

# Annual Review 2017

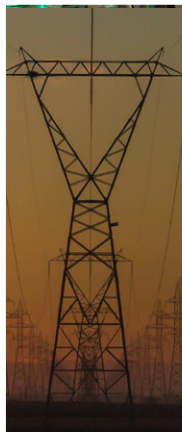
Incorporating the annual report and accounts  
of the Institution of Chemical Engineers



We are IChemE 



Led by members,  
supporting members,  
serving society



# Thriving in an exponential world

In my Presidential Address I focussed on the implications of the digital revolution for chemical engineers. Specifically, I talked about 'Generation C' – the generation that has grown up in the digital era, and consequently, expect their interactions with friends, educators, employers and policy-makers to be digitally enabled. I framed this concept as *Thriving in an Exponential World* because, as we experience in our daily life, the digital world is moving at an exponential rate.

The process industries are also confronting the challenge of adopting to, and thriving within, a digitally-enabled world. This was ably demonstrated at IChemE's *Advances in Process Automation and Control* conference in October. It's a sobering thought that before long, artificial intelligence, cognitive/self-learning, virtual reality and higher-level automation in process plants will become as commonplace as email.

Looking back on my presidential year, it's clear that both IChemE and our fellow institutions have more work to do in better understanding the impacts that our rapidly evolving world offers. How does IChemE thrive in this exponential world? One place we must start is by reshaping our engagement approach. Specifically, encouraging Generation C engineers to engage with, and support, both their profession and their Institution. This is a difficult ask if we remain stuck in a place that they don't recognise as relevant.

Prior to taking office, I had been working with my predecessor, Jonathan Seville, on a review of IChemE's governance. It became clear that we had to refresh and modernise the way IChemE gets things done in order to best support our strategy. This covered the critical concept of better engagement with our entire membership.

We were delighted when over 300 members invested time to share their detailed thoughts on our proposals to improve the Institution's accountability, transparency and effectiveness during a formal consultation. Even more valuable feedback was gathered during conversations with employers, universities and with individual members during a series of meetings and webinars.

Perhaps understandably, some members felt that the pace of change was not fast enough. This prompted the calling of an Extraordinary General Meeting which took place early in 2018, and although this review covers events in the 2017 calendar year, the outcome of that meeting has already been widely reported. I am grateful to all those who expressed their ongoing confidence in Council's leadership and the direction that our reforms are taking.

Now it is time to put the changes into place. We have listened to the ideas coming from the membership. Your suggestions have been examined in detail by Council and, following extensive discussion, a package of changes to our Charter and By-laws was published at the close of the year.

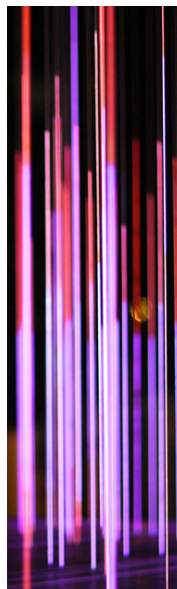
The proposals include a slimmed-down and more accountable Board of Trustees (which will replace the current Council), supported by a fully-democratic IChemE Congress of elected members. I trust that you will join me in voting in favour of these changes at the 2018 AGM.

This review describes the latest steps in IChemE's journey. We have a good story to tell and I am proud to have played a role. However, that journey is far from complete and like so much else in the world in which we live and work, the Institution is changing.

There is nothing wrong with change, provided it is in the right direction. In the pages that follow, you'll see how much we are doing to ensure future success and continued relevance.



John McGagh, FTSE FIChemE  
President





# Advancing professional standards

The good thing about being a newcomer, particularly to an organisation that is led by a diverse community of volunteers, is that people are quite eager to tell you what they really think. This was certainly my experience when I joined IChemE as Chief Executive in February.

I made it clear from the outset that I was in listening mode. Every interaction provided food for thought and I was impressed at the passion and enthusiasm shown by IChemE members. Desire for change was apparent in many quarters including amongst the members of Council. A process of governance reform and strategic repositioning was already underway at the time of my appointment and I welcome the opportunity to help deliver this work that will ensure continued relevance and support for members as they serve society.

