

King's Engineer

KING'S
College
LONDON

ISSUE 1

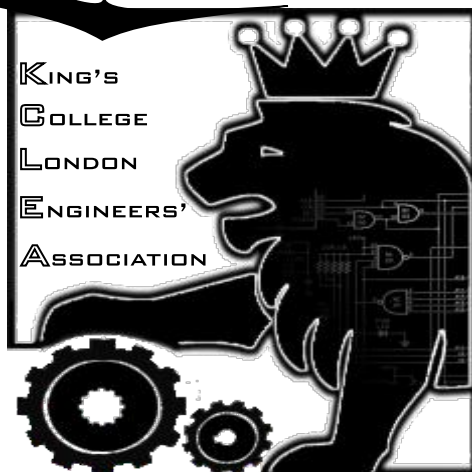
SPRING 2009

KCLEA ANNOUNCES FREE MEMBERSHIP

A sub-committee was formed back in January 2008 for the task of exploring the successful future and revitalisation of the KCLEA.

It was found there is still a very strong willingness to continue efforts to keep Engineers from King's in contact with one another and support current students in all their University endeavours.

Engineers, graduated and current, have a passion to look after their own, these new proposals have been passed allowing the KCLEA to abandon its long held subscription based membership plan and instead open the doors to all past Engineering alumni, lecturers and honorary members.



This year's re-energized committee is hoping to unite King's Engineers from all around the globe to help support the activities of the Association where everyone between the latest graduates and Life Members of the KCLEA can host fresh events, come to the College for talks and share fond memories of their time at King's. – And Yes help will be needed – so please don't hesitate to join in.

**PLEASE DON'T FORGET TO JOIN
THE NEW 'KCLEA' FACEBOOK
GROUP**

Editorial – Well this is Issue 1 of the new and hopefully successful “King’s Engineer”. The theme is ‘Times of Change’, as King’s is a highly dynamic university.

Engineering is at the forefront of this producing some of the most employable graduates in the country.

With change in mind the previous Newsletter “HRH Reggie” has been retired so bringing us to this first issue in which we explore a wide selection of what’s happening in the College now.

We hope that this newsletter will not only promote the Division of Engineering, but also encourage Students and Alumni to get more involved with the continuing work of the KCLEA.

A little about the Editor:

Well my name is Nigel Sharp (studying a Mechanical Engineering MSc), as a previous KCLEA Bursary winner I have become more involved with the KCLEA.

Volunteers are always needed on the committee and I encourage all graduating engineers to get involved and keep the spirit that a good engineer is a King’s engineer.



WHAT IS KCLEA?

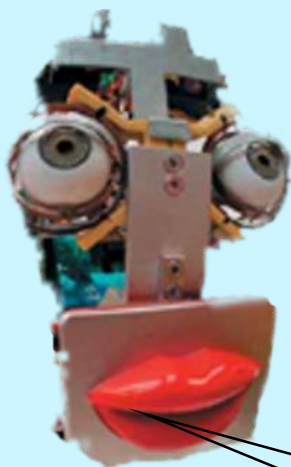
KCLEA is the graduate association for engineers who have studied or worked at King's. It's aims are the following:

-To facilitate communication between members

-To facilitate communication between the College and the members

-To provide support for the College and current engineering students

-To provide support for the King's College London Engineering Society



HI I'M "INKHA" - THE MECHATRONIC RECEPTIONIST AT THE STRAND - AN ONGOING ENGINEERING PROJECT

If you have any stories you would like published in the next edition of the “King’s Engineer” or just want to find out more please e-mail:

info@kclea.org

A LETTER FROM THE KCLEA PRESIDENT

Dear Engineering Alumnus,

I am writing to you, as President of the King's College London Engineers' Association (KCLEA) to tell you of the considerable changes which are taking place in the modus operandi of the Association.

It has been obvious for some time that the Association needs to modernise its operations if it is to once again be one of the leading alumni groups in the College.

As a consequence of this, we have been charged with pushing through a series of major changes in the coming year which can be agreed with the KCLA and passed at the KCLEA AGM later this year. The main change is that subscriptions are being reduced



to zero and all engineering alumni are automatically entitled to be ordinary members of the Association.

We intend to work on the basis that all engineering alumni with whom the College is in contact (possibly those receiving copies of In-Touch) will automatically become members of the KCLEA unless they inform us that they do not wish so. Unfortunately, there is a downside-



Reducing subscriptions to zero means that our annual income which is used essentially to serve the student body by providing bursaries, prizes and supporting KCLES events could be at risk. However, we hope that all existing members and many 'new members' will feel that they can support our activities in the future by giving donations.

We will be keeping you informed of the progress of the changes in future copies of the Newsletter.

