Ambassador for the chemical industry

LEANNE HART, a 24-year-old process engineer from Hartlepool, is the chemical industry’s new Young Ambassador. She received her trophy at the Chemical Industries Association’s Awards Dinner from TV news presenter Peter Sissons.

Leanne works for AMEC, an international project management and services company. She also receives a cash prize and an educational trip abroad to a country of her choice.

The competition is open to anyone in the chemical industry who is under 30. Over the next year she will represent the chemical industry and will participate in a number of prestigious events with access to top-level decision makers and opinion-formers in the chemical industry and beyond.

Leanne is eager to undertake her role as an ambassador. “As well as the personal achievement I feel this has given me, this award will give me the chance to show people the massive opportunities available in the chemical industry which are far often overlooked. I will be proud to represent an industry that can offer so much to so many,” she said.

Judith Hackitt, Director General of CIA, stressed the importance of this award: “It is an effective way of showing the public, in very human terms, how vital the chemical industry is. It is extremely encouraging to see committed young people, like Leanne, talk passionately about their job.”

Tackling trolley trials

Thirty-eight students from twelve schools around the UK impressed airport bosses with their innovative airport trolley design, when they competed in the national final of the 2005 BAA Trolley Challenge at the Heathrow Airport Visitors Centre, sponsored by BAA Communities Trust and organised by the Young Engineers.

The contestants showed ideas to help tackle problems encountered by passengers, including how to get heavy luggage from the car, taxi, or train to check-in, how to take care of the children and to help the disabled, how to improve security and how to negotiate potential obstacles such as escalators.

“Every day I have to deal with passengers’ problems with airport trolleys,” said Chris Garton, engineering manager at Gatwick Airport, who presented the prizes.

“Today has been a real pleasure for me to see tremendous ideas from every school, many of which I will be carefully considering with our own trolley designers”.

Primary school winners (shown below) were from Staniland Primary School, in Boston, Lincolnshire – Luke Thompson (11), Charlotte Harrison (11), Sam Brackenbury (11) and Sam Relton (10). Their multi-feature design includes folding child seats, rollers which are the same height as the check-in conveyor to enable luggage to be slid easily on and off the trolley, a security basket on top of the trolley for valuables, ergonomic handles incorporating a braking mechanism, and handles for young children to hang on to.

The junior age category was won by Limavady Grammar School, Northern Ireland, whose team of Matthew Beattie (14) and Matthew Buchanan (14), based their design on using ball bearings instead of traditional wheels, making it more manoeuvrable.

Senior winners were Charlotte Dexter (15), Amy Costigan (15) and John Eaves (15) from Our Lady’s Catholic College in Lancaster, with a streamlined design using toughened Perspex as the construction material to give good visibility.

Runners-up were the Cheltenham Ladies’ College team (shown left) of Malgorzata Cholast (17), who travelled back from her native Poland for the competition, and Cherry Ng (18), whose design incorporates radio frequency identity tagging for security and magnetic braking.

Each of the winning teams won £500 and runners-up £250 and trophies designed by Rex Garrod of Robot Wars fame using pieces from Concorde and other important engineering artifacts.

The photo below shows senior vice-president Dawn Fitt’s son Oliver with his school’s display about the life of Amy Johnson.

Oliver is in Year 1 and during this past year, they have discussed famous people, including Amy Johnson, George Stephenson, Henry Ford, Gladys Aylward, Helen Keller and Grace Darling. The school’s literature on Amy Johnson made no mention of her time with the Women’s Engineering Society.

Dawn borrowed the bust of Amy Johnson to take along to the school with some old journals which the children found fascinating. The display includes the children’s paintings and text pieces about Amy’s life.
Energy and Transport in York

The WES 2005 conference takes place at Alcuin College, University of York from Friday 14 – Sunday 16 September. This year’s theme is ‘Energy and Transport’ but as usual a WES conference offers much more than just a technical forum. There is a wide range of social activities, interesting visits, opportunities to network and personal development workshops.

Technical programme

Friday kicks off with three keynote sessions on high-speed railways in the UK by Ernest Godward, Scott Wilson Railways; appropriate sources of energy for homes in the third world by a speaker from ITDG (now called Practical Action); then a session from Advanced Transport Systems on their personal rapid transit system, ULTra. This will be followed by a panel debate.

