

Big names to line up for the Commercial Vehicle Show 2023



**D5** Q&A with SOE President John Eastman



06 Operational efficiency on the agenda at IRTE Northern Centre



Full steam ahead for exclusive Society webinars

# soeners soeners

THE QUARTERLY NEWSLETTER FOR SOE MEMBERS

SPRING 2023

**ISSUE 21** 

# Sector gets set for this year's IRTE Skills Challenge

lans are well underway for this year's IRTE Skills Challenge, with entries already coming in and sponsors lending their support to the industry's premier showcase of new technical talent.

Event partner S&B Automotive Academy, one of the country's leading providers of automotive training & assessment services, is once again backing the event and will be hosting it at its Bristol HQ.

The challenge sees the sector's engineering stars compete in a series of electrical, mechanical and bodywork challenges to find the best in bus & coach.

Knorr-Bremse, a major supplier of braking systems and other safety-critical rail and commercial vehicle equipment, has also come on board as the latest sponsor to back the Skills Challenge once again.

Carl Dibble, Training & Technical TL at Knorr-Bremse, said that supporting the annual event is the perfect way for the supplier to demonstrate its commitment to safety – and its commitment to today's and tomorrow's technicians and apprentices.



companies in the UK. We want to support them and we want to make sure they are maintaining our products to a high standard. That ensures safety for everybody working on the vehicles and obviously everyone using these vehicles."

S&B Operations Director Richard Belton, meanwhile, said that training & development is something that never stands still as employers of all sizes across the sector keep one eye on the future while keeping their business safely on the road today. Richard, who was awarded the Philip Margrave Memorial

### This is First Bus's Eugene Arbuzov.

Award for Outstanding Achievement in 2023, said: "We're all about developing talent and looking to the future – and that means investing in training as well as in existing and innovative technologies.

"Year after year, the Skills

Craig Perkins, Engineering Apprenticeship Manager at National Express and recipient of the IRTE Skills Challenge Master Technician award in 2023, said the competition is a must-attend for his teams.

He said: "The competition shows the level required to be at the top of your trade. Apprentices can see areas that they may need to develop, and for experienced engineers, it can also get your brain working on things you may not have seen for some time.

# FACTS & FIGURES

# 2,345

The total number of engineers and technicians who were professionally registered in the last three months of 2022

# 1,296

The total number of people who achieved CEng in Q4 2022

# 

# 293

The total number of people who achieved IEng in Q4 2022

# 694

The total number of people who achieved EngTech in Q4 2022

# 62

The total number of people who achieved ICTTech in Q4 2022

# 5,000

A total of 5,000 people were professionally registered during the second half of 2022 and around a third of those were technicians, achieving either EngTech or ICTTech registration. **Outgoing Engineering** Council CEO Alasdair Coates BEng (Hons) MSc CEng FICE MCIHT CMIOSH said: "Congratulations to every single person registered in 2022 on their achievement. We understand what a professional and personal milestone professional registration is. "Every professionally registered engineer and technician has chosen to have their competence independently assessed, setting them apart from their non-registered colleagues."

be future 2023, said the existing He said: "Th

He said: "We've always worked closely with the bus

Challenge showcases the technical talent that continues to emerge across the sector. We're delighted to be a partner for the event as we, too, are committed to training, developing and assessing the apprentices and technicians of the future."

"We've always worked closely with the bus companies in the UK. We want to support them and we want to make sure they are maintaining our products to a high standard"

Carl Dibble, Knorr-Bremse

"Also, being in the competition with other people from different companies allowed us to communicate about our different ways of working. It helps share knowledge and ideas which can improve you as a person and help the company you work for grow in the way it operates." Applications for this year's event are now open and the

event are now open and the Testing Week itself takes place at S&B's HQ in Bristol on 5-9 June.

# 

## **NEXT GEN MAKERS' SKILLS PROGRAMME** Next Gen Makers has

confirmed a range of companies have joined a programme over the past year to tackle the skills crisis facing UK manufacturing. The companies that have joined the Next **Gen Makers Best Practice** Programme include Collins Aerospace, Cummins, RBSL, Thyssenkrupp Materials, **Renishaw, and Sulzer. Next** Gen Makers launched the programme last year with MSC Industrial Supply to help engineering and manufacturing firms identify skills gaps within their organisation and improve the quality of their apprenticeship schemes. It has established a group of more than 50 engineering and manufacturing firms as part of its programme.

# **GO-AHEAD TO HIRE 1,020 APPRENTICES IN 2023**

The Go-Ahead Group has set a target of hiring 1,020 apprentices in 2023 to train as bus drivers, rail drivers and engineers. The intake will include 700 apprentice bus drivers for Go-Ahead London. Some 220 apprentice engineers and train drivers will be recruited by Govia Thameslink Railway, which operates Thameslink, Southern, Great Northern and Gatwick Express rail. A further 100 apprentices will work at Go-Ahead's regional bus companies and in head office roles in London and Newcastle.