By listening to the views of members in different parts of the world, I was able to align my own thinking with that of our volunteer leaders on how to take the Institution forward. *Strategy 2022* – our ambitions as we approach our 100th birthday – began to take shape. This process will continue to evolve as the impact of the governance reforms take hold in the year ahead.

I took on the Chief Executive's role after six years of leading the Engineering Council, the UK's registration authority for professional engineers. While I was there, my focus was on maintaining professional standards and the sharing of good practice across all parts of the engineering community. At IChemE, my priorities are no different. A professional engineering institution can achieve little without the wholehearted commitment of its qualified membership. This is much more than a numbers game and I firmly believe in ensuring that sustainable membership growth is delivered through members recognising the value that membership brings both to them and to wider society.

This review reports a fall in membership for the first time in several decades. There is no need to be concerned or surprised at this development. One of my first moves was to initiate a detailed review and rationalisation of IChemE's membership register. For example, we were operating international agreements with other bodies that were not delivering in line with expectation and so are being reshaped. Our administrative processes had allowed those in arrears to continue receiving reduced membership benefits for an excessive grace period in excess of two years. Such individuals are progressively being removed from the roll, and as we move forward, the numbers we report will offer a more accurate picture of the active IChemE community. In particular, you will see greater encouragement to each region to grow the number of professionally qualified chemical engineers within their area. This will demand improved and clearer pathways to the respective member grades and improved support for member volunteers.

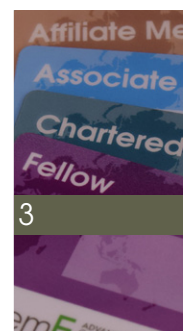
As the Institution approaches its centenary in 2022, alongside the good work that is being done in the qualifications space, I have also called for a renewed focus on IChemE's role as a learned society. We exist to advance the profession for the public good. We do this by qualifying members, encouraging them to maintain their competence and identifying and sharing good practice. We already deliver a number of internationally recognised activities in this sphere. 2017 saw technical events and activities across our regional footprint. This included members with the relevant expertise promoting knowledge and good practice in process safety, contract management, energy management and much else besides. Furthermore, we leveraged the expertise of our members with partners and policy-makers in a number of jurisdictions to raise the importance of chemical engineering and the profile of chemical engineers. We also continued to support and recognise professionalism and excellence, through accreditation, training and awards. In future, it would be fantastic to see our learned society activity embracing all corners of the profession in this way.

Sustainable financial performance is essential. After two years of reporting an operating loss, members will be pleased to note that this review reports an operating surplus for 2017.

IChemE is a great Institution with a strong reputation for professionalism. I am sure that you will wish to join me in seeing our profession continue to prosper. Thank you for your support during my first year in the Chief Executive's chair.



Jon Prichard  
Chief Executive



# A learned society with international reach

Sharing knowledge and good practice to advance chemical engineering worldwide



IChemE's Diversity and Inclusion Working Group publishes the report *Social Mobility and the Chemical Engineering Profession in the UK*.

**UK**



**MARY KAY O'CONNOR  
PROCESS SAFETY CENTER**  
TEXAS A&M ENGINEERING EXPERIMENT STATION

present the report *Process Safety for the 21st Century and Beyond*

**US**

**10th World Congress  
OF CHEMICAL  
ENGINEERING**

IChemE members and staff deliver speeches at the *10th World Congress of Chemical Engineering*

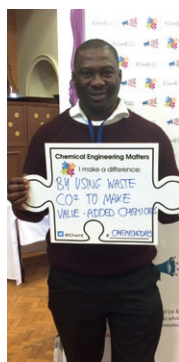
**Spain**



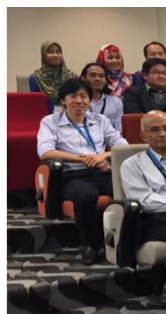
**UNIVERSITY OF  
PATRAS**  
ΠΑΝΗΠΕΡΙΣΜΟΣ ΠΑΤΡΑΣ

the first Greek university to achieve IChemE accreditation

**Greece**



**67** degree programmes accredited or re-accredited



**8** new training courses



**5** new online courses





hosts a side meeting at COP23  
**Germany**

Inaugural event **ICHEME**  
**Oman** Oman Members Group

ICHEME celebrates 100 years of palm oil industry  
**Malaysia**

ICHEME becomes a U-Associate of the National Trade Union Congress  
**Singapore**

University of Canterbury Emeritus Associate Professor John Abrahamson gives the Kennedy Wunsch lecture  
**New Zealand**

Dow Chemical CEO Andrew Liveris opens **Chemeca**  
**Australia**



A diverse range of international activities shaped our continued commitment to sharing knowledge and good practice in 2017.