Highlights on Saturday include presentations on:

- The history and future of Cummins Engine Company by three engineers working for the company on diesel engines
- Peak oil – how to keep the economy going once oil production diminishes by past-president Jackie Carpenter, formerly of Energy 21
- The Arrol Galloway and the Volvo YCC – two cars for women by Dr Nina Baker, University of Strathclyde
- Developing appropriate transport systems in impoverished countries by a speaker from the (IFRTD) International Forum for Rural Transport and Development
- Electricity transmission – the operational challenges by Rachel Morfill of National Grid Transco.
- It is also hoped to have papers on Saturday or Sunday on:
  - Amphibious vehicles
  - Aero-engine development
  - The future for nuclear power
  - Better windmill design
  - Brunet engines for home power supplies.

Some Saturday and Sunday sessions will run in parallel to give delegates choice on which presentations they wish to attend.

On Sunday there will be more exciting technical topics with parallel sessions on personal development. These will include “George Stevenson and 19th century engineers’ networks” by Carolyn Dougherty and “Handbags & Heels – external ways to boost our inner confidence” by Karen Skidmore.

Booking

The deadline for booking places at the conference is 2 September. The booking form appeared in the last issue of the Woman Engineer or can be downloaded from the website www.wes.org.uk.

A variety of registration fees are available depending upon which days you wish to attend and whether you wish to come to the Annual Dinner.

Social side

On Friday evening there will be a visit to the Jorvik centre to experience life in Viking England at first hand.

There is a difficult choice to be made on Saturday afternoon between visiting either York Railway Museum, York Coal Mining Museum or York Brewery. These visits will run in parallel with a MentorSET mentee/mentor group networking session.

Later on Saturday afternoon the WES AGM will take place followed by the Annual Dinner on Saturday evening.

Accommodation is in single en-suite rooms. Bursaries are available for those on a low/no wage. Please contact the office for more details or indicate this on your form.

My last piece for the journal as President. What can I say? I hope you will approve of Council’s nomination of Dawn Fitt as the next President. Intelligent and energetic, with plenty of useful experience, willing to listen and to learn, Dawn has been a valuable asset to WES for many years, and will make a good President. We have also proposed some good Vice-Presidents to back her up. Do nominate anyone you think would make a useful Council member (including yourself).

The last two years have been ‘interesting times’. Various things have now settled into new shapes and hopefully the Society can move forward more easily. The membership survey is providing useful information about what members want and how to prioritise possible actions. Conference is a good opportunity to get many heads together to think about things – another good reason to come, just for the day if you cannot manage the whole event.

Looking back, what strikes me most? If you have been reading my comments in recent journals, you know my answer – teamwork. WES works as an organisation because many people work hard to help achieve our aims. Our normal accounts do not diminish by past-president Jackie Carpenter, formerly of Energy 21.
From the editor...

For those of you planning to speak for the first time in public at the WES conference in September, the article on page 5 will give you a few valuable tips. Public speaking is something many WES members are required to do in their professional lives - and it can be a terrifying experience. Hopefully if you follow the guidance in this article, you’ll cope without too much trauma – and might even enjoy it.

We always celebrate the success achieved by women engineers in these pages – and this issue is no exception. However, unfortunately some members find their career prospects hampered by factors outside their control. Despite legislation to promote diversity and outlaw bullying and prejudice, the latter two still exist in some workplaces – even though the companies may congratulate themselves on their equality policies.

On page 4 one member describes the bullying she experienced, the inability of her employers or union to sort this out, and the terrible aftermath that she has suffered – and is still suffering – as a result of this experience.

She is not alone in suffering in this way, as the postscript to her article shows. So yes, we should always celebrate success, but at the same time acknowledge that it’s still an uphill struggle – and sometimes the price of fighting to overcome prejudice is very high.

Youthful enthusiasm is always welcome so we are pleased to share again the experiences of a young lady in discovering what engineering is all about (on pages 6-7).

Tahereh Mohammadi is the winner of the WES prize for the essay she wrote after attending an INSIGHT course for girls who wish to learn about careers in engineering. Tahereh was inspired by her course and has decided that she definitely wants to be an engineer.

Young people love seeing how engineering can solve everyday problems. The Young Engineers’ airport trolley challenge produced some innovative solutions from young people aged 10-18. BAA designers are going to investigate some of their designs (see back page).
Your letters should be sent to: The Editor, The Woman Engineer, 22 Old Queen Street, London SW1H 9HP or via e-mail to editor@wes.org.uk

Dear Editor

Please accept this email as a massive “THANK YOU” for the support you have shown for “Developing Female Engineers” over the past year. The help we have received has been excellent and very much appreciated. We really could not have completed the project without you. You should be able to find the WES name on our website (address below) under “Steering Committee and Acknowledgements”.