## LOGISNEXT IN **UNICARRIERS** REBRAND

Logisnext UK has announced that its brand UniCarriers has now been replaced in the UK by Mitsubishi Forklift Trucks. Since the acquisition of UniCarriers Corporation in 2017, Mitsubishi Logisnext Group has applied the strategy of ensuring that all wholly-owned subsidiaries are taking Mitsubishi Forklift Trucks branded products to market in Europe. The project started in April 2021 and has reached completion with the UK subsidiary Logisnext UK rebranding on 1 January. The Mitsubishi Forklift Trucks brand has been available in the UK since the 1970s.

# Society passes SocEnv and EngC licence reviews with flying colours

he Society had the second of its mandatory Society of the **Environment (SocEnv)** Licence Review and Engineering **Council (EngC) Licence Review** towards the end of 2022 – and we passed with flying colours.

These are audits carried out by the industry's standards bodies to ensure that everything we do meets the requirements of our licence. In essence, they ensure that we are continuing to provide a quality service to our members seeking registration and one that upholds the standards expected of a REnvP, CEnv, EngTech, IEng, REnvTech or CEng.

Each review involved a submission of documentary evidence detailing how we provide Professional Registration activities, including



all aspects of the registration process itself, CPD auditing, as well as CPD auditing, approvals of professional development schemes and apprentices and accreditation of academic courses. This was then followed by a visit from representatives

from SocEnv/EngC to meet the team and volunteers responsible for managing the processes.

The Society's Membership & Registration Manager, Oliver Teasell (pictured), said: "We are waiting for formal notice from SocEnv and EngC but we know



that the reports from both organisations recommend the maximum five year relicence possible to their respective Quality Assurance Committees."

Below: Work-based and self-directed learning are key components of CPD programmes, which all registrants must complete.



# SOE supports tomorrow's engineers

he Society of **Operations Engineers** (SOE) has made a formal pledge to increase the diversity and number of young people entering engineering and

technology careers. The Society has signed up to EngineeringUK's Tomorrow's Engineers Code, an initiative which brings together organisations working towards common goals.

Signatories of The Code make four pledges: to inspire connection, drive inclusion, showcase engineering and improve the impact of their engineering outreach. Society President John Eastman said that SOE "actively champions" the next generation of engineers, which aligns with The Code's mission.

Melanie Washington, Director of Engagement Projects at EngineeringUK, said: "We're proud that, in just over two years, The Tomorrow's Engineers Code community has grown to over 250 members. Given the acute skills shortage and the UK's net zero ambitions,

it's crucial that we continue to attract more young people, from all backgrounds, to go into engineering and tech careers. "With The Code

and its four pledges,

and technology." The Institution of Royal Engineers recently joined as a Supporter of The Code, committing to play an active part in the community. Robert Drew, Digital Services Manager at the Institution, said:

"As a Professional Engineering



Institution we strive to support and develop our current and next generation of military engineers. The Code supports that mission."

**SO**e

Any organisation with UK operations that funds, designs and/or delivers engineering outreach activities, or intends to, is invited to become a

Signatory, which is free to do. Any organisation not meeting these criteria, but supporting the aims of The Code, can join as a Supporter. The Code was created by and is for the engineering community and has been brought to life through funding and in-kind support from a range of organisations including the founding Signatories Anglo American. the Department for Education and Shell.

## **JUNGHEINRICH AND KAMMAC IN VNA DEAL**

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Manufacturer Jungheinrich UK has entered a five-year rental fleet management deal with Kammac, together with a fleet of new very narrow aisle trucks. The deal will see Jungheinrich supply electric counterbalance and power pallet forklifts across the logistics and warehousing specialist's 14 UK sites.

SOE becomes the 250th signatory to the pledge and joins other engineering firms and professional institutions, as well as government departments, charities and STEM delivery providers, in becoming members of The Code community. Other Signatories include the Institution of Engineering and Technology, NatWest, STEM Learning, Siemens, and the Department for Education.

we're able to make important strides towards this by improving the quality, inclusivity, targeting and reach of activities designed to inspire young people. I'm delighted that we've welcomed so many new members and I'm confident that, together, we can inspire more and more diverse young people so they choose a career in engineering

code.tomorrowsengineers.org.uk

To find out more and to join The Code, visit: www.code.tomorrows engineers.org.uk

To find out more about EngineeringUK, visit: www.engineeringuk.com

# **COMMERCIAL VEHICLE SHOW 2023**



# Big names to line up for Commercial Vehicle Show

R egistrations for this year's Commercial Vehicle Show, which takes on the 18-20 May at the NEC in Birmingham, are now open – and Ford, BP Fleet UK, Isuzu and Iveco are just some of the big name manufacturers which have signed up to exhibit.

