lieutenant of Staffordshire

**PRESIDENT**  
Professor Rex Harris  
FREng, FIMMM, FInstP, MIEEE

Dear Member,

My first newsletter to you is written with a certain amount of trepidation: I hope you will find that the next three years are as satisfying as the last three. Paul Bettson retired from the chair at the AGM in May having had a most successful and, I hope, happy term of office. He has set high standards and is a hard act to follow. However I have a very strong and hardworking team around me and with their support and encouragement I trust that Lichfield Science and Engineering Society will go from strength to strength.

## Monthly lectures

In May we had a brisk AGM with 122 members present during which we addressed the management of the Society. Paul gave his final Chairman's report and then I presented the Financial Report on behalf of the Treasurer, Dr Bob Giles, who was unable to be with us. The Society is in a sound financial position and the subscriptions will remain the same. Professor Rex Harris then took the chair and presided over my election as your new Chairman. It was my pleasant duty to present Paul with a gift, not only for his term as Chairman, but for the many years in which he has given so much time and effort to the Society. Elected, in his absence, to the job of Deputy Chairman was Dr Bob Giles. He will also complete his term of office as Treasurer. The rest of the committee was re-elected en bloc. Marion Sadler will carry on as General Secretary. Mike Beeson, ably assisted by Tim Sims, will continue devising interesting visits which they do so well and Mike, in his capacity as Publicity Secretary, will keep us and, when necessary, the public aware of what is going on. Jenny Arthur is Education Officer and Roy Foster is your contact for social occasions. Paul will stay as Membership Secretary and the Committee is completed by Irene Ordidge and Claire Robinson.

Following the AGM Dr Patricia Fara addressed the concept 'Faces of genius: Looking at Isaac Newton'. She explored his legacy and made us appreciate the scientific genius that was his and she considered the aspects of his work which lead to such reverence of the man. He was a polymath with enlightened views on gravity, optics and mathematics and was much before his time, standing out from his contemporary scientists who found it hard to follow his thinking. The trumped up story of the apple, we found out, only came into being later despite the fact there are now Newton's apple trees and Newton's apple trees from cuttings, all over the world. She said we could be left to think that the apple tree we saw at NPL was from a true cutting! There were 138 Members, 1 student and 10 visitors present.

A meeting in June was a new enterprise. This slot on the calendar had previously been filled by a lecture combining the Arts and Sciences as part of the programme for Lichfield Festival. In recent years it has been poorly subscribed, most of the audience was made up from our members and it cost us a fee. It was decided to call a halt to this association and we would go it alone. So June 10<sup>th</sup> saw us listening to Jim Evans who was formerly of Cadbury's Technical Department. His lecture entitled 'From Cortez to Cadbury: the History of Chocolate' explored the history of man's relationship with the cocoa bean from the Aztecs, through Columbus bringing the beans to Europe and on into the slow evolution of the product leading up to the wonderful commodity



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which we now enjoy. We were privileged to see some of the material from the Cadbury archive and we were able to compare the original machines with those of today from Jim's photographs. Facts such as 10 cocoa beans being enough to purchase a slave and chocolate being a solid at room temperature but which must immediately melt in the mouth at body temperature, kept us fascinated. There were 131 Members, 5 students and 13 visitors present.

### Visits

In April 19 Members visited The University of Birmingham. Dr Oluremi Olatunbosun showed the work of the Automotive Engineering Department, including several test beds which help to improve the efficiency of vehicle engines. A large proportion of the work is on behalf of Jaguar Land Rover. The visit also included the Machining Research Group's facility which has an international reputation in the field of advanced aerospace alloys. Their work includes high speed micro-machining using milling cutters down to 0.1mm diameter.

Dr Richard Clay introduced the University's VISTA Centre. Their use of large touch-screens and video tables to allow interactive presentation of information was a real eye-opener. They had also made use of new photographic techniques, which some Members first saw at the HSE's Laboratories, to produce stunningly clear images of the Staffordshire Hoard at such high magnification that one of the conservators had been embarrassed to find a previously overlooked piece of cotton wool. This visit proved so popular that only half the Members who applied were able to go but the University has kindly offered another date in late July.

In May our visit was to Kidderminster, the traditional home of carpet making. The local industry is a shadow of its former self but Brintons, one of the oldest firms, founded in 1783, is still going strong and welcomed 19 Members to their No. 6 factory. Members saw every stage of the process and the machinery, from looms controlled by Jacquard cards, through computer-driven ones to the latest technology which allowed a photograph taken of Prince Andrew arriving at the factory to be woven into a carpet and presented to him before he left.

As previously reported, Members visited Ball Packaging's aluminium drinks can works at Wrexham. In June another 12 went to Ball's steel can facility in Rugby. The process is similar but seeing how they turn out five million cans each day was still very impressive. The 142 employees keep the factory going. It communicates directly with the Britvic factory next door via a tunnel and 15.6 billion cans have been shipped down it.

The Society is grateful to these and to all the other organizations who offer us their hospitality.

### Summer Supper

The summer supper at Curborough Hall Farm on the warm summer evening of Wednesday 18<sup>th</sup> June was attended by 91 Members and guests. After supper, which was as usual crowned with its Bakewell Tart, Mike Ballinger – a trustee of the National Tramway Museum at Crich - talked about early electric traction in South Staffordshire and in particular addressed the history of the tramways in Walsall. We looked at the people and the problems involved in the enterprise and enjoyed his photographs from this era. Our thanks go to Roy Foster who made sure the evening ran smoothly.



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### Future events

The programme committee has planned another year of thought provoking lectures for you, the first of which will be on Thursday 18<sup>th</sup> September when our President, Professor Rex Harris, will give the lecture: 'Rare Earth Magnets, Hydrogen and Sustainable Technologies'.

The 25<sup>th</sup> Erasmus Darwin Memorial Lecture will be given by Professor Sir Colin Blakemore on Thursday November 20<sup>th</sup>. Colin Blakemore, who was knighted in the Birthday Honours, has researched extensively into vision and the development of the brain and the lecture will consider 'Evolution of the Human Brain: a tale of two Darwins'. **Be sure to book your seats from The Garrick box office.**

The annual dinner will be held at Little Aston Golf Club on Wednesday 22<sup>nd</sup> October, 2014. The talk will be given by Dr Turi King who is the lead geneticist on the Richard III remains which have been found in Leicester. You will find an application form in with this mailing and I would urge you to book your places quickly as I think it is a very exciting subject.

Mike Beeson has arranged more visits for the next few months, some of which he expects to be oversubscribed so early booking is advisable. The Discussion Lunch will be on Thursday September 25<sup>th</sup>. It will be led by Brian Teall who will introduce 'Scientist of the invisible: the life of Rudolph Steiner'. We shall discuss the Rudolph Steiner Schools as an alternative to mainstream education. You will find application forms for these with this mailing, and application forms and updates are also available in the Members' Area of the website.

### Reminders

Subscriptions fall due in September. It would help the Treasurer if these were paid on time.

Visitors will be allowed into a meeting after 7.50pm if there are no Members queuing. Until this time Members will have priority. Anyone who joins the Society on the evening will still be treated as a visitor for that event.

### Lastly

In closing I would like to wish you all a happy summer, thank the Committee again, and look forward to seeing you in September when our new programme begins.

Carol Hannam,  
Chairman