Outputs from the project are as follows:

* Literature review
* End of project report
* “Women in North West Engineering” brochure
* End of project dissemination workshop at The Lowry on 13 June 2005

* Leaflet promoting industrial placements to Engineering students
* Project website (all thanks to the hard work of Louise Heatley)
* Presentation of preliminary findings at a “Women in North West Information Technology” (WINWIT) workshop in Manchester, December 2004
* Forthcoming presentation of findings at the “13th International Conference of Women Engineers and Scientists” in Seoul, South Korea, August 2005

* Three potential journal articles have been written and will be submitted to relevant journals in due time

If you would like to read the literature review or report, please visit our website at www.cse.salford.ac.uk/dfe and look under “Publications” where they can be downloaded.

For further information, please contact Dr Haifa Takruri-Rizk, Project Manager, on h.takruririzk@salford.ac.uk.

Thank you again for all your support. We wish you all luck in the future.

Haifa Takruri-Rizk, Katherine Jensen, Laura Crossley

Dear Editor

I am a WES member, although I have changed direction considerably now, from aerospace engineering to working in the HIV/AIDS field.

We are involved in the MakePovertyHistory campaign this year and I am wondering whether the WES will have any focus on this?

2005 offers an exceptional series of opportunities for the UK to take a lead internationally, to start turning things around as the UK hosts the G8 gathering and heads up the European Union. More than 430 organisations have joined together under MakePovertyHistory, calling for change on trade, debt and aid – www.makepovertyhistory.org provides more information.

What else can we, as professional engineers, do? The rules of international trade are stacked in favour of the most powerful countries and their businesses, including the companies we work for.

We must act to promote and implement ‘ethical’ engineering practices nationally and internationally. This means applying and complying with international standards and best practice to ensure that our engineering is environmentally sustainable, wherever the project is. We can promote and encourage the following:

* investment to build local capability
* training and use of local labour wherever possible
* ensuring community involvement and consultation
* ensuring governments can effectively regulate water companies by keeping water out of world trade rules
* ensuring trade rules do not undermine core labour standards.

Celia Fisher
celia@lass.org.uk

Dear Editor

We are three young women science journalists working to launch an intelligent popular science and technology magazine aimed primarily at women. We previously started a pilot version of the magazine at the University of Toronto in 2001, where it still runs. Our team members all have degrees in science and masters in science communication. Between us, we have worked full time at the BBC, Discover magazine in New York and New Scientist. Currently, we are in the early stages of development, working with NESTA to raise capital and support.

We hope our project is something that WES members would like to know about and could possibly have very useful opinions on. If so please contact anna.gosline@gmail.com.

Anna Gosline, Anne Casselman, Katie Law
NEW RESEARCH published by the Department for Work and Pensions explores how women plan financially for retirement.*

Pensions were not found to be high among women’s priorities. Women are more concerned with their family’s short-medium term needs than with saving for their own future, and felt that their partner should provide for their retirement.

The research showed that independent pension provision for women was not seen as salient (either by women or their partners). Whilst people know that partnerships often terminate, they don’t like to think about it or plan for that eventuality. Many women did not know how their pension situation (state or private) would be affected by divorce, separation or bereavement.

There is some evidence of a cultural shift. Younger women are more likely to value a degree of financial independence. They recognise that many partnerships do not endure, and are more likely to feel it is important for women to make pension provision in their own right.


A NEW TEST for osteoporosis that allows faster diagnosis – by examining fingernails – is being pioneered by engineers at Crescent Diagnostics in partnership with the University of Limerick.

An estimated 3 million people in the UK suffer from osteoporosis. The test works by shining a laser beam onto the nail and the reflection back is analysed to provide information on the characteristics of the nail, which replicates those of the bone. This examines structure rather than mass, a more accurate method of analysis.

The Bone Quality Test(tm) (BQT) will speed up detection, lower the costs of testing dramatically and broaden the scope for testing to a much wider group than is now possible due to the expense of X-ray testing. At present only those groups most at risk are tested, such as post menopausal women.

By 2007, a hand held diagnostic device will be launched for front line doctors that can assess fracture risk in three seconds, just by inserting a finger into a device.

PLANETARY VOICES is a website containing over seventy features on the environment, human rights and peace and reconciliation. These include an interview with past-president Jackie Carpenter entitled ‘Death is a process not an event’. Jackie discusses the terminal illness and death of her partner Ian Daycock with whom she founded Energy 21. She describes how they worked positively with his forthcoming death so that Ian was able to embrace death fearlessly. He was also able to help others with terminal illness.

Jackie explains their shared philosophy about the links between death and sustainable lifestyle. She goes on to describe the work of Energy 21 in promoting sustainable energy.

