The Institution of Engineering and Technology

150
1871 - 2021

WE ARE THE IET

MAKING A DIFFERENCE FOR 150 YEARS

1871 2021

THIS IS OUR STORY

150th Anniversary

Souvenir Brochure

Foreword

We are absolutely delighted to be celebrating our 150th anniversary – a monumental milestone for any institution. It's a fantastic opportunity to celebrate our rich history and the ways in which the last 150 years have shaped the way we live today, as well as how we'll help build the future.

We're one of the world's oldest professional engineering institutions and can trace our history back to the foundation of the Society of Telegraph Engineers, which held its first meeting in London in May 1871. Although the world has changed since those Victorian days, one thing that hasn't is the incredible impact engineers continue to have by solving many of the challenges facing communities across the globe.

Engineers throughout the ages have been improving our world, from innovators and forward-thinkers, to influencers and visionaries of the future. Our profession is dedicated to the advancement of knowledge, and we are proud to play a pivotal role in building networks of engineers and technicians who are working to engineer a better world.

Throughout the year, we've been celebrating difference makers – people who are having a massive impact on the world around us. Many people don't always understand the work of engineers or appreciate how much society depends on their skills and innovations, so we've been using our anniversary to inspire, inform and influence, young people especially, so that engineering and technology are seen as exciting and desirable careers.

Engineers bring ideas to life, turn dreams into reality and make solutions to big challenges possible. During our 150th anniversary year, we've been sharing the magic of engineering with wider society and highlighting how truly crucial it is to the world around us.

We want to acknowledge the contributions of the many people who have been part of the IET's 150 year history and who paved the way to make our institution what it is today. We also want to thank our incredible members, volunteers, partners and staff who are continuing to support us in our vision and mission to engineer a better world – and inspire the engineers of tomorrow.

This commemorative brochure celebrates the achievements of our past, and our ambitions for the future. We hope you enjoy reading it.

Professor Danielle George MBE BSc MSc PhD CEng FIET, IET President

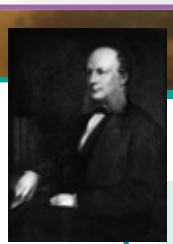
Nigel Fine BSc MBA CEng FIET FICE Chief Executive and Secretary

IET@150 Timeline

1871
The Society of Telegraph Engineers (STE) is founded on 17 May

The STE has 110 members by the end of the year

1872
Sir Charles Siemens elected as the first President of the STE



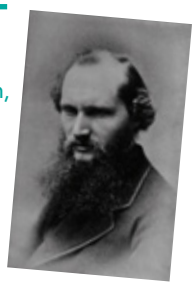
The Society's first journal is published

The first Ordinary Meeting of the STE is held on 28 February

1873
The STE Honorary Memberships are first awarded

Willoughby Smith presents a paper on the photo conductivity of selenium – technology which led to early television cameras and solar cells

1874
Sir William Thomson, later Lord Kelvin, becomes President of the STE



1875
Sir Francis Ronalds bequeathes his library of rare books and pamphlets to the STE, forming the core of the Library collection

We can trace our heritage back through over forty predecessor organisations, some of which are featured in the timeline below.

Today we span a broad set of disciplines but still maintain the goals from our humble beginnings. Knowledge sharing underpins everything we do – whether advancing the next innovation or inspiring the next generation. Our members continue to lead the discovery and advancement of almost every aspect of our daily lives, both big and small. Our archives are a wealth of information and, while we can't include everything, the following pages provide a small snapshot of our collective impact over the last 150 years.

Our Vision

Working to engineer a better world.

Our Mission

To inspire, inform and influence the global engineering community, supporting technology innovation to meet the needs of society.

Our Values

We treat everyone with Integrity and respect, continuously striving for Excellence in all our activities, and use the power of Teamwork to deliver value.

