

## North West Engineering Excellence Awards Dinner

In association with the IMechE and IET branches of the North West, the first annual Engineering Excellence Dinner was held on the 31<sup>st</sup> of March 2017 at the Hilton hotel in Manchester City Centre to great success. Fifty members of the IChemE attended the awards dinner out of a total of three hundred and fifty, culminating in a successful night of networking and entertainment.

With over three thousand members of the IChemE, the North West geographic region is the largest in the UK with a large concentration of professionals in a variety of industries and three

key universities. With certain appetite for a regional dinner, the NW branch was thinking bigger to ensure that the event was one to remember culminating in cooperation with two key engineering institutions in the NW.



Entertainment on the night was covered by Sweet Rhythm Big Band, an established 15-piece big band playing a variety of music from the "Great American Songbook". Table entertainment was also provided with an award for the winning table. Raffle prizes on the night included a variety of bottled drinks and spirits, in addition to an Afternoon Tea for Two at the Hilton, a RedR two hour team challenge, Cherry's Model Engineering by David Carpenter and the highly prized Hub-san Quadcopter Drone with camera.



ond iteration of the dinner, with the aim of incorporating additional institutions to the event.

If you wish to join Engineering Excellence Awards Dinner for 2018 committee please email [nwmgcem@ichememember.org](mailto:nwmgcem@ichememember.org).



From its inception in September 2016, members of the Engineering Excellence Awards Dinner committee have been meeting regularly to organize the event with three key engineering institutions in mind. A key strength of the event was tailoring to a wide range of engineering backgrounds, promoting joint institution cooperation at grassroots level. Attendees on the evening were based on tables purchased by organizations including BakerHicks and DATS Recruitment Consultants or general IChemE members from purchasing tickets. The event was sponsored by Sellafield Ltd.

The event included a drinks reception followed by a 4 course dinner, awards ceremony guest speaker and music until late, with ample opportunity to network amongst friends and colleagues in the Deansgate Suite.

The speaker on the night was Martin McCann, the CEO of RedR, an organization that utilises engineers a raffle was held on the evening with all the proceed of £1450.90 donated to RedR. Martin inspired the audience describing the work that RedR carries out in helping provide engineers and technologists for life saving relief in the many areas of the world impacted by disaster. RedR UK is an international charity with a strong affinity with the engineering sector, founded in 1980 as the Register of Engineers for Disaster Relief. RedR provides training and support to humanitarian workers across the globe.



The event was attended by IChemE CEO Jonathan Seville and John Pritchard, who delivered the awards for the evening. The IChemE winner of the night for the category of Young Chemical Engineer of the Year was Prabhuraj Balakrishnan of the University of Manchester, based on his pioneering work with

Graphene as part of a research group. In the category of University Chemical Engineering Design Project of the Year was Harry Small of Chester University, who was highly commended by his supervisor. Both winners on the night were voted for by the committee out of a total of three set of finalists in both categories covering the North West region's organizations and universities.

Martin McCann CEO of Redr stated : "On behalf of RedR and the beneficiaries of our work across the world, I would like to express my sincere thanks to the IMechE, IChemE and IET for supporting RedR at the North West Engineering Excellence Awards. The collection was a great success and raised £1450.90. This amount will enable use to sustain and further develop our life-saving training of aid workers."

Organization has already begun for the sec-

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## 73rd Annual General Meeting

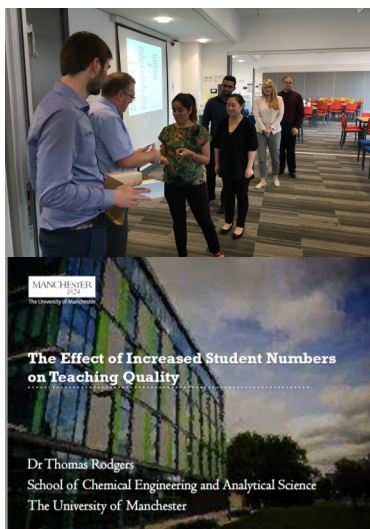
The 73rd Annual General Meeting of the North West IChemE Branch was held on the 20<sup>th</sup> of July and was hosted at the school of chemical engineering at the University of Manchester.