To hear the interview in full, see www.planetaryvoices.org.uk/death_is_a_process_not_an_event.html.

THE LEARNING and Skills Council’s Equality and Diversity Annual Report shows significant progress is being made in driving up vocational learning among women, particularly those from ethnic minority backgrounds. The number of Black African women in further education rose by nearly 20% from 5,240 in 2002-03 to 6,180 in 2003-04, whilst the figure for women of British Bangladeshi backgrounds increased from 14,800 to 16,200.

The LSC is also working with the Apprenticeships Task Force to involve more under-represented people in apprenticeships training and ensure gender ‘stereotypes’ are broken down. At present, for instance, only five per cent of engineering apprentices are female and only four per cent of apprentices are from black and minority ethnic communities.

MANAGERS in the engineering industry find it hard to take holidays, according to a survey by the Chartered Management Institute. Although the majority of employers encourage staff to take time off, most employees admit to working during their annual leave and almost one third fail to take their full holiday entitlement.

Engineering managers are fearful about the impact of their absence and more than half (63%) contact their organisation by choice due to work overload. A majority (74%) will also respond to requests from their employer whilst on holiday. Almost half (42%) regularly check their work email and 47% monitor voicemail. In an effort to keep in touch with colleagues, 66% take away their work mobile phones, 16% take their laptops and 11% regularly visit internet cafes.

Cosmetics company L’Oréal and the UK Resource Centre for Women in SET (UKRC) are funding three cash bursaries of £10,000 each year to women scientists and engineers returning to academic careers.

Those applying must be qualified to PhD level and have taken at least a twelve-month career break. The bursary is intended to help restart their careers. It can be used for research and publication of findings and to fund additional childcare to enable them to maintain their lecturing hours.

In a keynote speech at the House of Commons, Meg Munn, Deputy Minister for Women and Equality said: “There are currently 24,000 women with SET qualifications who return to work after career breaks, however, only one third of them actually return to a career in science.

“The collaboration between L’Oreal and the UK Resource Centre is an excellent practical way of helping women back into science.”

To apply for a bursary, contact fwisbursaries@uk.loreal.co.uk.

A jury consisting of representatives from L’Oreal, UKRC, UNESCO, Equality Challenge Unit and the Daphne Jackson Trust will assess the applications.

The first awards will be made in spring next year.
President's message
Continued from page 1

Working for the good of our office. This journal is up to a tremendous force an amazing variety of those heavily involved with appear to be resolved.) plenty of fun. ing so many interesting interests. When we get did take this opportunity. My thanks go to everyone who has helped me. My thanks go to every- one who has helped me. Many have responded to all sorts of requests, both those heavily involved with WES and members whose names I plucked from the membership list because it looks as though they may be able to contribute to a solution to some current problem. Thank you all for your helpfulness.

Charter for academic equality

The Athena SWAN Charter is a scheme that recognises excellence in science, engineering and technology (SET) employment in higher education. Launched in June by the Royal Society’s Athena project in partnership with the Scientific Women’s Academic Network (SWAN), the charter is supported by the UK Resource Centre for Women in SET (UKRC), with funding from the European Social Fund under the Equal initiative.

The charter will help universities to create more equitable working environments for women scientists and engineers. It will also reward universities that are making positive steps though bronze, silver and gold SWAN recognition awards.

Universities who are the first ‘founder’ charter members are: Bristol University, Cambridge University, Heriot Watt University, Imperial College London, Loughborough University, Oxford University, Plymouth University, Queen’s University Belfast, Southampton University and University College London.

By signing up to the charter universities commit themselves to:

- Address gender inequalities by commitment and action from everyone at all levels
- Tackle the unequal representation of women in science by changing cultures and attitudes across the organisation
- Address the high loss rate of women in science
- Recognise that use of short-term contracts has particularly negative consequences for the retention and progression of women in science
- Recognise the transition from PhD into a sustainable academic career in science can be particularly difficult for women
- Examine the absence of diversity at management and policymaking levels.

Charter members pledge themselves to action at organisational and departmental levels and to monitor their progress and provide an annual account of their action and plans to improve women’s participation and progression in SET.

More information about the Charter can be found at www.athenaswan.org.uk.

............................................................................

Speaker at the launch (from left to right): Dr Nancy Lane (University of Cambridge), Dr Sean McWhinnie (RSC), Dr Louise Archer (London Metropolitan University), Prof Peter Main (IOP), Annette Williams (UKRC), Sir John Enderby (President, Institute of Physics), Prof Dame Julia Higgins (Royal Society).