The CV Show – the Commercial Vehicle Show – is the largest and most comprehensive road freight transport, distribution and logistics event in Britain.

For operators it is the annual meeting place to network and for sector suppliers the ultimate event to showcase your brand and products to a huge audience of prospective customers.

And with all the latest vehicles, trailers, equipment, and technology on display, the 2023 CV Show looks set to be unmissable for thousands of fleet owners, directors, senior managers, engineers and to anyone operating commercial vehicles as part of their business. Meanwhile, speaker programmes will be announced 11,110 VISITORS

TO SEE new vehicles or products





shortly for the 'Workshop Sector' and 'Road Ahead' Live Theatres. Sector will of course be exhibiting – please come and visit us in Hall 5





### MICHELIN AND MARSTON IN FUEL CONSUMPTION DEAL

Marston Holding has confirmed a year-on-year reduction in fuel consumption of 13.4% via Michelin's **Connected Fleet's smart** data and performance analysis. Marston provides fleet solutions for more than 500 local authorities across the UK, as well as central government and private sector organisations, from design through to implementation. It relies on Michelin Connected Fleet across its 1,400-plus vehicles, which includes 650 vans, 350 cars, 300 scooters and around 150 trucks. Data collected and analysed by **Michelin Connected Fleet's** team shows the company has reduced its fleet size by 9% during the past year through improved asset utilisation. In addition, engine idling has dropped by 14% and carbon dioxide emissions have decreased by 4%.

# HSE RELEASES BUILDINGS GUIDANCE

The Health and Safety Executive (HSE) has released guidance for anyone responsible for a building's information throughout its lifecycle. This includes building companies, principal designers and principal contractors, and local authorities. The HSE said the building's information must be kept digitally, kept securely, as a building's single source of truth, available to people who need the information to do a job, available when the person needs the information and presented in a way that a person can use. According to the guidance, the information that is kept must be proportionate and will depend on what stage the building is at in its life.

# UK FACING STEEL SHORTAGE

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The UK will need more than 10 million tonnes of steel over the coming years to become more energy selfsufficient, experts say.

TO NETWORK with peers and colleagues

WITH PURCHASING RESPONSIBILITY for vans or trucks

More than 11,000 visitors attended the CV Show last year – and this year looks to be packed too. The Society's IRTE Professional

at Stand D30 and take part in the activities we have planned for members and other visitors to the show.

# **"WORKSHOP SECTOR" AND "COOL CHAIN SECTOR" MEANS SHOW VISITORS CAN FOCUS ON THEIR NEEDS**

There are also two dedicated areas at the CV Show each year that visitors can visit: the Workshop Sector and the Cool Chain Sector.

Cool Chain meets the special requirements of the temperature-

controlled operator with a display of refrigerated transport and cold chain equipment. The CV Show organisers say that "whether its vehicles, fridge units, monitoring equipment or any other products,

this area is the go-to services and vehicle destination for cold maintenance. OE chain operators". components and replacement parts, The Workshop Sector, meanwhile, maintenance is a shop window management systems and for operators specialist to connect with exhibitors specialising equipment will in aftermarket all be on show.

<image>



**Research from Tata Steel** revealed that more than five million tonnes of steel will be needed to build thousands of wind turbines at sea by 2030. Additionally, an estimated 1.5 million tonnes of steel will be needed to build the infrastructure for hydrogen production and distribution as well as large-scale carbon capture projects. The metal will also be needed to unlock new sources of oil and gas from the North Sea. Planned solar and nuclear power plants are expected to require about 3.5 million tonnes of steel over the coming years.

# GOOD MONTH

## SOLAR CELL ENGINEERS

Four pioneers behind the electricity-generating silicon solar cell have won this year's Queen Elizabeth Prize for Engineering. Professor Andrew Blakers. Professor Martin Green, Dr Aihua Wang and Dr Jianhua Zhao developed so-called **Passivated Emitter and Rear** Cell, or PERC, technology. This transformed the efficiency of solar panels and is now built into 90% of all installations worldwide. The quartet will share a £500,000 award and a trophy, to be presented by the Princess Royal. Lord Browne of Madingley, Chairman of the Queen Elizabeth Prize for Engineering Foundation, said: "The QEPrize celebrates the engineers who time and time again solve the impossible and transform our world for the better. PERC solar technology is one of those innovations. I believe that everything we do has to be oriented around the global energy transition, so we can achieve net zero, for the planet and the people that live on it. I wholeheartedly congratulate Professors Green and Blakers, and Drs Wang and Zhao for their contribution to humanity." The team is to be honoured at a special ceremony later in the year.