Dr Tom Rodgers, Lecturer at the University, was speaker at the event and delivered a presentation titled "The Effect of Increased Student Numbers on the Quality of Teaching" and was well received by attendees.

Commemorative pens were handed out to the newly chartered members MIChemE and Fellows (FIChemE) within the North West branch by the chair. The Webmaster, Mentor Co-ordinator and Vice Chair were elected into their positions over the past 12 months.

The positions of Secretary and

Diversity & Inclusion Officer are now vacant and interested current committee members will vote for new replacements of these roles. Student Representative Roles are also vacant.



Name	Position
Alex Allen	Chairman
Wadoud Hazineh	Vice Chairman
Vacant	Secretary
Adil Farooq	School's Liaison
Milton Avila	Webmaster
Sam Haig	Treasurer
Shabir Hussain	Mentor Co-ordinator
James Winterburn	University Representative
Kirsty Donovan	Social Secretary
Anthony Greenough	NW Branch Committee Member
Vacant	Diversity and Inclusion
Vacant	Student Representative
Vacant	Student Representative

*If you are interested in joining the committee please email:*

[nwmgecm@ichememember.org](mailto:nwmgecm@ichememember.org)

## Science Industry Process Plant Engineer Degree Apprenticeship

Ground breaking approach to delivering Chemical/ Process Engineering Degree Apprenticeships in the North West

Bill Harper, IChemE Vice-President (Qualifications)

Many involved in the Process Industries will have been encouraged by news of the UK Government's Apprentice Reforms and the refocus onto vocational routes towards entry into the sector.

Those above a certain age will indeed consider this to be simply a return to the situation some 30-35 years ago where apprentice and college based routes were indeed common place.

If done well, this development has the potential to open up valuable employment opportunities to a diverse population.

The imposition of a substantial levy onto companies has also focussed the minds of all organi-

sations as to the how to recoup the money.

It is however daunting to many individuals and their employers as to how process engineering apprenticeships will work in terms of dove-tailing in accredited academic qualifications, getting enough demand to make courses viable and even remembering what trainees would do in the workplace.

A unique initiative involving close collaboration between Chester University, TTE, Cogent and IChemE has been established to provide a basis on which North West based Process Organisations can be provided with a "one-stop" shop which will tackle these entry barriers.

We have enough companies expressing an interest to have allowed us to push ahead towards a launch of a degree apprenticeship programme from September 2018.

If you want to know more please register to come along to Thornton Science Park, Pool Lane, Ince, Chester CH2 4NU on Wednesday 4th October 2017, starting at 09:30. There is absolutely no obligation to proceed at this stage. To register please email Steve Wilkinson [s.j.wilkinson@chester.ac.uk](mailto:s.j.wilkinson@chester.ac.uk), the Head of the Chemical Engineering Department at Chester.

*Did you know that 31% of the NW branch members are Associate Members?*

## APM JOINT EVENT

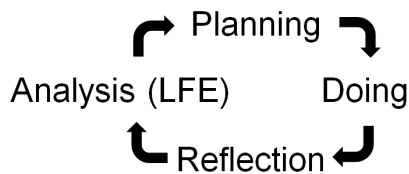
In collaboration with the Association of Project Management (APM), a joint event was held on the 3rd of May on the topic of lessons learnt from the relocation of the AstraZeneca offices from Macclesfield to Cambridge. The event was well organized and future collaboration with other institutions is proving fruitful for the region.



**Cogent skills**  
for science industries

## Chartered Engineers and SMEs

Small and medium enterprises (SMEs) are typically characterised by a relatively small number of employees (5-250) with a turnover of less than £25million per annum. For engineering SMEs specifically, broad engineering knowledge will be required in addition to good multitasking skills. Big firms offer prestige – and top starting salaries – but small and medium-sized enterprises (SMEs) can often give a young engineer a much broader engineering experience. Engineers in SMEs typically have greater responsibility than their peers in larger organizations and time is limited to devoting extra effort on accreditation that they might not need. Chartership, however offers a level above the rest and is especially useful in smaller network



to rise above their peers. Chartered engineers are akin to experts in their fields and the title of CEng is linked to technical expertise and trust of the person who has completed a self-led activity as part of their Continuous Professional Development (CPD) cycle.