RAE’s first female senior vice-president

PROFESSOR WENDY HALL has become the first female senior vice-president of the Royal Academy of Engineering and plans to work with the Academy to attract more women engineers.

Professor Hall is head of the School of Electronics and Computer Science (ECS) at the University of Southampton and was founding head of the Intelligence, Agents, Multimedia Research Group. She has been a Fellow of the Royal Academy of Engineering since 2000, and will serve for three years.

She intends to develop initiatives to improve public perceptions of engineering so that more young men and women are encouraged to join the engineering discipline.

She also plans to encourage companies to encourage the active involvement of women in all aspects of their business.
Was it them .. or is it me?

The legacy of sexual discrimination lingers long after the problems stop, as a WES member discovered

Sexist behaviour, discrimination and bullying have not disappeared. They just have a different and covert form. I know that women have similar experiences to me, but no-one talks openly about it anymore.

One reason is that women engineers still have to prove themselves and just tough things out, because engineering remains a male-dominated profession, in an industry which is not people-centred, but focuses on profits and getting the job done.

There is also another serious reason why sexual discrimination continues but has disappeared from the public agenda. No-one wins, everyone loses if a sexual discrimination claim is made. Employers know it is bad for business if they are seen to have failed even just one of their women.

And the ‘victim’ gains a second identity. It is in the employer’s best interest to assign the problematic personality to the woman. So the average woman chooses to be quiet, rather than have her ‘personality’ put under public scrutiny.

Originally I intended to give examples of bullying I endured and write about management theories and psychological concepts to support my perspectives. But a Eureka moment showed that what I really wanted to do was to write, with honesty and openness, about the result of discrimination; the emotional impact, the psychological legacy.

It was about having my skills and expertise – criticised and minimised for years – recognised. Also having my other abilities acknowledged, those that I had developed above and beyond the ones needed to do my job.

But the validation and confirmation of sexual discrimination never came.

And while my line managers and the company have long forgotten me, I have been left with a legacy that has affected everything I do and changed me as a person.

By confessing this, maybe it will help to put sexual discrimination back on the public agenda. I know that by just writing, I have released some of the stress of the legacy, whose elements include:

- anxiety about never being good enough for anything
- fear that tomorrow, or the next day, someone will find something about me or something I have done to criticise, condemn and exclude me again.
- bitterness that builds up, as I watch colleagues and acquaintances being praised and rewarded for their work, while I have struggled to just survive
- loss of trust in employment policies, the law and people in positions of authority
- secret shame for somehow deserving and attracting problems.

Elements that summarise into the sound bite: ‘If it was not them, then it has to be me.’

PS I know other women feel, or have felt, the way I do. I met one recently at a WES event. We both discussed openly anymore, and recognised that even fellow women engineers feel more comfortable if these problems can be put down to individual weaknesses and personality problems. And so we went our separate ways, not even exchanging names.

The simplest way to eliminate sexual discrimination is by explaining it away as ‘personality problems’.

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HD
Grazyna Whapshott reports on discussion and decisions taken at the Council meeting which took place on 25 June

Plans are proceeding well for Conference on 16-18 September. Conference organisers Julie Winnard and Carolyn Dougherty reported that payment had been made to the venue – Alcuin College, University of York – and insurance had been arranged. Coaches had been booked to take delegates to the Jorvik Centre, site visits and the annual dinner. The final speakers were being arranged and it was planned to include sessions on MentorSET networking, history and future of WES, and 19th century engineering networks.

Following the distribution of the flyer and booking form in the May issue of the Woman Engineer, the WES website had been updated by Roseni Dearden to include the flyer and booking form.

Council discussed some form of Conference memorabilia, such as pens, tee-shirts, mouse pads, or wristbands. It was agreed to seek quotes from possible suppliers.

Council agreed to give five Conference bursaries. A questionnaire would be prepared which those applying for these would be asked to complete.

The WES AGM will take place at Conference. Council considered nominations for the Honorary Officers and to fill vacancies on Council. Sasha Gallagher resigned at the June meeting and was thanked for all her hard work and commitment over her years on Council.

Vice-President Karen Quigley has indicated that she wishes to step down at the AGM.

Council nominations for Honorary Officers for 2005/2006 are:

- President – Dawn Fitt
- Vice-President – Grazyna Whapshott
- Vice-President – Valentina Macchi
- Vice-President – Fiona Neads
- Honorary Secretary – Dorothy Hatfield
- Honorary Treasurer – Betty McCarthy

Nomination for ordinary members of the Council are:

- Susan Andrews
- Jan Peters
- Milada Williams

In her President’s report, Pam Wain acknowledged the help that WES has received, and is still receiving, from SEMTA. Preparations are underway for the move to Stevenage and will be put into motion as soon as the formal contract is signed with the IEE. It will be necessary to find a venue for the October Council meeting as the IEE offices are closed on a Saturday.