# BAD MONTH

# WIND FARMS

Scotland could lose £60bn, including billions from the public purse, through the surrender of nearly two thirds of the potential supply chain spend and the 'underselling' of leasing rights for the offshore wind revolution. The Herald on Sunday reports that 20 ScotWind projects, with a combined potential generating capacity of 27.6GW - estimated to be enough to power over 14 million homes - were offered new rights to develop offshore wind power last year. But according to declarations made to gain rights to ScotWind, more than £47m of the £76.5bn of supply chain commitments covering at least the first six years of operation, will leave Scotland. The Herald on Sunday also reported that while ScotWind raised £755m from seabed lease deals, similar schemes in the US and in England have generated up to 18 times that for the public purse.

# SocEnv Awards 2023 now open for entries

# SocEnv Society for the Environment

egistrant members of the SOE are being invited to enter the 2023 Society of the Environment (SocEnv) Awards.

Two awards – Environmental Professional of the Year and Newcomer of the Year – are up for grabs and nominations are now open.

Nominees for both awards must be registered as a CEnv, REnvP or REnvTech. However, nominations are free to make and can be submitted by anyone, including selfnominations.

This year the SocEnv Awards will be piloting video nominations as an option to make the application process more accessible to a wider range of people.

The Awards winners will be announced at a free online celebration event on 6 June 2023.

For further details, to learn more about last year's winners, meet the judges and to submit a nomination, please visit: www. socenv.org.uk/socenv-awards



# **RECENT PAST WINNERS OF THE ENVIRONMENTAL PROFESSIONAL OF THE YEAR**

## 2022

Becky Toal CEnv, Managing Director at Crowberry Consulting Ltd

## 2021

Dan Reading CEnv, Head of Sustainability at World Sailing

# 2020

Mandhy Senewiratne CEnv, Director Sustainability, Communication and Change Management at Fyrefly Global Sustainability Ltd and David Symons CEnv, UK Director of Sustainability at WSP

### Recent past winners of the Registrant Newcomer of the Year include:

the Year include:

### 2022 David

Paul Field CEnv, Environmental & Compliance (ESG) Manager at Janus International Europe Ltd

# 2021

Lara Young CEnv, Group Carbon Manager at Costain

# 2020

Chris Landsburgh CEnv, Environmental and Sustainability Manager at Wills Bros Ltd

# EngineeringUK inquiry into apprenticeships uptake

ngineeringUK has launched an inquiry into apprenticeships in engineering, manufacturing and technology. The inquiry is being carried out in partnership with former Labour and Conservative ministers Lord Knight and Lord Willetts.

Employers in the sector – as well as training providers and young people – are being urged



to get involved in the call for evidence by submitting their views, evidence or ideas to improve the career pathway into the sector. Despite a "modest uptick" in numbers last year, engineering-related apprenticeship starts in England are still 9% lower than in 2014/15. The uptake varies by subject with a "worrying" 34% decline for engineering and manufacturing technologies, EngineeringUK said.

The inquiry – 'Fit for the future: growing and sustaining engineering and technology apprenticeships for young people' – is open until 27 February 2023. Hilary Leevers, Chief Executive of EngineeringUK, said: "Given the pressing need for more engineers and technicians in the UK, now and into the future, we urgently need more young people to start and complete apprenticeships in the sector. "We therefore urge the sector, as well as youth training

providers and organisations,

to show their support for this important inquiry by sharing their experiences and suggestions for how to make engineering-related apprenticeships more available and accessible to young people. We hope the inquiry will open up conversations about how to break down barriers, inform effective policy making and widen opportunities for young people in engineering and technology careers."

For more information and to respond visit: www.engineeringuk. com/fitforthefuture



# John Eastman

President of the Society of Operations Engineers

In the first in a series of Q&As with Trustee Board members, President John Eastman EngTech CEnv FSOE FIRTE outlines his hopes for the Society and the future for the industry as a whole

You took on the role of Society President towards the end of last year. What are the key differences between the role of Chair and President?

Historically, the President has been the Chair of the Board as well as being the President. Under the new structure agreed by members last year at an EGM, the Trustee Board has been streamlined as described by the previous President in the previous issue of SOE News, allowing the President to influence the Board without being the Chair. It allows me to step back and take a broader view, allowing an element of freedom to look at the Society rather than chair the Board but still be actively involved as a Trustee and Board member.

It also gives me the opportunity to communicate more with HQ and relate to the office members as well as helping the chief operating officer where needed.