The IChemE Safety Centre (ISC) attracted 18 new partners during the year, including BP and PETRONAS. In collaboration with the Mary Kay O'Connor Process Safety Center (MKOPSC), ISC also launched *Process Safety for the 21st Century and Beyond* at the 10th World Congress of Chemical Engineering in Barcelona, Spain, and at the annual MKOPSC 2017 International Symposium in Texas, US. The report examines current challenges in process safety and sets out the latest thinking from industry, academia and regulators.

The UK's academic and postgraduate community came together for the annual *ChemEngDayUK* at the University of Birmingham. 300 participants discussed new developments in research and teaching under the broad theme "Better Life, Better World".

In Malaysia, IChemE delivered the *Symposium of Malaysian Chemical Engineers (SOMChE)* for the first time – previous events have been hosted by various universities in Malaysia. The Institution also recognised a century of progress in the palm oil sector at a special event – *100 Years in the Palm Oil Industry: 50 Years of Process Engineering*. The meeting considered the importance of chemical and process engineering in the sustainable development of the world's second-largest palm oil producer.

Elsewhere in South East Asia, IChemE's Energy Centre led a workshop at the *World Engineers Summit* in Singapore. The workshop focussed on energy issues in the region and the role of chemical engineers in climate change mitigation. In October, IChemE became a U-Associate of the National Trade Union Congress of Singapore. The Institution joined a unique alliance of oil, petrochemical, energy and chemicals sector stakeholders to accredit and raise safety standards among Singapore's process technicians and engineers.

Significant enhancement was made to the Institution's university course accreditation documentation in August. The changes reflect the introduction of virtual accreditation panels (VAPs), new information on benchmarking, and arrangements for joint visits. Five new degree programmes received IChemE accreditation during the year: at Charles Darwin University in Australia's Northern Territory; Chester, Huddersfield and Hull in the UK; and the University of Patras – the first university programme in Greece to receive such recognition.

The Middle East also saw a new development with the appointment of Petroleum Development Oman's Henry Mangkusasono as an IChemE Senior Ambassador. Mangkusasono's role was confirmed at the inaugural meeting of IChemE's new Oman Member Group, which had over 150 attendees.

At the end of the year, IChemE's headline membership exceeded 42,000 in over 100 countries. This reflected a 4% year-on-year fall, shaped largely by the ending of the Affiliate Society agreement with COIQCV in Spain, and correcting anomalies within our South Africa membership list. 459 individuals were elected as Chartered Members in 2017. Overall, 30% of IChemE's membership was qualified – up from 28% in 2016.



**5** new universities receive degree programme accreditation

**85** Fellows elected  
**459** Chartered Chemical Engineers elected  
**1,416** Additional Associate Members



# Supporting our members

## Empowering committed professionals

IChemE's core purpose is to develop the next generation of chemical engineers and it relies upon its professional membership to do this.

In 2017, training and guidance materials for Chartered Membership, Accredited Company Training Schemes and university accreditation assessors and interviewers were reviewed and improved. Two new newsletters for the Professional Formation Forum and Education and Accreditation Forum were launched. Over 230 member-volunteers received individual training, with a further 500 volunteer professional review interviewers completing their online refresher training.

GHD, GlaxoSmithKline, and T Musk Engineering in the UK were awarded their first Accredited Company Training Schemes (ACTS). Amec Foster Wheeler, ExxonMobil, Lilly, and Process Systems Enterprise achieved Gold Corporate Partner status, with GHD, Jacobs Douwe Egberts, PM Group and Tarmac achieving Bronze.

After more than a decade of growth, and in line with other STEM subjects, applications to study chemical engineering in the UK fell by 12%. The undergraduate intake fell by 4%. Although, new chemical engineering programmes were introduced at Queen Mary University and at the University of Greenwich.