WES needs to recruit a permanent member of staff to run the new office. It was proposed that the position should be WES Office Administrator rather than WES Secretary, which it had previously been. Council agreed to this in principle although the change of role and title needs to be approved by September’s AGM. Meanwhile Council agreed to go ahead with drawing up the job specification and placing an advertisement in the local Stevenage press.

September’s AGM will also be asked to approve indemnity insurance for WES’ directors and trustees. This is needed to comply with Charity Commission rules.

The President reported that there would be a closer relationship and co-operation with AWiSE in the future. She also reported that the Institute of Physics was running the Elizabeth Johnson lecture in September under the title Science and Society.

Honorary Treasurer Betty McCarthy presented the financial statement and accounts. This was accepted by Council and appears in the Annual Report. Betty stated that some restricted funds (eg WES ICWES funds) might need further scrutiny.

Future strategy

Reporting on future strategy for WES, Dawn Fitt recommended that:

- Administration of the Clusters was handed to the Office Administrator when the new database is ready
- Engineering Development Trust should, in future, be the responsibility of Heather Bilton
- SETNET/SEAs need to be reassessed.

Other points requiring further discussion were direct debit, new members’ pack, company members, and information about pensions.

Written reports were received on MentorSET, Student Groups, the Scottish Circle, the Lady Finniston Awards and from the Membership Officer. A number of recommendations were approved from these reports including the creation of a fund raising sub-committee.
Victoria Guy is the first engineer to appear on Management Today’s list of women under 35 tipped to be future business leaders.

Victoria is general manager of Shell’s North and Central European Bitumen Division.

She tells us about her life, career and what being nominated means to her.

Victoria first decided that she wanted to become an engineer after doing work experience at a local engineering company while she was at school.

“I really enjoyed working in this environment,” she said. “I was impressed by the diversity of activities within an engineering organisation, as I had the opportunity to experience product development and research; putting in place a quality system; supporting and optimising work on the assembly line. This experience encouraged me to study manufacturing engineering and business studies at Birmingham University.”

Following a vacation job at Stanlow refinery after the second year of her course, Shell sponsored Victoria for her career within Shell.

Following this she undertook a mixture of strategy / portfolio and general management roles in Shell in the Chemicals, LPG and Commercial Fuels and Bitumen business sectors.

“These roles could all be classified as ‘business’, however given the nature of the hydrocarbon business, they have always required technical competence and my engineering background has been drawn upon heavily,” she said. “Most recently, my roles have included being the general manager of an autogas business in the Netherlands and Belgium, based in Amsterdam. This involved leading the project to design and implement the processes and organisation to form a Global Commercial Fuels and Bitumen business. Then, within this new global organisation, I have taken on the role as general manager.”

Victoria sees good prospects to further her career within Shell.

“Shell uses a system of Open Resourcing, an internal job market, whereby in conjunction with your line manager, you can view roles that might be suitable for your onward progression,” said Victoria.

“I only moved into my current role six months ago and am looking to delivering consistently over some time and building my team to respond to the business challenges, before even considering where to go next. Eventually I would like to become Vice President for one of the Global Businesses.”

Working in a male dominated business has not proved a disadvantage.

“There are many customer and industry events that I attend, where I am the only woman present. My view is that whatever the business sector you are involved in, if you prove yourself and deliver above expectations, you gain credibility. My career to date has been challenging and this would be the case regardless of gender.

“My career has been challenging and this would be the case regardless of gender.”

“Although I have not had an official mentor I have been fortunate to work with many peers and managers, who have taken the interest and time to coach me. This is one of many reasons that I enjoy working for Shell. There is a general desire in the organisation to help others succeed and a great deal of satisfaction is reapplied when others do well. I am currently a mentor for two female Shell staff.”

The recognition of her achievements by being included on the Management Today 35 under 35 best of British Female Talent list, Victoria sees as incredibly flattering in view of the sheer quality of the other women on the list. But also “it is visible recognition for the many individuals that have confidence in me, coached and supported me over the years.”

Victoria lives with her partner, Alastair, in London. She believes that maintaining a clear delineation between work and private life is important.

“Due to my geographic responsibility, the main challenge is business travel, however I travel back home in the evening as much as possible. Furthermore I try to, and encourage others to schedule activities, where it is necessary for staff to travel, in mid-week to avoid cutting into weekends. Meetings are scheduled to finish early so travel is during work time, enabling parents to be available for the school pick-up.