### How long have you been associated with IRTE and the Society as a whole?

I have been a member since 1973 having been advised by my boss at the time to join the Institute of Road Transport Engineers. In 1985 I applied for membership of the IRTE Council and with tremendous joy, I was accepted. I sat on the Professional Sector Council (PSC) which gave me an insight into the workings of the Institute, learning from senior members and improving my knowledge of transport engineering as well as friendship from fleet engineers of note. I also became registered with the Engineering Council.

In 2000 the IRTE attracted an additional professional institute, IPlantE, and in 2003 I was asked if I would stand for President of what is now the SOE, a great honour indeed. I have been involved with the SOE and the IRTE Council in one form or another and Chair of the IRTE PSC and Technical Committee as well as being a Trustee. The involvement has always been interesting and



rewarding. Being involved with irtec and Workshop Accreditation from conception through to fruition has been greatly rewarding.

# How has the industry changed over the years?

Transport engineering has changed a great deal over the years with many companies moving from ownership to leasing, which saw fleet managers now being with the manufacturers, rather than with a company that once owned all of their vehicles and relied totally on them to manage the fleets and the ownership of the operator licence. My own experience is along these lines, having been with a number of blue chip companies in fuel, flour, brewing and transport. In the past, being an engineer/technician in the transport engineering industry as an apprentice was once

seen as a recognised career path, but the education system now does not promote such a career; the emphasis being instead on IT and other careers. As a result, there is a lack of engineers, which is one of the agenda items of the IRTE and other PSCs. Discussions with the operations engineers managers is ongoing as to how we attract youngsters into not only engineering but also membership.

### The Society was formed by the merger of existing membership organisations. Is this something that we may see more of in the future?

market strength. Membership concerns are no different and with the threat of diminishing members due to industry changes and/or focus and the lack of young engineers coming through the education system, merging with similar or added-value organisations can be one way forward.

# How can the industry grow and develop in the future?

A great question with no easy answer. All through my career I have heard how good the Germans are at engineering and producing quality machines. The British have also had this level of recognition but it seems overseas rather than at home. Over the years we have seen industry sold off, and from market leaders in engineering we have lost some ground.

Certainly a great many things have changed, with technology evolving ever faster and faster. The emphasis seems to be on the softer engineering sectors rather than the heavier end, which is a shame. Technology has evolved in transport also with leaps and bounds in electronics and telematics.

I have seen the prestige of having an apprenticeship in engineering drop back when compared with when I started my career. When I left school, the number of school-leavers looking for an apprenticeship was very competitive and the industry was spoilt for choice. If you were selected it was seen as a feather in your cap. You were made for life.

The apprentices I have seen at the IRTE Skills Challenge and WorldSkills, as well as



# FORD EUROPE TO CUT 3,800 JOBS

Ford Europe is cutting 3,800 jobs including 2,800 jobs across its engineering footprint over the next two to three years as part of a major business restructure. A company spokesman said its strategy to offer an allelectric fleet in Europe by 2035 remains unchanged and production of its first European-built electric passenger vehicle is set to start later this year. The reduction in 2,800 engineering jobs is being driven by the transition to fully electric powertrains and reduced vehicle complexity, he said, adding that Ford will maintain an engineering organisation of approximately 3,400 roles in Europe, focused on vehicle design and development, as well as the creation of "connected services".

# CONSTRUCTION WORKER SHORTAGE

The UK may require an extra 225,000 construction workers by 2027, according to the latest Construction Skills Network report. The report says that there are "substantial" recruitment and training challenges facing industry. It predicts that 45,000 extra workers will be needed per year up to 2027, down from last year's figure of 53,200. All nine English regions plus Scotland, Wales and Northern Ireland are set to experience demand for more workers, although recession is expected in 2023 with slow growth returning in 2024. The major sectors for demand are private housing, infrastructure and repair and maintenance. There will be 2.67 million workers in the construction industry by 2027 if projected growth is met.

# MORE ENGINEERING JOBS IN IRELAND

There could be as many as 8,000 engineering jobs available across Ireland this year, according to a forecast by one of the country's main trade bodies. Engineers Ireland said

its latest employers' survey

found that there was strong

demand for engineering talent

across a range of specialities,

including civil, electrical and

mechanical engineering.