In May, leading motorsport analyst Mark Gallagher delivered the Trevor Kletz memorial lecture at *Hazards 27* in Birmingham, UK, drawing parallels between risk management in the world of motorsport and the process industries. The *Hazards* brand continues to grow internationally. Later in the year, the fourth *Hazards Asia Pacific* meeting saw hundreds of delegates hear from nine keynote speakers in Kuala Lumpur.

Roland Clift CBE delivered the George E Davis lecture in London in July. The 12th recipient of the George E Davis Medal, his lecture focussed on the role of chemical engineers in delivering a resource-efficient and more sustainable world.

Dow Chemical CEO Andrew Liveris gave the welcome address at *Chemeca – Australasia's* premier chemical engineering conference. The Chemeca Medal, the highest honour from the Australian and New Zealand Federation of Chemical Engineers, was presented to Judy Raper. Raper was the second female to receive the award since its establishment in 1982.

A record level of in-company training was delivered through IChemE's Australian operation during the year, including process safety training to remote parts of Western Australia and Indonesia.

New Zealand chemical engineer Aaron Low was awarded the 2017 Earle Travel Fellowship, providing funding to travel abroad and expand his knowledge and professional networks.

Madeleine Jones, a Chartered Chemical Engineer at Sellafeld, UK, was awarded the Women's Engineering Society's Karen Burt Award in recognition of her excellence and potential in engineering practice and her promotion of the engineering profession.

To improve services for members, digitalisation is a continued priority for IChemE. The IT team is developing a new content management system to deliver webservices that are smartphone ready. In September *The Chemical Engineer* magazine's website relaunched with this functionality.

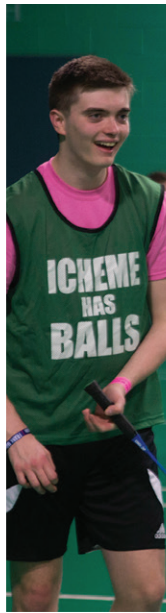
To improve back-office operations, all staff were migrated to Office 365, a cloud-based platform. Cloud storage, via One Drive, has now replaced individual hard-drives, improving resilience. More work on document control and storage is planned for 2018 as IChemE aims to become ISO:9001 certified by 2020.



New chemical engineering programmes at University of Greenwich and Queen Mary University



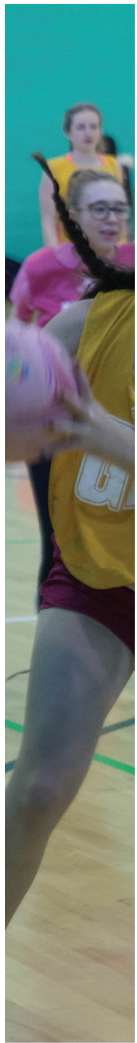




**150** delegates completed IChemE's updated HAZOP course

**200** complete new online training courses

Henry Kister's distillation training attracted **70** delegates from around the world



Brand new website for *The Chemical Engineer*

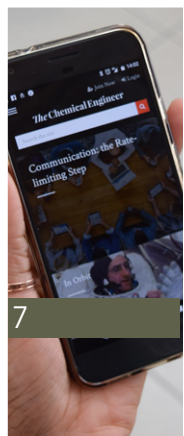
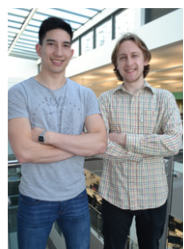
**The Chemical Engineer**

New in-house training for companies in

 **Belgium**

 **Canada**

 **Finland**





# A member-led institution

**202** member and special interest group events around the world



IChemE  
BioFutures



**33** student presentations at universities in Australia, Europe and South East Asia

## Enabling chemical engineers to serve society

IChemE members provide the voice of the profession, advancing knowledge of the discipline for the benefit of society.

IChemE co-ordinated the engineering community's input to the energy and clean growth section of a report on the UK government's Industrial Strategy Green Paper. Published by the Royal Academy of Engineering in April, the report, *Engineering an Economy that Works for All*, was produced on behalf of Engineering the Future, an alliance of 38 professional engineering bodies in the UK.