Celebrating IET@150 on film:

1877

Alexander Graham Bell presents his paper on 'Researches in Electric Telegraphy'

1878

Sir William Preece demonstrates Edison's phonograph – the first demonstration in the UK

1881

The STE changes its name to the Society of Telegraph Engineers and of Electricians (STE&E)

1882

The first Wiring Regulations published as 'Rules and Regulations for the Prevention of Fire Risks arising from Electric Lighting'

1883

The STE&E is registered under the Companies Act

1884

The Vulcanic Society is founded, later the Junior Institution of Engineers

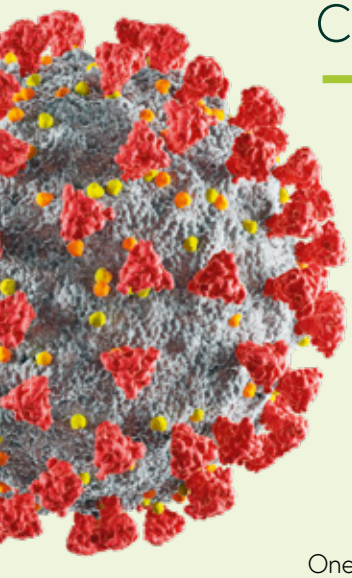
1885

Sir Joseph Swan presents a paper on 'The subdivision of the electric light' (ie incandescent lamps for interior lighting)

Making us better...

Bill Gates warned, in a now infamous 2015 TED Talk, that the greatest risk of global catastrophe would emerge from an epidemic, and that the power of mobile phones and wearable technology would be a critical tool in addressing such a threat.

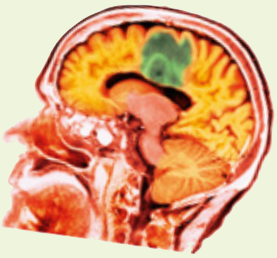
In the 2021 IET Turing Talk: Sounding out wearable and audio data for health diagnostics, Kate Farrahi discusses using audio signals for disease diagnostics, as well as her recent work: a collection of respiratory sounds (coughs, breathing and voice – crowdsourced through mobile apps) to pre-screen and diagnose COVID-19.



Computer virus

The 2020 E&T Innovation Awards (previously the IET Innovation Awards) saw many entries in response to the pandemic. These included technology powered by artificial intelligence (AI) to help track the outbreak, clean hospitals, deliver supplies and develop vaccines, as well as innovations showing how big data platforms can be mobilised quickly and transparently to be a force for good.

One of the award winners was OxVent – a rapid design and manufacture low cost ventilator for COVID-19, which allows critical care infrastructure to be rapidly upscaled to meet the projected patient requirements. It also utilises components not required of industry standard systems, relieving logistical pressure on existing manufacturing efforts.



Under the skin of the problem

Dissecting the anatomy of the atom has allowed us to see ever further into the inner workings of our bodies – without needing to make an incision.

Lord Rutherford was awarded the Nobel Prize in 1908 for his theory of radioactive half-life and the identification of alpha and beta radiation. He went on to develop the atomic model and discover the neutron, and was given our most prestigious award, the Faraday Medal, in 1930.

Electrical engineer Sir Godfrey Hounsfield developed X-ray computed tomography – the CT scan – for which he received the Churchill Medal (1976) and a Nobel Prize (1979).

Aidoc is a suite of AI algorithms that support and enhance the impact of radiologist diagnostic power. An E&T Innovation Award winner, the solution reduces turnaround time and increases quality and efficiency by flagging acute anomalies in real time. Radiologists benefit from the deep learning technology that runs behind the scenes, enabling them to focus on the diagnosis itself.

IET Honorary Fellow (2010) and Faraday Medal recipient (2000) Professor Sir Michael Brady FRS FREng is an authority in the field of image analysis, initially working on shape analysis while at MIT, then on robotics – with an emphasis on medical image analysis.

1887
First student meetings held

1889
The STE&E changes its name to the Institution of Electrical Engineers (IEE)

1890
The IEE Benevolent Fund is established

1892
The first scholarship is founded as the Salomans Scholarship, from a bequest by Sir David Salomans

Nikola Tesla gives a lecture on 'Experiments with Alternate Currents of High Potential and High Frequency'. It was so popular, that it was held at the Royal Institution to allow more members to attend

1898
Science Abstracts is first published, later the basis of IET Inspec

1899
The first Local Sections are established in Dublin, Glasgow, Newcastle and Cape Town

Hertha Ayrton is admitted as the first woman Member of the IEE (she was also the first woman to present a paper to the IEE)

Guglielmo Marconi gives a lecture on 'Wireless Telegraphy'. It was so well-received that it was repeated at Exeter Hall later that same month

...and keeping us fit

The heart of the matter

'Jade' (an E&T Innovation Awards winner in 2020) is the first at-home stethoscope of its kind that provides a world-beating solution at a low cost. As a completely open-source telehealth product for public welfare, it is a totally affordable yet radical new approach that combines AIoT and medical technology to catapult the traditional stethoscope into a revolutionised phase of usage.