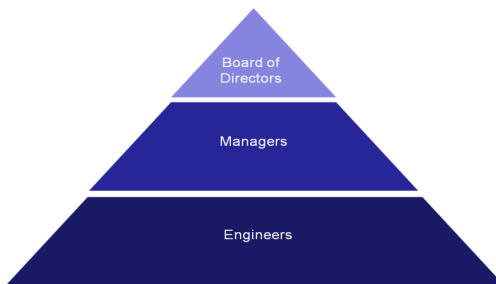
Whilst a substantial proportion of the IChemE North West member group work with large multinational companies, an even greater number work at SMEs. At time of publication, around a thousand engineers within the group are Associate Members (AMIChemE) with a path towards reaching chartered status- this includes SMEs in addition to larger organizations.

It is especially difficult for young engineers working at SMEs to work towards becoming chartered without the guidance of senior engineers in the same organization- whether this is with the IChemE or another institute. The situation sometimes is that there is no understanding of what a Chartered engineer is or what benefits this can bring to the table. Budget constraints for smaller organizations can also play a role, where time spent on professional body activities and training is slashed to a minimum.

The benefits for the organizations for CPD in general include the demonstration of on-going and increase in competence of workforce and the demonstration of a strong culture of self-led development based on needs analysis. Specifically, chartered engineers in the workforce provide good advertisement for a well trained and competent organization with technical expertise. Ultimately, the technical value and standards of the engineers will be greater.

Working at small organizations may be daunting, especially in situations where there may be engineers of variable experience backgrounds, this situation should be taken as an advantage where new skills can be learnt across the board, whether this is technical or business oriented. SMEs are also typically burdened by lower resource allocation and can therefore only focus on the requirement for growing the business in reputation and knowledge. The challenges faced by these organizations can offer a plethora of learning and development of young engineers.

For young engineers working towards being chartered, the first step is to indicate to the employer what the benefits of chartership are with respect to advertisement and organization's worth. Engaging and networking with other engineers at the same or other organization will be useful to gauge similar challenges and overcome them in the process. Self-motivation is an important point, in addition to the demonstration of dedication and continual improvement of skills to the organiza-



tion.

Aspiring young engineers may find the path difficult, but must remember that experience IChemE members volunteer their time as mentors to assist young professionals in attaining their goals. Whilst it will not be an easy path, experienced IChemE member mentors volunteer their time for assisting young professionals in attaining their goals.

Even with tight budgets and time constraints, organizations can help engineers get chartered in a variety of ways. If a training budget is available, attending relevant training courses is very valuable for career development. If a budget is not available, allowing the engineer time to attend online seminars and events during or after working hours would be very beneficial too. Hosting an event after working hours that assists in networking and professional development may be valuable to the engineer and to the image of the organization- even if this is only for venue availability. Assisting in "on-the-job" training skills outside the scope of chemical engineering will also widen the skill horizon of the organization.

The emphasis on networking for young engineers starting their career cannot be overstated- this vehicle not only builds communication skills but also acts as an acid test for comparison with oth-

er professionals at the same career level. This can be conducted in local IChemE committee meetings and events, in addition to attending online seminars and utilising social networking websites and forums such as LinkedIn.

Finally, it must be reiterated that there is no "one-size fits" all for SMEs and engineers, due to the wide differences between them. Industries vary and organizational cultures do so even more. Self motivation is important and requires dedication from the engineer but also understanding the limit of the organization and being realistic. Fixed period planning of self-development is necessary and so are fixed term goals.

The mentor co-ordinator for the NW group continuously manages an updated list of mentors with mentees and has acted as a helpful connection for both.

If you are interested in finding a mentor or becoming one, please email [nwmgecm@ichememember.org](mailto:nwmgecm@ichememember.org) for further details.