The Institution's contribution to the Future Climate – Engineering Solutions (FC-ES) alliance continued with a well-attended side meeting at COP23, the United Nations Climate Change Conference in Bonn, Germany. The event focussed on good practice in national energy planning.

In March, a group of early-career chemical engineers represented the profession at the Royal Society of Biology's *Voice of the Future* event in Westminster, where IChemE members cross-examined UK parliamentarians on science and technology policy issues.

Active engagement with the Royal Academy of Engineering's diversity concordat continued with participation in a sector-wide benchmarking exercise for diversity and inclusion. In July, the Institution's Diversity and Inclusion Working Group published *Social Mobility and the Chemical Engineering Profession in the UK*. The study examined the influence of social factors, including childhood household income on career progression.

IChemE's BioFutures work programme stepped up a gear with the establishment of four priority work strands:

careers; skills; SMEs; and policy challenges. Member-led groups will work to identify how the Institution can better engage with, and support, bio-chemical engineers.

Submissions for consideration by IChemE's learned journals increased by 9% in 2017. *Process Safety and Environmental Protection* saw its Impact Factor jump by 40% to 2.905 – the highest ever reported for an IChemE journal. *Chemical Engineering Research and Design* also saw continued growth.

The Institution's well-respected *Model Forms of Contract* welcomed a new addition to its multi-coloured stable with the arrival of *The Silver Book*. Drafted with performance-based projects in mind, the publication provides a professional services contract for global use.

IChemE and the Process Management & Control Special Interest Group delivered *Advances in Process Automation and Control* – a specialist conference on automation in the process industries, digitalisation, and Industry 4.0.

The Water Special Interest Group marked its 30th anniversary with a Young Process Engineer Prize, sponsored by Arup. Two University of Leeds postgraduates, Oliver Grasham and Robert White, received a prize of £1,000 for their work on energy-efficiency in wastewater treatment plants.

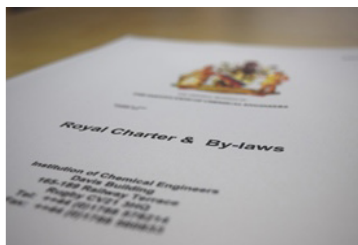
The legendary Frank Morton Sports Day reached new heights with over 2,000 competitors gathering at Loughborough University for a full day of athletic – and not so athletic – pursuits. IChemE was on hand to cheer on the students, with the team from the University of Birmingham taking top spot for the third consecutive year.



# Working together to serve society



300  
member  
responses



New 12-member Board of Trustees  
and Congress proposed



## Improving accountability, transparency and representation

Following a member consultation launched by IChemE President Jonathan Seville in December 2016, the Institution further consulted its members on options for governance reform in August and September 2017. Over 300 members committed their time to provide the Institution with their detailed opinions via an online survey and in one-to-one conversations. A report was prepared, and Council considered the findings in October. Strong support was evident for many of the proposals – including more transparency for electing honorary officers, switching from Council to a smaller Board of Trustees, introducing a Congress to be the voice of the membership and scrutinise the Board, and adopting a 'hub and spoke' approach to the Institution's international operations.

The pace of change was too slow for some and an Extraordinary General Meeting\* was called at the end of the year. This followed a motion of no-confidence in the Council that was submitted by 50 IChemE members in October. Council tabled an alternative motion restating confidence in its leadership and seeking approval for the ongoing programme of strategy and governance reform.

Key developments on the governance reform process were announced in December in advance of the Extraordinary General Meeting. This included proposals for a 12-member Board of Trustees to replace Council – with all posts open for nomination and election by the wider membership – and the creation of a new Congress that will operate in a virtual way. The proposed Congress would scrutinise the Board's decisions and act as an effective voice for members in all parts of the Institution. Work also started on the design of the 'hub and spoke' management structure – the new arrangements will deliver aligned self-sufficiency for the different parts of IChemE's international community.

Council will continue to engage and consult with members on proposed changes to governance in 2018. The proposals and related changes to the Institution's Charter and By-laws will be voted on, by members at the Annual General Meeting in May.

\* The Extraordinary General Meeting took place on 11 January 2018. Council's position received clear support from a majority of the voting members who took part.





# Awards



The IChemE Global Awards programme embraced 15 different categories in 2017 with entries from 25 countries. The Global Awards dinner and awards ceremony was held in Birmingham, UK, with national ceremonies held in Singapore and Kuala Lumpur, Malaysia.