Yours faithfully,

Norman Borrett
President - KCLEA

ANNUAL BURSARIES & PRIZES

Now in its fourth successful year, students have applauded the efforts of the KCLEA towards helping and awarding the current Engineers with prizes and money.



The **Bursary Awards** are broken down as follows:

There are two KCLEA funded bursaries, to the value of £1000 each, which are awarded to second and/or third year students in the Division of Engineering.

The awards are decided by a panel consisting of academic staff from the Division of Engineering and committee members of the KCLEA, together with a non-voting input from the student body.

The Terence Lo Engineering Bursaries are two awards kindly funded directly by Terence Lo (Mech Eng Graduate 1983), and the Albert Cheung Bursary is kindly funded by Albert Cheung (Mech Eng Graduate 1983).

These are also worth £1000 each and are awarded by the same panel, and based on the same criteria as the KCLEA awards.



Bursary Award Winners 2007-2008:

The picture shows from left to right: Mr Panayiotis Kolios (3rd year Telecommunication Engineering), Ms Ruchna Bhirgoo (3rd year Telecommunication Engineering),

Mr Ahmed Abubaker (2nd year Electronic Engineering), Mr Florian Naumann (3rd year Engineering with Business Management), Mr Alessandro Guicciardi (3rd year Engineering with Business Management), and

Professor Seneviratne (Head of Division)

Prizes are given out yearly to students, various Medals and small cash sums reward students throughout their degree

IF YOU WOULD LIKE TO HAVE MORE INFO OR SUPPORT THIS IMPORTANT ACTIVITY - PLEASE E-MAIL INFO@KCLEA.ORG

KING'S ENGINEERS' DAY 2008

Traditionally, most KCLEA events have been organised centrally and held in the south east of England. A look at the list of members soon shows that most of our membership now lives outside this area. One suggestion that has been made to overcome this geographical spread is that groups of King's Engineers should arrange to meet in a location convenient to their particular group but that the timing of the meeting preferably should be on the same day as the other meetings around the world – a King's Engineers' Day.

If you can help organise any sort of event please
E-mail info@kclea.org

For now just note to look up some King's Engineers and old friends, and find your own way to celebrate on Thursday 8th October 2009



2007/08 WINNER: KCLEA 13 CLUB TROPHY

I'm a partner in an engineering practice that builds a whole range of structures, from buildings to bridges. Some are quite ordinary, small-scale projects, and quite a number are large-scale projects. But in my time I've been

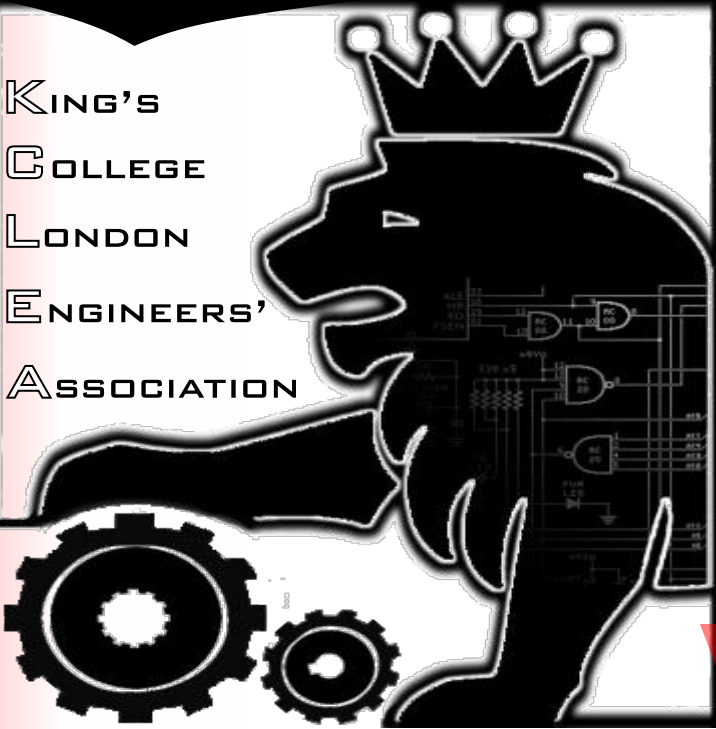


involved in quite special projects, like buildings in Antarctica, or special "millennium bridges," which are part of a riverside landscape scheme that's meant to extend the enjoyment of rivers in York and Lancaster.

- Mark Whitby



KING'S
COLLEGE
LONDON
ENGINEERS'
ASSOCIATION



KCLEA v.s. KCLES

So often people are confused when discussing the Engineering Association and the Engineering Society - To clarify these are two separately run societies, the latter being run entirely by current students in the Division of Engineering. With that said there is a huge amount of cooperation between both organisations.