## NORTH LANCASHIRE UPDATE

The North Lancashire Member Group (NLMG) held five open meetings over the period October 2016 to March 2017. A varied programme which was well-attended, judged as providing satisfactory level of interest, reflected in attendances and lively audience participation.

The events held over this period included: "Too many Reactor Designs; which Gen IV systems will survive?", "The Science and Applications of Nuclear Magnetic Resonance and the Imaging and Analysis Techniques", "The RAF in Cumbria, South Galloway and North Lancashire during the period 1939 to 1945", "Endangered Species need help and Protection. Call for Forensics!", "The December 2015 Flooding in Cumbria and North Lancashire"

Looking forward for the near future, speakers are being approached for the next session, with a full programme is anticipated. The group is still on the lookout for young colleagues interested in providing assistance with the running of the group.

For information on how to join the group, including help organise events and talks please contact Peter Macalpine at [pmacalpine@sky.com](mailto:pmacalpine@sky.com)



## ICHEME NORTH WEST GROUP NEWSLETTER

### CUMBRIA BRANCH UPDATE

The Cumbria Members Group have enjoyed a busy spring and summer of events. The most active demographic group in our area are younger engineers working towards achieving Chartership – this means we try to tailor our events towards this group, and we have been lucky to receive some really positive feedback on our approach.



Jon Prichard (IChemE Chief Executive Officer) visited the areas in June and the Cumbria Members Group hosted a working lunch. Our committee found it useful to discuss our challenges with Jon and appreciated his words of thanks for our volunteering efforts.

We held a summer social event at a local coffee shop in July, with a particular focus on the science of coffee. Those who attended enjoyed learning more about coffee and the different brew methods – we tasted the same coffee beans made using four different techniques, including coffee cocktails. It was also a good opportunity for some of the new Chemical Engineers in the area to come along and meet the wider community.

For more information please contact Toby Cushion at: [cumbria-chair@icchemember.org](mailto:cumbria-chair@icchemember.org)

### MANCHESTER BRANCH UPDATE

Following a committee reinvigoration in 2015, the Manchester Members Group has been very active, covering the needs of over 1500 local members. With regular meetings in Cheadle, the committee meet regularly and have organized social events including a tour of the Robinson Brewery, a Christmas Social and a tour of the University of Manchester Pilot Plan. Several technical talks have been held covering aspects such as “Get Chartered” or “Plant Layout Talk”, with events generally hosted at the University of Manchester.

All hosted events were well attended by a broad spectrum of people across the geographic area. Future events include a visit to the Buxton Cement Works, a repeat of the Robinson Brewery Tour and Christmas Social.

For more information please contact Martin Hyde at: [Martin.Hyde@ghd.com](mailto:Martin.Hyde@ghd.com)

### WARRINGTON AND WIDNES UPDATE

The Warrington & Widnes Group after a successful season of organising talks is currently having our annual summer break and will be back in earnest in September. The talks organised over the last season including, “integrated approach to assessing cumulative risk” and “how the HSE works” were very well attended and we wish to thank our speakers and all those who attended.

Next season promises to be equally successful, we aim to continue to organise technical talks, with potential topics being, “Climate Change – Where Do We Go From Here” and “Safety Valve Sizing and Selection”. In addition to this, we are organising a tour of Fiddler’s Ferry Power Station in Sep-

tember and will continue to publicise interesting events by other institutions. We wish everyone a wonderful summer and look forward to meeting members and local chemical engineers in the coming season.

For more information please contact Phil Egan at: [philegan2000@hotmail.com](mailto:philegan2000@hotmail.com)



### CHESTER BRANCH UPDATE

The Chester and North Wales Member Group had an active period where it organised various technical visits, including those to the School of Applied Science, Computing & Engineering at Wrexham Glyndwr University on the 16<sup>th</sup> of May, and the more recent combined trip to Biffa’s “Energy from Landfill Gas” site at Risley, followed by Clark Energy’s facilities at Knowsley.