Sometimes my work-life balance slips out of kilter. This is promptly recognised by family and friends so I can realign it quickly.”

In her leisure time she enjoys horseracing (she is in an ownership syndicate), exotic travel ‘of the back packing variety’ and hiking; fine food and wine.

“My pet project is a major renovation and refurbishment of a rundown flat – which takes a large proportion of my spare time currently. If I had the time, I would like to further my ambition to a fiction writer. I have many ideas and storylines, it is just getting the time to put pen to paper over a sustained period.”

She would encourage other young women who wish to pursue a similar business career to study engineering.

“The skills that an engineering degree and work experience provided me in terms of analytical capability, structured problem solving, systems thinking as well as statistics, operational research have proved useful time and time again and provided me an excellent ‘leg up’. That is the great thing about engineering – skills and competences that are built up are applicable in other branches of both business and even personal life.”
Graham Yemm provides

some useful tips on public speaking

“A confident presentation – Claire Davies presents last year’s Daphne Jackson lecture.”

Callie, one of the founding partners of Solutions 4 Training Ltd and a member of The Professional Speakers’ Association. He is a Master Practitioner of Neuro-Linguistic Programming (NLP) and was involved with setting up and running “The Business Group”, which promotes uses of NLP in organisations.

“Graham Yemm is one of the up and running ‘The Professional Speakers’ Association. He is a Master Practitioner of Business Group”, which promotes uses of NLP in organisations. Graham Yemm is one of the founding partners of Solutions 4 Training Ltd and a member of The Professional Speakers’ Association. He is a Master Practitioner of Neuro-Linguistic Programming (NLP) and was involved with setting up and running “The Business Group”, which promotes uses of NLP in organisations.

“Presentation paranoia – prevention and cure”

“Begin at the beginning and go on until you come to the end, then stop.” (Lewis Carroll)

Handle your nerves by realising it’s OK to have them as they trigger a chemical reaction which, harnessed properly, will help make your presentation a success. The trick is to use them to your advantage and not let them take over.

Visualisation – Visualise giving your presentation and see it going well, you in control of the room and the audience. Experience yourself nervous presenters are fine with the middle, but let themselves down with the front and back – and often lose the potential impact because of this. Work out how you want to summarise and then close. If all else fails, use the basic rule: Tell ‘em what you’re going to tell ‘em, tell ‘em and tell ‘em what you told ‘em.

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Graham Yemm is one of the up and running ‘The Professional Speakers’ Association. He is a Master Practitioner of Business Group”, which promotes uses of NLP in organisations. Graham Yemm is one of the founding partners of Solutions 4 Training Ltd and a member of The Professional Speakers’ Association. He is a Master Practitioner of Neuro-Linguistic Programming (NLP) and was involved with setting up and running “The Business Group”, which promotes uses of NLP in organisations.
Being part of the INSIGHT course for one week in Brunel University was one of the best experiences that I’ve ever had. I was informed about this engineering course by my physics teachers. This was the best opportunity for my friend and I to find out about mechanical engineering and also experience university life.

After applying for this course we received a lot of information about it. This course was for one week at the end of the school term, so we only missed one week of school, but we learned a lot of things and we had so much fun. It was a really good experience.

Harmonious gathering

On the first day of the course we met all the girls, who came to do the course with us, from different places, but with similar interests to our own. We were welcomed with a presentation by the SEMTA representatives, and the group leaders. We were also told about a project that we were supposed to do during the week.

Our task was to develop a ten-minute lecture to students. The title of our talk was about “The mechanics and physics of harmonic motion”. In our presentation we had to demonstrate the operation of three different harmonic motion systems. One of these had to be a simple pendulum, another one had to be a double pendulum and the third one was our own choice.

After settling down and finding our rooms, we had a group photograph (see opposite page).

Then we divided into six groups for our project and each group had a leader. We did some exciting experiments on the first day. We learned about the business of engineering a product and the marketing mix, which is about getting the optimum balance right between all elements that affect whether or not customers buy from you.

We also saw the racing cars that the Brunel students built (see the picture shown opposite of the car which is taken from the website www.brunelracing.co.uk/cars/br6.html). At the end of the day we all gathered with our new friends and talked about ourselves and our experiences.

The project

On the second day of the week, we started our project. We had some simple equipment to use for our experiment. After spending some time on our project brief, we were again divided into different groups. This time we were going to make a rotor. We all had to make the same thing, with the same size and weight, but with different shapes and ability.