The Society is often deemed to be the event organiser and the Association has the money to fund this. In reality, the Association consists of members who want to give something back, and in return the Society focuses on offering an internal social society for all the engineers who don't want to just be lost in the 19,000 student swarm at King's.

- KCLES -
STUDENT ENGINEERING SOCIETY



S

K
C
L
ENGINEERING
SOCIETY

KING'S
College
LONDON

University of London

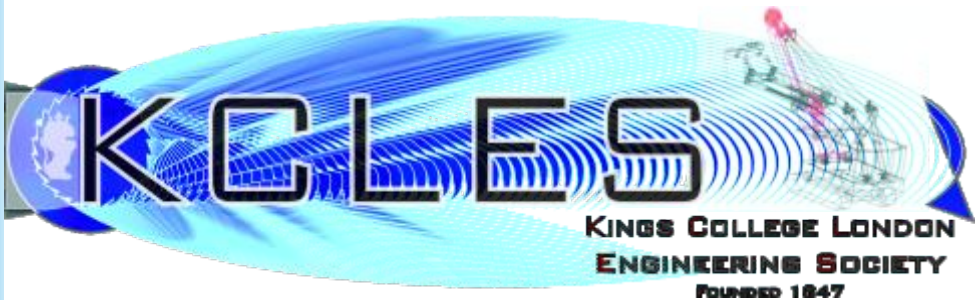
**THE OLDEST ENGINEERING
SOCIETY IN THE WORLD**

LOOKING BACK OVER 2008 FOR THE KCLES

All of the KCLES committee have worked outstandingly to ensure that the interests of students in the school have been represented. The focus of the Society over the past year remains to maintain both the long held traditions of the society - And to start new traditions whether it be Playstation® tournaments or entertaining the students with beer and wine

at the Engineering Christmas Party. The Society is continually changing and with these changes, new traditions and new focuses are being established. We owe much thanks to the KCLEA for continued guidance and financial support. It is unlikely we will be returning to our Victorian roots as the 'Shakespearean Reading Society' anytime too soon.

-Ahmed Abubakar



EVENT 2008: GROUP LOTUS FACTORY VISIT

15 Students were taken to Norfolk to visit the Lotus factory founded by Anthony Colin Chapman (Engineer) - to see the best of British Car Racing Pedigree being assembled.



Also produced is the new Tesla Roadster an Electric Powered Sports Car. Fun was had by all, a very successful excursion for KCLES members.



WORDS FROM OLD AND NEW KCLES PRESIDENTS

KCLES NEW VOTED PRESIDENT 2008-2009

Where to start really...I'm Lynda Nwike, just finished my first year and fingers crossed well on the way to a very productive second year. To sum up the past year in one word would be very close to impossible. The transition between sixth form and university hasn't been the smoothest, but at the end of the day what transitions ever are? Adjusting to university life was a tad bit tricky, but things are levelling out now! Both staff and students have been fantastic and the "first year experience" as I like to call it has definitely been a good one. I'm finally set on dedicating the next few years to a Mechanical Engineering degree which was definitely a difficult decision for someone who struggles to choose what to have for breakfast in the mornings.

So, I'm the new president of the Engineering Society, still sounds a

bit odd when I say it, but fingers crossed I'll get used to the title! There are so many more things I hope to achieve with the society in the coming months. The committee this year is fantastic, and the guys and girls are a great bunch. The committee size has grown considerably from last year and this can only be a good thing. The more the merrier! The coming year will hopefully be as good as the last (but I won't complain if it's better).

It's now the calm after the January exam storm and I'm definitely going to keep the society on track and looking forward!



My name is Ahmed Abubakar, I'm entering my 3rd year of Electronic Engineering. I was the president of the King's College

London Engineering Society (KCLES) over the last academic

year (2007-2008), and this role has been both a great responsibility and an honest pleasure.

The engineering society has had a long and proud history of representing King's Engineers and working for their benefit. Today that history continues and the society still remains the main body working for the social and academic needs of Engineering students. The engineers stick together for each other and always will!

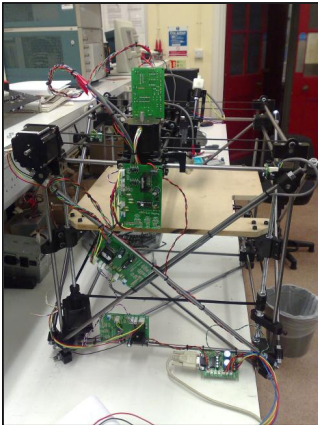
STUDENT PROJECT PROFILE



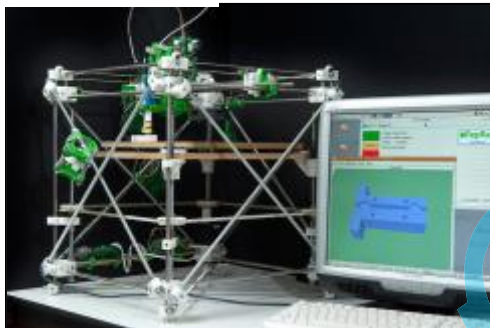
RepRap at Kings, Imagine being able to design a product on your PC and then literally having the option to print it out in 3D, right there in front of you.