A double IET Innovation Award winner in 2017, Creavo Medical Technologies created a cutting-edge scanner that helps doctors in emergency departments rule out serious heart disorders at an early stage.

Fitness fashions

Data from the devices we carry with us in our daily activities, including our mobile phones, can reveal much about our health and wellbeing. In the 2021 IET Turing Talk (scan the QR code to watch), we heard how heart rate, steps walked, calories burnt, the release of certain biochemicals and even seizures can be identified by wearables and audio data, making them increasingly viable healthcare tools for individual and population disease diagnostics.

Interface with innovation

Molly Stevens FRS FREng is a world-leading scientist heading a research programme at Imperial College London. An IET Achievement Medal winner in 2020, Professor Stevens has made numerous ground-breaking advances based on the elucidation of biointerfaces to develop designer biomaterials for myriad applications in biosensing and regenerative medicine.

Connected to care

Requirements for medical locations (such as hospitals and dental practices) were first included in BS 7671 Requirements for Electrical Installations (IET Wiring Regulations) in 2011.

1908

The IEE purchases a lease for the Medical Examination Hall, Victoria Embankment, which becomes Savoy Place

1900

The Northern Society of Electrical Engineers merges with the IEE and forms the Manchester Local Section

The first Kelvin Lecture is held

1912

The Associate Membership examination is established (the first exam is held in 1914)

1914

The IEE Library starts lending books to members

1919

The Wireless Section is established as the IEE's first technical group

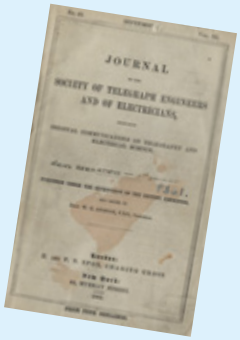
Regulations for the Electrical Equipment of Ships are first published

Our front doors...

The average three bedroom home has over 1km of electrical wiring; keeping the lights on, entertaining us, and making our lives more comfortable and efficient.

Electrical use has evolved rapidly over the last 150 years, and so has the need for clear rules and guidance to ensure public safety. There were initially over 26 different regulations in use across the UK, including variations produced by insurance companies like the Phoenix Fire Office, but by the early 20th century ours was the most broadly accepted. We still maintain these standards today as BS 7671: the IET Wiring Regulations.

Turn on, tune in


JOURNAL

Our earliest predecessor organisation, the Society of Telegraph Engineers, was established to meet the needs of engineers working in telegraph engineering back in 1871, and broadened quickly to accommodate increasingly rapid developments in electrical engineering. That organisation evolved into one of our most recent predecessors – the Institution of Electrical Engineers (IEE).

Membership grew at pace, and by 1899 the first Local Sections were established in Dublin, Glasgow, Newcastle and Cape Town. That same year, Hertha Ayrton became the first woman to present a paper to the Institution, 'The Hissing of the Electric Arc', which saw her elected as the first woman member just two days later.

The Society of Telegraph Engineers and of Electricians, as it was latterly known, published Rules and Regulations for the Prevention of Fire Risks Arising from Electric Light in 1882. That original document was just four pages long, with 21 rules covering the dynamo machine, wiring and lamps. This expanded vastly over the following years under the Wiring Regulations name, and guidance today now includes SMART home installations!

Lord Kelvin

An Honorary Fellow and President of the IEE three times, Lord Kelvin influenced the first international electrical standards. The IEE Kelvin Memorial Committee in 1908 led to the first Kelvin Lecture and supported the funding to get the IEE its own home – Savoy Place in London, UK.

Electrical Apprenticeships/ Level 3 Award

The first National Certificates and Diplomas in electrical engineering were set up in 1924 by the IEE and the Board of Education, in response to a need for nationally recognised engineering qualifications.