The WES INSIGHT essay competition

Following the success of this competition on two previous occasions, WES again teamed up with SEMTA and challenged students attending the 2004 INSIGHT courses to write an essay about their INSIGHT experience.

Unfortunately there were fewer entries than in previous years but the essays still reflected the wide range of technical challenges, teamwork and fun that INSIGHT courses have to offer all the girls who take part.

The essays were judged by INSIGHT organiser Angela Townsend and WES Vice President Karen Quigley.

The winners

**Winner:** Tahereh Mohammadi from Ickenham attended a course at Brunel University. Tahereh wins £120, a year’s free WES membership and has her essay published here.

**Second:** Rachel Jenkins and Jennifer Sisley, both from Hampshire, submitted a very original joint entry – they managed to convey the week’s events entirely in verse. According to their introductory notes, the essay can be sung to the tune of ‘Old MacDonald Had A Farm’. They share the £80 prize but both receive a year’s free WES membership.

**Third:** Rosemary Anthony from Norfolk won £50 and a year’s free WES membership for writing about her experiences on the Brunel course.

Our thanks go to SEMTA for providing the cash prizes.

**INSIGHT courses**

The INSIGHT courses are run by SEMTA through their ECIS (Engineering Careers Information Service). INSIGHT offers sixth form students the chance to spend a week at a UK university, learning about different fields of engineering whilst living together in student accommodation. INSIGHT is unique in that the courses are for girls only.

The first course was held at Loughborough in 1979 and the scheme has grown ever since, with a number of UK universities taking part with occasional collaborative courses within mainland Europe. All INSIGHT courses follow a particular framework. Each course has a day in industry, lots of hands-on activities, team challenges, lectures and social events. The courses are funded by the universities themselves with sponsorship from SEMTA; the students pay only a minimal sum to cover food and accommodation.

**WES involvement**

Many WES members had their first taste of engineering through an INSIGHT course and are happy to return the favour by volunteering to help. One of the key ingredients of the courses is the enthusiastic involvement of many female engineers who act as leaders and can talk to the students about their own work and study experiences. For example at Brunel, former WES President Petra Godwin is heavily involved with organising the INSIGHT week and WES member Helen Wagner has acted as a leader there for the past few years.

If you would like to help with future courses or if your company would be able to arrange a visit for a group of INSIGHT students, then please contact Angela Townsend directly by e-mail attownsend@semta.org.uk or telephone 01923 652 309.

Potential INSIGHT students can gain more information about the courses by visiting http://www.engineuity.co.uk/ and looking at the section marked INSIGHT. Alternatively they can contact the ECIS by telephone 0800 282 167 or e-mail ecis@semta.org.uk.

Karen Quigley
We were told what to do, how to do it and we were given all the equipment we needed. Basically we had to construct a balsa wood model of the rotor we designed. Our finished model was going to be tested in the centrifuge machine to determine the performance of the rotor and therefore the success of our design.

We really enjoyed doing this experiment. In the afternoon we did another exciting experiment. This time we were supposed to use a logic simulator and verify a stopwatch circuit.

We had to make a circuit on the computer first and then we made our own model. At the end of the day, after a barbecue dinner, we got to do something more exciting, salsa dancing. We had a dance teacher. It was really fun.

"Now I know that engineering is about creativity and skills"

Industrial visits

On the third day, we did something different, visiting various companies. Our group went to visit the National Grid Company. We learned a lot of things about electricity.

We learned how it is made and transmitted. We discovered that this company is like an electrical motorway running throughout England and Wales. A network of overhead lines, underground cables and substations link the power stations to meet the demand at any time.

That industrial visit made me think about electricity. At first I didn’t know what this company did, but now I really know (see www.nationalgrid.com/uk).

When we came back from the company, we had some time to spend with our friends. After dinner we had a quiz night, which was really interesting.

Sampling university life

On the fourth day of the course, all the groups gathered together, and then we all explained to each other what we had learned from our company visits. We then worked on our project.

In the afternoon we visited the mechanical department, electrical and computing department of the university. We saw some other products that the students had made. At the end of the day we had a conference reception and silver service dinner. We got to talk to some of the university students about their university life.

Looking to the future

On the last day of the INSIGHT course we went to a career fair. We got lots of useful advice about our future careers. Also we finished our project.

We were filmed during our presentation. The group with the best project got a nice prize.

After the prize giving, we all got our certificate for attending this course.

It was then time to say goodbye to our friends and the people who were with us all this time helping us.

Before doing the INSIGHT course I barely knew anything about engineering but now I know that engineering is about creativity and skills and it’s everywhere. I still haven’t changed my mind about doing civil engineering, but I know I’m going to need what I discovered from this experience soon.