RepRap (Replicating Rapid Prototyper) is a 3D printer that lays down consecutive layers of material to produce parts from digital CAD drawings. The technology already exists, but commercialised machines can cost anywhere in the region of £30,000. The RepRap aims to develop a similar technology that will cost £400 in comparison and will have the novel capability to self replicate.

The project is open sourced allowing for the free distribution of the technology. This opens it up to communities in the third world as well as to individuals in the Developed World.

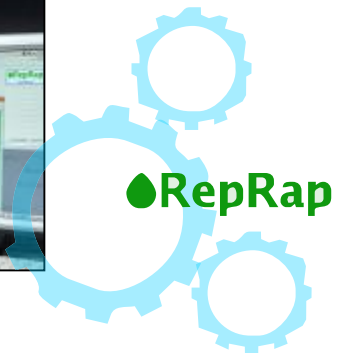


Shaheb's RepRap at Kings College London

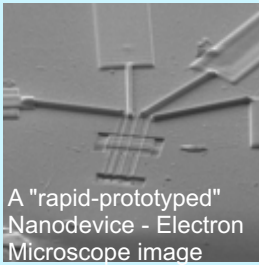


RepRap Machine at <http://reprap.org>

Shaheb Hussain - MEng Mechatronics



ENGINEERS MAKE THEIR OWN WAY INTO NANOSCIENCE - Dr Patrick Mesquida



A "rapid-prototyped" Nanodevice - Electron Microscope image

Nanotechnology is more than just a buzzword to get funding from venture capitalists and public sources. It is the

continuation of the miniaturisation story so successful in the microelectronics industry since the 1960's. It is essentially about downscaling more and more the sophisticated microfabrication processes, namely photolithography, and taking up expertise from other disciplines such as surface chemistry, biophysics and material sciences. Nanotechnology refers to

technology which manipulates, fabricates and manufactures devices on a scale between 1 nm and 100 nm. On this scale, lithographic techniques will definitely come to an end, simply from fundamental physical principles that do not allow the continuation of the top-down approach.

Nanotechnology is interdisciplinary in its nature and exploits knowledge from Chemistry, Physics and Biology. At King's the new MSc course 'Nanotechnology Engineering' focuses on the practical aspects of nanotechnology design and manufacture from an engineers point of view.

ENGINEERING **materialsLibrary**

@ KING'S - DR MARK MIDDOWNIK

The relatively new Materials Library has a selection of some of the worlds most interesting materials. The Materials group made a list of their current favourites - available for interested and inquisitive engineers to explore!

1. Aerogel- lightest solid on earth (shown right).
2. Aluminium Nitride Wafer - cuts ice like butter.
3. Bioglass Scaffold - cells turn into bone on contact.
4. Rapid Prototype Nylon Chainmail - the ultimate in machine art
5. Silicon Nitride Ball Bearing - smashes concrete without a scratch
6. Ferro fluid - a liquid that is not a liquid
7. Thermochromic Paper - a retake on the colour of heat
8. Tin Stick - a metal that cries
9. Shape Memory Alloy - metal that remember its shape
10. TV Rock - natural version of transparent concrete.



More in the next issue from other areas of the Division of Engineering such as the Centre for Telecommunications Research



WWW.KCLEA.ORG

The website is taking a huge overhaul, we need volunteers and people with experience in design and managing dynamic websites. We hope to be offering a PayPal service for much needed donations in the very near future. Check out www.kclea.org for all the latest details on upcoming meetings.

HOW YOU CAN GET INVOLVED...

Membership of the Association is open to all former students of the KCL Engineering Faculty.

We aim to be a staple part of the King's student experience and continue to support communication between all engineering Alumni and staff.

The College has a great impact on all it's Engineering Students in one way or another. Some of the fondest memories often retold in meetings are of the great times had during those student days.

The Association is made up from a yearly elected committee and hold regular meetings at the Strand Campus.

There is no better way to give something back than to help the Association continue its activities. Please consider donating a small sum of money or time to allow the current prizes and events to continue for the foreseeable future.

Support for KCLEA can be posted to:

Dr Mike Clode
King's College London,
Division of Engineering,
Strand, London.
WC2R 2LS

or E-Mail: info@kclea.org