## IChemE Global Awards 2017 in association with Johnson Matthey and Wood

Clean technology venture, Desolenator, took top honours with the *Outstanding Achievement in Chemical and Process Engineering Award*. The company's novel technology uses solar power to purify contaminated water and render it fit for human consumption. The project also won the *Water Award*.

[www.icheme.org/globalawards2017](http://www.icheme.org/globalawards2017)

## IChemE Malaysia Awards 2017

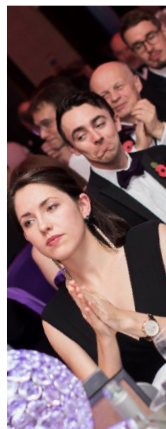
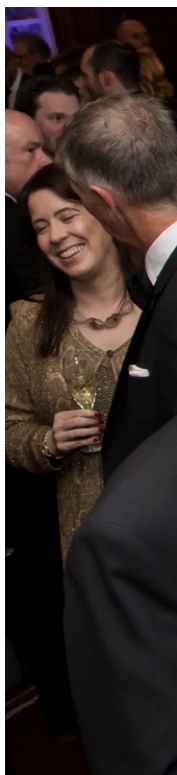
PETRONAS came out top in three out of seven categories, including the *Oil & Gas Award* for its collaborative project with the Dalian Institute of Chemical Physics to remove CO<sub>2</sub> from natural gas. The national oil and gas company's collaboration with specialist consultancy East 101, using process simulation technology to reduce corrosion under insulation, won the *Process Safety Award*.

[www.icheme.org/malaysiaawards2017](http://www.icheme.org/malaysiaawards2017)

## IChemE Singapore Awards 2017

The National University of Singapore won the *Energy Award* for its solar-hydrogen production project. Hu Yu, of Shell's Eastern Petroleum branch, took the trophy for the *Young Industrialist Award* category. Shell and the National University of Singapore also each received two runners up mentions.

[www.icheme.org/singaporeawards2017](http://www.icheme.org/singaporeawards2017)







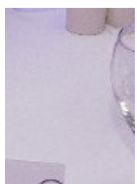
## National Honours

Three chemical engineers were awarded the Order of Australia. Max Lu, Vice-Chancellor and President of the University of Surrey, was awarded Officer in the General Division (AO). Ross McCann and Donald Hector were awarded Member in the General Division (AM).

Angela Strank, Head of Downstream Technology and BP Chief Scientist, was awarded Dame Commander (DBE) in the Queen's Birthday Honours. She was commended for her services to the oil and gas industry, and for encouraging women into science, technology, engineering and mathematics (STEM) careers.

## Ashok Kumar Fellowship

Postgraduate Erin Johnson, of Imperial College London, UK, was awarded the Ashok Kumar Fellowship 2017. During her three months working at the Parliamentary Office for Science and Technology (POST), she produced a parliamentary briefing note for MPs on the fire safety of building materials, in response to the Grenfell Tower fire.





# Medal winners

## Recognising outstanding achievement and excellence in chemical, biochemical and process engineering

The 2017 medal winners are listed below. Visit [www.icheme.org/medals](http://www.icheme.org/medals) for full details.

Ambassador Prize	Dr Clementine Chambon, Oojra Solutions/Imperial College London, UK
Andrew Medal	Professor Freek Kapteijn, Delft University of Technology, the Netherlands
Council Medal	Richard Cousins, BP, UK
Donald Medal	Professor Christopher Hewitt, University of Aston, UK
Frank Morton Medal	Professor Eva Sorensen, University College London, UK
Franklin Medal	Professor Henricus (Hans) Michels, Imperial College London, UK
Hanson Medal	John Bresland, Former Chair of the US Chemical Safety Board, USA
Hutchison Medal	Professor Grant Campbell, University of Huddersfield, UK Dr Daniel Belton, University of Huddersfield, UK
Junior Moulton Medal	Anna Patsioura, Université Paris-Saclay, France
Lees Medal	Alfonso Ibarreta, David Anderson, Michael Stern, Sean O'Hern, Timothy Myers, all of Exponet, US
Nicklin Medal	Dr Eloy Sanz-Perez, Universidad Rey Juan Carlos, Spain Dr Kyra Sedransk Campbell, Imperial College London, UK
Sargent Medal	Professor Robin Smith, University of Manchester, UK
Senior Moulton Medal	Milena Nadgorny, University of Melbourne, Australia Zeyun Xiao, University of Melbourne, Australia Luke Connal, University of Melbourne, Australia
Sharma Medal	Professor Geoffrey Hewitt, formerly Imperial College London, UK