Institutions as well as industries go through market share concerns. Looking to stay in the running by means of merger or buyout is not uncommon with brand names being maintained due to their popularity and

"The new structure allows me to step back and look at the Society rather than chair the board" many others taken on by vehicle manufacturers, are of a very high level, but we need more of them. The interest from school-leavers does not appear to be there and the education system is where it needs to be nurtured. Many apprentices I knew went on to be directors, managing directors and leaders in industry with many large companies, so the career path is there for the taking. Going to university is not necessarily the best route to getting on in life. Engineering is not all oil, grease and dirty overalls. This

needs to be portrayed to 13

starting point to do that.

year-olds and school is a great

This is despite a drop-off in software engineering positions following a number of highprofile job cuts by major tech firms. However, Engineers Ireland warned that filling the roles will be a challenge, as those in the sector report a continued lack of available talent. The report found that 72% of its members were concerned about a shortage of engineers with the correct skills.

# Operational efficiency on the agenda at IRTE Northern Centre

# **IRTE NORTHERN CENTRE**

anuary saw IRTE Northern Centre Society members and guests enjoy a CPD lecture given by Tom Harrison, Corporate Account Manager of Michelin Connected Fleet.

Tom began his presentation by explaining how Michelin Connected Fleet Services and Solutions can provide the tools and information for fleet operators and managers to help them to manage their fleets daily to maintain and improve operational efficiency.

Members and guests heard that Michelin Connected Fleet partners with its customers to give operational recommendations based on the data extracted from the fleet performance, company statistics and vehicle data.

The model means that customers can reduce costs, improve productivity and ensure the safety of their drivers and operational fleets.

Tom demonstrated the various methods of extracting the data and explained how this is then used to look at managing

# **INFORMATION IS KEY**

What fleet managers need to know to maximise operational efficiency

- Vehicle and trailer purchasing
- Leasing options statistics
- Fuel returns
- Engine idle running analysis
- Road-weight distribution
- plansMaintenance costings
- Vehicle downtime
- Monitoring tyre
- pressures on various fleet applications
- The effective use of the driver's duty time
- Downloaded vehicle telematics data

### Source: Michelin Connected Fleet / IRTE Northern Centre

ways of improving operational efficiency.

Asked by one member what data is used, Tom explained that "simply" as much or as little as required and this can include a range of metrics. Tom rounded off his presentation with an informative question and answer session before the IRTE Northern Centre Hon Chair Sam Archer thanked Tom on behalf of the IRTE Northern Centre for his CPD presentation.

SOE Professional Sector:

Transport Enginee

Institute of Road

Pictured left to right: Tom Reed (IRTE Northern Centre Committee Member), Tom Harrison (Michelin Connected Fleet) and Sam Archer (IRTE Northern Centre Hon Chair)

# White Paper takes fresh look at tackling atmospheric CO<sub>2</sub>

hew research paper from the Society takes a fresh look at some of the steps currently being taken to tackle global warming – and warns that some of them do not lower the amount of atmospheric  $CO_2$ and often, in fact, increase it.

The paper says that, without more thorough analysis, we could find ourselves on an "inefficient and unsustainable" route to reducing the amount of atmospheric CO<sub>2</sub>.

The paper, written by Ian Jackson CEng FSOE FIPlantE (pictured) and available at www.soe.org.uk, suggests that actions such as going "all electric", increasing the use of hydrogen and installing equipment to remove CO<sub>2</sub> from the atmosphere could remain inefficient until all electricity generation becomes  $CO_2$ emission-free in the first place.

In addition, some of the currently promoted actions, like using carbon offsets and switching from fossil fuels to carbon-based renewable energy such as biofuels, are not having an entirely positive impact.

Greater focus needs to be placed on measuring the rate of  $CO_2$  flowing out of the atmosphere against the amount that is flowing in. "We need to increase our general understanding of how and why CO<sub>2</sub> enters the



"By how much did we lower the amount of  $CO_2$  in the atmosphere today?". That means that today and every subsequent day should be thought of as "Day Zero", or the first day we can now take action. Report author Ian Jackson said: "The answer itself must be based on honest, rigorous and accurate measuring and reporting of the total actual amounts of CO<sub>2</sub> entering and leaving the atmosphere, together with the actual change in the amount of atmospheric CO<sub>2</sub> on Day Zero." Questions that need to be asked include how does human action affect the rate of CO<sub>2</sub> leaving the atmosphere? And how can we increase that flow of CO<sub>2</sub> out of the atmosphere? Ian said: "We need to increase our general

understanding of how and why CO<sub>2</sub> enters the atmosphere. In particular, we need to understand how the everyday

# **WEBINAR**

Ian tackled the subject of renewable energy and carbon dioxide emissions in a webinar that is still available to Society members. In it, he discusses why not all the renewable energy we use for heating and lighting our homes, powering our industries, and running our transportation systems is free of CO2 emissions.