The Group also ran a series of lectures, in collaboration with the University of Chester’s STEM Society, and, on occasion, with other PEIs such as the IMechE, IET, IOP and RAeS. For example, in June, a talk on a novel process for the recycling of waste plastic was given by Matt Green, from Swindon-based spin-out company Recycling Technologies. After that talk the group were pleased to entertain Jonathan Seville, president of the IChemE, Ken Rivers, IChemE Treasurer and the speaker, Matt Green, over dinner. The occasion allowed a number of students from the University of Chester’s STEM Society committee to discuss various approaches to the tutoring of new chemical engineering students, with the assembled chemical engineers. The students wished to probe what else could be done to truly prepare them for the world of work. The group expresses its thanks to the venues for their kind sponsorship, and also to the speakers for giving their time and expertise, hence making the series of talks possible.

On the 9<sup>th</sup> of May the group held a committee meeting at the Black Dog in Chester.



## ICHEME NORTH WEST GROUP NEWSLETTER

### STUDENT IN INDUSTRY UPDATE— BY KHOR EUGENE

#### BACKGROUND

-Studying MEng Chemical Engineering with industrial Experience in The university of Manchester

-Born and raised in Malaysia

Working in Valero Energy Corporation from July 2017 to July 2018

It has been slightly more than a month since I have been in Valero as a year in industry student. Being here for just a relatively short period so far, I am confident that my overall views on the role would change throughout the course of my placement. Overall, my angle on the start of my placement is a positive one, including many instances where the difference between university life and work life is striking. No doubt, the most obvious change would be the hours of commitment!

The transition from a student to this “real” experience was new and to some extent abrupt. For instance, my priority is no longer to only myself, but also to the company. A big difference, and advantage in my opinion, is that learning tends to be a more open process in the industry. While I am allocated a rather specific role, I am also acknowledged as a student and I am encouraged to expand my knowledge to other roles. This seems to apply even to the more seasoned engineers.

Unlike university, where the syllabus is set and in some modules it is essential to memorise long lists of facts to pass an exam, in the industry I find myself focusing more on topics which I find useful to me in my role, and on the other hand topics which I find interesting myself. Of course, some things I learnt in industry also include such long lists of facts to be memorised but they are immediately applied to what I am doing and in most cases are essential in doing the job.

As an example, for my role in Advanced Process Control, in order to build a controller in a multivariable process control and optimisation tool (the DMC – Dynamic Matrix Control), it is essential for me to understand the types of control loop modes, tuning parameters and process dynamics.

While being in a particular role sounds very specific, the work I do is much more general. Of



course, being in the department physically means that my immediate work tends to be more department-specific (process control in my case), but I often, and also encouraged to, visit other engineers to obtain other jobs.

What strikes me as new is the work environment. The workplace and projects are not as constrained and stressful as those we expect and see in movies, but tend to be more casual. This is likely to depend on the project urgency, but frequently I am not rushed for a near deadline to complete something and there isn't that overly-strict supervisor who watches you every minute to make sure you are doing work. Learning for my own knowledge is something I could do whenever I want and at days I could spend half the work day only learning on a unit instead of doing work that would contribute to the company directly.

The company justifiably views such activities as personnel investment which would contribute ultimately to the company in the long run. This applies not only to me, but to the more seasoned

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employees. They would always have the time to answer any questions I have on any work related topics. There were days I would have asked an engineer over 10 questions and they would not hesitate to explain them to me and even go in-depth without me asking, unless they have a meeting. This greatly aided in my transition to the work environment.

Something worth noting about work in industry that I found unexpected is that the type of work I do is not exclusively engineering specific. I spend a fraction of my time working on reports on Key Performance Indicators and team progress, as well as updating them regularly. As a student, I found this immensely helpful, contrary to what one might think, as it gives me a much better insight into the overall performance of the refinery as well as the team. It helps me identify a target for me to look at as a student should I want to get involved in something useful to the company.