Medals awarded in 2017 will be presented at various locations during 2018. Images show 2016 medal winners including Rob Best, Roland Clift, James Lister and Christina Phang.





# Governance and leadership

## IChemE Council Members

John McGagh President	Chief Digital Officer, Snowy Hydro, Australia
Jonathan Seville Immediate Past President	Professor of Chemical Engineering, University of Surrey, UK
Ken Rivers Deputy President/Honorary Treasurer	Chair, COMAH Strategic Forum, UK
Bill Harper Vice President – Qualifications	Technical Capability and Knowledge Manager, Sellafield, UK
Paul Ellis Vice President – International	Managing Director, Schaefer Kalk, Malaysia
Jon-Paul Sherlock Vice President – Technical	Head of Respiratory Intelligent Pharmaceuticals, AstraZeneca, UK (to 10 May)
David York Vice President – Technical	Professor, School of Chemical and Process Engineering, University of Leeds, UK (from 10 May)
Rose Amal Vice President – Australia	Scientia Professor and ARC Laureate Fellow, University of New South Wales, Australia
Lynn Gladden CBE	Shell Professor of Chemical Engineering, University of Cambridge, UK
Jarka Glassey	National Teaching Fellow, School of Engineering, Newcastle University, UK
Steve Harrow	Manager, Process Engineering, Amec Foster Wheeler, UK (to 10 May)
Iain Martin	Business Development and Incubator Director, Johnson Matthey, UK
Sean Moran	Managing Director, Expertise, UK (10 May–27 September)
Jane Atkinson Chair – IChemE UK Board	Director Specialist Services, Cape, UK
Abdul Aziz Abdul Raman Chair – IChemE Malaysia Board	Dean, Faculty of Engineering, University of Malaya, Malaysia
Allyson Black Australian representative	Strategy and M&A, Caltex Australia, Australia
David Platts New Zealand representative	Managing Director, PDV Consultants, New Zealand
Colin Webb UK representative	Professor of Chemical Engineering, University of Manchester, UK

## IChemE Senior Management Team (1 January–31 December 2017)

Jon Prichard	Chief Executive (from 30 January)
Justin Blades	Deputy Chief Executive/Chief Operating Officer Interim Chief Executive (to 30 January)
Neil Atkinson	Director, Qualifications and International Development (to 28 July)
Michael Cloke	Director, South East Asia
Jo Downham	Director, Finance and Business
Claudia Flavell-White	Director, Policy and Publications
Andrew Furlong	Director, Communications and Brand Development
Trish Kerin	Director, IChemE Safety Centre
David Lloyd-Roach	Acting Director Qualifications (from 28 July)
Peter Slane	Director, Australasia

# Financial results

After two years of cost reduction and a good return on investment, 2017 was a positive year financially for the Institution, ending ahead of budget. The Institution reported a net income of £560,000 in unrestricted funds – an increase from £431,000 in 2016.

This was due in part to learned society activity. Training course uptake showed signs of recovery, with increased delegate income. Journal sales saw continued growth. There was an increase in income to the Institution's

knowledge communities - which includes subscriptions to IChemE's Safety Centre and Special Interest Group activity.

After taking into account a transfer from restricted funds of £402,000, and actuarial gains on the defined benefit pension scheme of £253,000, the net movement in funds was £1,215,000. Therefore, the total balance carried forward was £2,384,000. The restricted fund balance carried forward at year end was £1,348,000.