Justisson CDipp FDDG FIPSindT, member of the Operations & BifandE Portlessional Sector R
 uncide, discusses why not all the revealede energy we use for heating and lighting our bornes,
 emiting our industries, and running our biosportation systems is free of carbon disorde
 listens.
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### Join now for full access or login to continue reading

21 Mer 7021 Outstanding finalists unveiled 2022 Sco Env. Averatio use of equipment by us all results in extra CO<sub>2</sub> entering the atmosphere and, crucially, how this can be reduced or even ended.

"The paper does not look at the rights or wrongs of the global warming and climate change debate. It takes no political position. Nor does it take a position on the impact that different levels and rates of  $CO_2$  has on temperature, weather or the environment.

"Its purpose is to determine how levels and rates of atmospheric  $CO_2$  can be measured accurately and to set out the role that the operations engineer has to play in managing them."



# Full steam ahead for busy series of Society webinars

he Society's busy webinar series continues apace, giving members exclusive access to informative – and entertaining – online events presented by industry experts. The webinars also help

members clock up CPD points – an essential requirement of professional registration.

Recordings of popular webinars from 2022 are available for members to watch in their own time. This includes a series of presentations around the subject of steam in which Steve Bishop, Consultant Specialist for Spirax Sarco, outlined the fundamentals and the future of this important subject. Steve talked about the reasons why steam remains relevant in engineering today, before taking a look at future technologies and innovation. Steve's presentations drilled down into how new products, technologies and solutions will help meet Net Zero targets while retaining steam as a heat transfer media. Steve, who has many years of experience of a variety of general industrial and steam processes, including manufacturing experience across a variety of industries, also looked at the key aspects

of steam quality and how this is impacted through the operation and maintenance of the steam system and its effect on process. He examined how steam is widely used to transfer thermal energy. Covering the advantages of steam, he also discussed how it can be generated in a carbonneutral manner.

A broad range of webinar recordings, from this year and previous years, is available to members on the Society's website. This includes a series hosted by Thomas Baker MSOE MIPlantE SA GCCC (Mech), SFHEA, Academic Lead for Engineering at the University of Hertfordshire. His presentations looked at some of the bigger picture topics that can impact on engineering. He begins with the concept of 'Lean Thinking' when applied to engineering operations, moving on to look at how good design can help manage inventory costs and rounding up with a view of 'Carbon in the Transportation industry'.

Adam Keenan, Business Executive at Intelligent Energy, presents an in-depth technical presentation on hydrogen fuel cells for manual handling equipment (MHE). He guides us through a range of fuel cell products based on Intelligent Energy's patented technology, including the world's highest power density fuel cell for uncrewed aerial vehicles (UAV) and systems, providing power from sub-1kW to 100kW for applications including automotive, aerospace, power generation, telecoms, marine, rail, and materials handling.

Of interest to the IRTE Professional Sector, is a presentation from Victoria Eyers, senior consultant in the Investigations Group at TRL, specialising in road accident reconstruction and providing consultancy advice presents on traffic accident 3D modelling. She shares her knowledge of the applications of 3D modelling within collision investigation and how to apply appropriate tolerances to analysis.

Look out for more webinars and online events coming your way. Do get in touch if you are interested in presenting in a subject area which could benefit members or if there are subjects or presenters that you would like hear from. Email suggestions to: membership @soe.org.uk

# SOCIETY APPOINTMENTS

# Best new female Chartered Engineer celebrated

Dr Emma Walton received the Karen Burt Memorial Award for the best new female Chartered Engineer (CEng) at a Women's Engineering Society (WES) ceremony held in London.



Dr Walton was nominated for the 24th Karen Burt Award by the Institute of Physics (IOP), for her work in miniaturising the functions of an entire medical laboratory with her 'lab-on-a-chip'.

She was presented with the award at the WES Caroline Haslett Lecture and Awards ceremony, held at the Geological Society.

Also presented at the ceremony was the Amy Johnson Award for furthering diversity within engineering, which went to Natasha Kelly, and the Men as Allies Award, given to Stephen Gill.

# **Engineering Council appoints Chair**

Prof John Chudley CEng FIMarEST has been appointed to the position of Chair of the Engineering Council's Board of Trustees. Professor Chudley will take up the role in June 2023 at the Engineering Council's AGM, at which Professor Chris Atkin CEng FRAeS FREng formally completes his term as Chair.



Nominated by the Institute of Marine

Engineering, Science and Technology (IMarEST), Professor Chudley has served on the Engineering Council's Board of Trustees since 2017 and chairs the Registration Standards Committee. He was appointed as Vice-Chair of the Engineering Council in 2021, including supporting the implementation of the Engineering Council's 2025 Strategy.

He began his career as a mechanical engineering apprentice, before progressing through higher education and completing a PhD in marine technology. Over the course of his career, he has held various academic positions, including Provost of Warsash Maritime Academy at Southampton Solent University (where he was also Professor of Engineering Education) and Head of the Institute of Marine Studies and Director of Research and Innovation at the University of Plymouth.