1921
The IEE is granted a Royal Charter

George V becomes Patron of the IEE

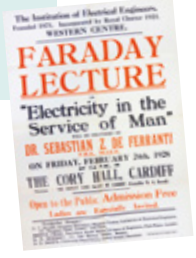
The Institution of Production Engineers is founded, later the Institution of Manufacturing Engineers

1922
Faraday Medal first awarded to Oliver Heaviside

Ernest Rutherford gives the Kelvin Lecture on 'Electricity and Matter'

1923
The BBC leases space in Savoy Place for studios and offices

First Faraday Lecture is held as a travelling lecture aimed at the general public


The Institution of Electrical Engineers
WESTERN CENTRE.
FARADAY LECTURE
"Electricity in the Service of Man"
DR. SEBASTIAN Z. DE FERRANTI
ON FRIDAY, FEBRUARY 24th, 1928
THE CORY HALL, CARDIFF
Open to the Public. Admission Free
Ladies are Especially Invited

1924
First National Certificates and Diplomas in Electrical Engineering set up by the IEE and the Board of Education

The term Chartered Electrical Engineer is approved for IEE members

...to our bedside drawers

Always in fashion

In 2021 we partnered with the Fashion District and Fashion Innovation Agency, on a prize supporting technological innovations which solve the manufacturing challenges facing the fashion industry today. With the aim to create interdisciplinary connections between technologists and engineers, and fashion creatives and manufacturers.

On the box

Sir Issac Shoenberg was born in Russia and emigrated to London in 1914 to join the Marconi Wireless and Telegraph Company.

He became general manager of the Columbia Graphophone Company, remaining with the company through its merger with EMI in the early 1930s. Here, he headed a research group that developed an advanced camera tube, the Emitron, and a hard-vacuum cathode-ray tube television receiver.

Recipient of the Faraday Medal in 1954, Shoenberg was involved in the first BBC broadcasts from Alexandra Palace in 1936 and the BBC adhered to the technical standards he had proposed until 1964.

...and bedtimes

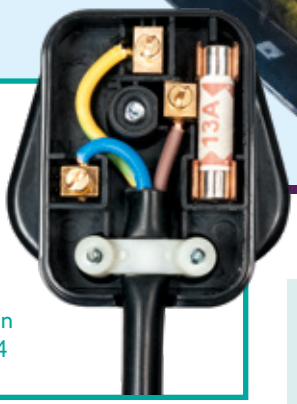
Around one in four UK parents said they had tried to use tech such as 'virtual assistants' for bedtime stories.

During our anniversary year we launched the IET 150 Award, as part of The Times/Chicken House Children's Fiction Competition, to celebrate the endless possibilities of STEM – pushing the boundaries of innovation and adventure found in children's literature.

Teatimes...

An expert on domestic electrical installations, Caroline Haslett sought to harness electrical power to free women from household chores.

The only woman on the IEE Post-War Planning Committee, she helped change electricity supply in the home. Haslett was First Secretary of the Women's Engineering Society, President in 1941, and co-founder of the Electrical Association for Women in 1924.



1941

The IEE Post-War Planning Committee on Electrical Installations begins work – it published its report recommending the three-pin plug and ring circuit in 1944

1925

The Institute of Wireless Technology is founded, later the Institution of Electronic and Radio Engineers

1928

A joint meeting with the American Institute of Electrical Engineers is held via transatlantic wireless telegraphy

1936

George VI becomes Patron of the IEE

1944

The IEE endows a Chair of Electrical Engineering at the University of Cambridge for five years

1946

The IEE hosts a convention on radiolocation, the first to discuss wartime developments in radar and radiolocation

1947

First District Meeting held – a 'pub and bike' event in Kettering

Dialling out...