## Consolidated statement of financial activities for the year ended 31 December 2017

	Unrestricted Funds £000	Restricted Funds £000	Total 2017 £000	Unrestricted Funds £000	Restricted Funds £000	Total 2016 £000
<b>INCOME</b>						
Donations & legacies	131	-	131	60	-	60
Charitable activities:						
Qualifying chemical engineers	3,765	-	3,765	3,735	-	3,735
Operating a learned society for chemical engineers	3,636	29	3,665	3,559	270	3,829
Other trading activities:						
Trading operations	212	-	212	236	-	236
Investments	101	-	101	73	21	94
<b>TOTAL INCOME</b>	<b>7,845</b>	<b>29</b>	<b>7,874</b>	<b>7,663</b>	<b>291</b>	<b>7,954</b>
<b>EXPENDITURE ON</b>						
Raising funds:						
Trading operations	(117)	-	(117)	(113)	-	(113)
Investment management costs	(68)	-	(68)	(58)	(17)	(75)
Charitable activities:						
Qualifying chemical engineers	(2,716)	-	(2,716)	(2,788)	-	(2,788)
Operating a learned society for chemical engineers	(4,631)	(271)	(4,902)	(4,712)	(403)	(5,115)
<b>TOTAL EXPENDITURE</b>	<b>(7,532)</b>	<b>(271)</b>	<b>(7,803)</b>	<b>(7,671)</b>	<b>(420)</b>	<b>(8,091)</b>
Net gains on investments	247	-	247	439	134	573
<b>NET INCOME / (EXPENDITURE)</b>	<b>560</b>	<b>(242)</b>	<b>318</b>	<b>431</b>	<b>5</b>	<b>436</b>
Transfer between funds	402	(402)	-	-	-	-
Actuarial gains/(losses) on defined benefit pension schemes	253	-	253	(3,059)	-	(3,059)
<b>NET MOVEMENT IN FUNDS</b>	<b>1,215</b>	<b>(644)</b>	<b>571</b>	<b>(2,628)</b>	<b>5</b>	<b>(2,623)</b>
Fund balances carried forward at 1 January	1,169	1,992	3,161	3,797	1,987	5,784
<b>FUND BALANCES CARRIED FORWARD AT 31 DECEMBER</b>	<b>2,384</b>	<b>1,348</b>	<b>3,732</b>	<b>1,169</b>	<b>1,992</b>	<b>3,161</b>

The results relate to the continuing activities of the Institution. The group has no recognised gains or losses other than the net movement in funds for the year.



## Balance sheets as of 31 December 2017

	Group		Charity	
	2017 £000	2016 £000	2017 £000	2016 £000
Fixed assets				
Tangible assets	1,057	1,138	1,041	1,119
Investments	6,825	6,545	6,825	6,545
	7,882	7,683	7,866	7,664
Current assets				
Debtors	1,198	1,163	1,172	1,162
Cash at bank and in hand	2,459	2,740	684	1,042
	3,657	3,903	1,856	2,204
Creditors: Amounts falling due within one year	(2,382)	(2,769)	(1,922)	(2,073)
Net current assets	1,275	1,134	(66)	131
Provisions for liabilities	(81)	(41)	(81)	(41)
	1,194	1,093	(147)	90
Pension scheme funding deficit	(5,344)	(5,615)	(5,344)	(5,615)
<b>Total net assets after pension deficit</b>	<b>3,732</b>	<b>3,161</b>	<b>2,375</b>	<b>2,139</b>
Income funds				
Fixed asset reserves	1,057	1,138	1,041	1,119
Free reserves	6,671	5,646	5,330	4,643
Pension reserves	(5,344)	(5,615)	(5,344)	(5,615)
Unrestricted funds	2,384	1,169	1,027	147
Restricted income funds	1,348	1,992	1,348	1,992
	3,732	3,161	2,375	2,139

These financial statements were approved by Council and authorised for issue on 12 April 2018.

### Council's statement on the summarised financial statements

These summarised financial statements are based on information extracted from the statutory Council's report and consolidated financial statements. They may not contain sufficient information to allow for a full understanding of the Institution's financial affairs. The full consolidated financial statements, the auditor's report on those consolidated financial statements, and the Council's report should be consulted.

Copies of these can be obtained from the finance department by email: [jdownham@icheme.org](mailto:jdownham@icheme.org) or [www.icheme.org/financial-statements](http://www.icheme.org/financial-statements)

On behalf of the Council:



Mr John McGagh  
President



Mr Ken J Rivers  
Honorary Treasurer

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