He is currently the Rector of MLA College, a Council Member of the RNLI and active in supporting the IMarEST.

# EngineeringUK appoints Director of Business Development & Partnerships

Rebecca Rawle is to join EngineeringUK as Director of Business Development & Partnerships. Rawle is currently Deputy Director of Fundraising and part of its UK Leadership team.

With a background working in the notfor-profit sector, in her role at ActionAid UK Rawle has developed partnerships nationally and internationally, with a focus on women's rights, economic empowerment and climate.



Previous roles include corporate partnership development and management at Breast Cancer Now, Marie Curie UK and the Juvenile Diabetes Research Foundation.

Rawle said: "I am really excited to join EngineeringUK at an important time for the organisation. Education, equity, diversity & inclusion and the sustainability agenda are issues which are very close to my heart, and as a passionate proponent for the positive impact of partnerships, I can't wait to start working with those in industry to bring about the shift-change needed for engineering and technology, and society at large, to thrive."

# Resources for apprentices and students

he Society has a number of webinar recordings aimed at students and apprentices. If you are preparing for your End Point Assessment you may want to take a look Gulam Bakawala's guide.

As the Bus & Coach Programmes Manager at S&B Automotive Academy, he is well placed to talk you through the requirements at end point assessment (EPA) for inspection, including understanding defect



categorisation and coding. There are also a number of topics to help in your broader career progression. An engineering apprenticeship or degree is just part of what employers are looking for in new recruits, which is where our presentation on 'Soft Skills in Engineering' can help. Or if interviews make you nervous perhaps take a look at Interview Coaching -Progression with Confidence where Hannah Mason, founder of The English Meeting Room, shares her knowledge about how to succeed in any interview situation.

If you have ideas for webinars that you would find useful as an apprentice or student do let us know. Email us at: membership@ soe.org.uk

# **Servomex Appoints Four Directors**

Servomex, the gas analysis operator, has appointed four directors to oversee commercial, sustainable, strategy and sales operations. Martin Cox has been appointed commercial director, responsible for all business units, research, manufacturing engineering and product compliance. He has been with the company for 40 years, starting as a 16-year-old electrical engineering apprentice and working across multiple departments and countries over the years. Sang Won Park takes on the role of global sales director, overseeing the market-to-order process. Having only been with Servomex for six years, he has risen from the Asia sales team to the IP&E business leader. Sarah Chalk has been promoted to director of strategy and marketing. Having now worked for Servomex for 20 years, Chalk began her career as an electrical engineer. Mike Proctor, who takes on the new role of director of sustainability and strategic projects, will lead the delivery of the company's net-zero goals. All will report to Servomex's president Andy Cowan.

# **COFFEE BREAK**

# Crossword



# Unscramble

Unscramble the letters in the shaded squares in the crossword to reveal a themed word:



# Across

- Confirm (8)
  Where bees are kept (4)
- 9 European country (5)
- **10** Tortilla topped with
- cheese (5)
- 11 Modest (10)
- 14 Unwind (6)
- **15** Special \_\_\_\_: film illusion (6)
- **17** People watching an event (10)
- **20** Wild dog of Australia (5)
- **21** Small roundish fruit (5)
- 22 Fathers (4)
- 23 Slapdash (8)

## Down

- 1 Immense (4)
- 2 Heavy metal (4)
- 3 Condemnation (12)4 Tithes (anag) (6)
- **6** Leans (8)
- **7** Lengthen (8)
- 8 Intolerable (12)
- **12** Became less intense (8)
- 13 Showed a TV show (8)
- **16** Ideally perfect state (6)
- **18** Release (4)
- 19 Sight organs (4)

# Codeword



A codeword is a completed crossword grid where each letter of the alphabet has been substituted for a number from 1-26. There will be at least one occurrence of each letter of the alphabet. Certain letters are given as starters. The solver must decipher the rest of the code to discover the words in the completed puzzle.

# SuDoku

The rules of the game are simple: each of the nine blocks has to contain all the numbers 1-9 within its squares. Each number can only appear once in a row, column or box. Each vertical nine-square column, or horizontal nine-square line across, within the larger square, must also contain the numbers 1-9, without repetition or omission.

Every puzzle has just one correct solution.



**WIN!** A £25 Amazon gift card

For your chance to win simply complete all the puzzles and return to: SOE News, 22 Greencoat Place, Westminster, London, SW1P 1PR.

Name:	
Address:	
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# EDITORIAL

on our website: soe.org.uk

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Find this month's puzzle solutions

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For a full list of Trustee Board members go to: **soe.org.uk** 

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