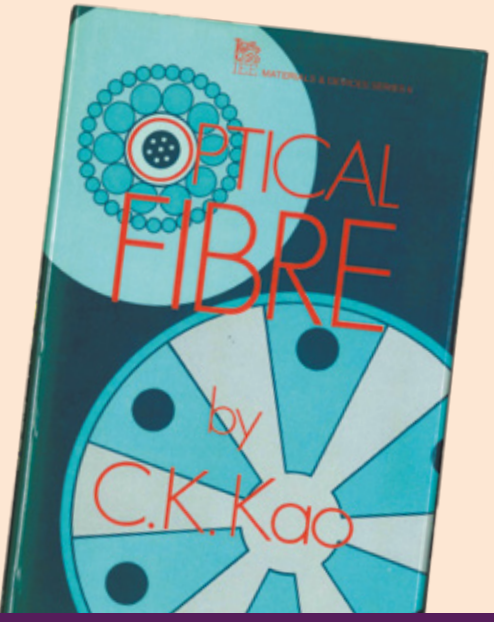
With the emergence of the telegraph network as a new means to communicate, the operators and engineers behind them held a skillset which set them apart from existing civil and mechanical disciplines: understanding electricity. So, on 17 May 1871, the Society of Telegraph Engineers (STE) was formed to meet their needs. Its purpose was:

"...for facilitating the exchange of information and ideas among its members."

Connecting and communicating

Sir Charles Siemens became the first President of the STE and founder of the British branch of the Siemens engineering firm that initially specialised in telecommunications.

Another founding member of the STE, Wildman Whitehouse, sent the first telegraph communications to the United States of America on 16 August 1858. William Thomson (later known as Lord Kelvin) was key to the eventual success of the transatlantic cable, suggesting improvements and developing his mirror galvanometer to detect signals.



Alexander Graham Bell gave his lecture on 'Researches in Electric Telephony' to the STE in 1877. 'World-Wide Radio Telegraphy' provided the subject for the first Faraday lecture, delivered by Professor George William Osborn Howe DSc in 1924.

A joint meeting with several hundred members of the Institution of Electrical Engineers in London and over 1,000 American Institute of Electrical Engineers in New York was made possible by transatlantic wireless telegraphy in February 1928.

Finally in 1956 TAT-1, the first submarine transatlantic telephone cable system, was inaugurated, carrying 35 telephone calls simultaneously, with an extra 36th channel used for 22 telegraph lines.

Communication continued to evolve at pace and, a decade later, Sir Charles Kao pioneered fibre optics and was awarded the Faraday Medal for his work in 1989. In 2020, Dr Mallik Tatipamula received the IET Achievement Medal for his outstanding contributions to the global telecommunication industry (through practical innovations and implementations that enabled 2G to 3G, 3G to 4G and now 4G to 5G migrations).

1948
Coat of Arms is granted to the IEE

1953
Elizabeth II becomes Patron of the IEE the year after her accession to the throne

1957
Proposals for major alterations to Savoy Place approved (construction is completed in 1961)

1960
Honours graduates in Physics made exempt from the IEE membership examination

1961
The British Institution of Radio Engineers (later the Institution of Electronic and Radio Engineers, or IERE) is granted its first Charter

1962
IEE membership reaches 50,000

...or commuting in

Leading light

Pedestrians and cyclists rely on the lights which line our city streets. Margaret Partridge, a founding member of the Women's Engineering Society, brought electric street lights to towns and villages in Devon and promoted the sale of electricity to domestic homes in the south-west.

Staying on track

Twice president of the IEE (1880 and 1883), Sir William Preece increased railway safety through the application of electricity to signalling and passenger-to-guard-and-drive communications.

In 2016, Loughborough University received an IET Innovation Award for Repoint, a fail-safe rail track switching technology that offers the potential for increased capacity and reduced maintenance alongside a reduced whole life cost – without the need to build new railway tracks.

Working from home

Sir Tim Berners-Lee, computer scientist and IEE Honorary Fellow, invented the World-Wide Web in 1989, and was awarded the Mountbatten Medal for his accomplishments in 1996.

"We build it now so that those who come to it later will be able to create things that we cannot ourselves imagine."

Dame Stephanie 'Steve' Shirley, recipient of the Mountbatten Medal in 1999, arrived in the UK at age five as a Kindertransport refugee. Shirley built a $3 billion tech empire in 1960s England, with an all-female, work-from-home staff. She adopted the name "Steve" to help her in the male-dominated business world.

Charged travel

"Its possibilities are simply boundless" was the reply given by Walter C Bersey, an Associate Member of the IEE, when asked his thoughts on electrically propelled carriages in 1898.