In addition to work, being part of a university course also means that I have certain university commitments. These requirements are less pressing than it sounds and has so far encouraged good habits for me as an engineer. One requirement would be to prepare an electronic logbook on a weekly basis as well as a skills portfolio including the engineering specific skills I have learnt. To meet this, I have developed a habit of making daily logs on what I have done,

what I have learnt as well as the projects I have worked on in order to prepare those reports easily in the future. But more personally, I am able to gauge myself on my own performance daily and plan my future days. If I see myself working too much on self-learning today, I would aim to apply this knowledge tomorrow in order to contribute to the company. It helps me strike a balance. The need to make a few thousand words dissertation as almost half the year's credits in university means that I would need a long term project to work on. This has driven me to actively talk to engineers and identify opportunities for me to be involved in something useful. As such, my experience so far has become varied and I feel such activities becoming second nature to me rather than something obligatory.

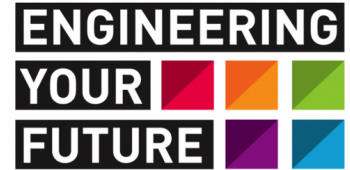


To end this, I would really encourage students to apply themselves into industrial placement courses. I believe a major deterrent to this choice would be the strict and restricted work life. While the problem of time commitment and early rising cannot be helped, work life is more relaxing and fun than one might expect. It provides a priceless experience and especially as a sandwich year for a university course, it supplies not only an early start for career seekers, but also a second chance for students to return to university for their final year and make life changing decisions, maybe even appreciate the comfort of student life more!

*Did you know that 10% of the NW branch members are Students?*



## ANNUAL NW PUB QUIZ



The annual North West Pub Quiz was held on the 13<sup>th</sup> of July 2017 with nine teams contending the title of the world famous event. The winners on the night was the team from Costain, who also ate their way through the prize hamper including some Tabasco sauce and chilli jam. The event was kindly sponsored by Morson International and was held in the Manchester city centre bar Veeno near the Town Hall.



Sponsored by:



## ENGINEERING YOUR FUTURE

On behalf of the North West Members Group, I am looking for presenters to take part in the Engineering Your Future events across the North West region. This is a series of one day events in which representatives from different engineering institutions (Mechanical, Civil, etc.) deliver a series of interactive presentations to 17-18 year old students to inform them about the different career opportunities available within engineering.

It is a full day commitment and you would be required to present about why you chose engineering, the route you took to get into engineering, type of work you do now etc. and run an interactive workshop for groups of 17-18 year old students. The presentations are 10 minutes followed by a 20 minute interactive activity followed by a 10 minute Q&A session. The interactive activity should ideally be related to your company / industry. This will be repeated for 5 different groups during the day.

Not only do these EYF events provide an extremely valuable insight into the exciting world of engineering for the students, they also acts as a valuable CPD element for the young presenters, and contributes to their company's CSR programme.

<http://www.northwest-engineering.org/what-is-engineering-your-future.html>

This is an excellent opportunity to enhance your CV and demonstrate commitment to supporting young people in STEM. For STEM Ambassadors this would also count as one of your volunteering activities.

Adil Farooq

Anyone interested in taking part or have any questions please email [adil.farooq@costain.com](mailto:adil.farooq@costain.com)

*Lookout for the Engineering Your Future events in Autumn / Winter 2017 near you!*

*If you are interested in joining the newsletter editing team or would like to publish an article or update please email:*

[nwmgcm@ichememember.org](mailto:nwmgcm@ichememember.org)

## UPCOMING EVENTS

Event	Date
Plant visit to Innovia, Wigton, Cumbria	11th September
Buxton Cement Works Visit	September
Fiddler Ferry Power Station Visit	September
An Integrated Approach to Assessing Cumulative Risk	October
University of Manchester School of Chemical Engineering and Analytical Science's Research Showcase	4th October
Process Engineering Apprenticeships at the University of Chester, Thornton Science Park	4th October
Robinson Brewery Tour, Manchester	October
How the HSE Works, Warrington and Widnes Branch	November
Pub Quiz, Cumbria	November
Cumbria MG AGM, Key note address by Jon Pritchard	9th November
Waste Recycling Visit to Axion plant, Manchester	Autumn
Christmas Meal, Manchester Branch	December
Get Chartered for Chester and Warrington and Widnes Groups	January