The IET Code of Practice for Electric Vehicle Charging was published in 2012, and EV charging safety is now included in the Wiring Regulations.

1966

The IEE acquires its first computer

1964

The Institution of Production Engineers is granted its first Charter

1963

The IEE is registered as a charity

1965

The 'Electronics Letters' journal is launched

Charles Kao and George Hockham publish their paper on fibre optics in the Proceedings of the IEE

1967

The first IEE book is published

Peter Peregrinus Ltd (PPL), now known as IET Services, is established as a publisher and IT service provider

The IEE publishing department moves to Stevenage

One world...

Accelerating global innovation

For over half a century, IET Inspec has been indexing and delivering the world's leading scientific and technical papers, supporting pioneers accelerating research.

Originally based on papers in Science Abstracts publications starting in 1898, today Inspec contains over 20 million records of research literature, making it one of the most definitive databases for subject-specific and interdisciplinary research in the fields of engineering, physics and computer science.

1969
Inspec is established

IET Present Around the World

IET Present Around the World is a global competition for young people in engineering.

Amy Chen, representing the Americas region, was the 2019 runner-up with her presentation: *Astroplastic: from colon to colony.*

Amy participated in the International Genetically Engineered Machine Competition (iGEM) in 2017 as part of the UCalgary team, conceptualising a start-to-finish process for PHB bioplastic production from solid human waste. Her involvement in the project continued as a subsystem lead for Astroplastic, selected for engineered systems testing in microgravity.

Feeding the future

Small Robot Company, a British agritech start-up, won the IET Horizontal Innovation™ Award in 2018 to fund the development of 'Harry', a precision drilling and planting robot, from concept to in-field prototype.

Trained to sustain

Engineers and technologists are key to helping solve some of the world's biggest issues, such as sustainability. The IET Academy (scan the QR code to visit the website) provides courses that ensure engineers, whatever their level, are ready to tackle these problems – from wind energy to smart grids and much more. IET Codes of Practice on renewables and sustainability provide expert advice and guidance for engineers working in these fields.

1971
Computer department and Inspec move to Hitchin, UK

1980
First undergraduate degree course is accredited by the IEE

IEE

CEI examinations replace IEE examinations

The first IEE books published by PPL rather than Cambridge University Press

1976
The IEE committee is established to consider the education and training of Chartered Electrical Engineers

1987
The IEE merges with the Institution of Electronic and Radio Engineers

...one future

Deep thought

We have better maps of the surface of Mars than we do the bottom of our oceans. Scientists are however making remarkable insights into this vast water wilderness, uncovering its living wonders and learning how the deep makes life possible everywhere else on Earth.

In the 2020 IET EngTalk: 'Why the Deep Ocean Matters', (scan the QR code to watch) Dr Helen Scales makes the case for safeguarding the deep, and shares the benefits of bioinspiration for new materials and new medicines that may be gained from exploring this vital part of our planet.

Next generation

IET Junior STEM Personality of the Year winner, Callum Daniel, is a trailblazer who founded his own firm iCodeRobots at age seven. His mission is to give children of all backgrounds access to classes, training them to build and code robots.

Reaching out

The first IET named lecture to be held outside the UK - the 2010 Pinkerton lecture - saw a record-breaking 950 delegates in Bangalore joined by 150 virtual viewers via a live global webcast. Speaker Professor Steve Furber of the University of Manchester discussed 'The Relentless March of the Microchip.'

The IET Pinkerton lecture honours John Pinkerton, who was involved in designing the UK's first business computer in 1951.

#PortraitOfAnEngineer

Dr Ozak Esu is an electrical engineer, winner of the 2018 IET Young Woman Engineer of the Year Awards, and joint winner of the 2017 IET Mike Sargeant Career Achievement Medal, as well as a STEM Ambassador.

Growing up in Nigeria, Dr Esu experienced first-hand the frustrations associated with frequent power cuts. With encouragement from her parents, she was inspired to study Electronic and Electrical Engineering, and now leads and assists on various global projects within the critical systems, education, residential, and workplace sectors. These include projects in Nigeria, UAE, UK, and Europe.

"Engineering is an international and global career. It is about collaboratively utilising our individual creativity and ingenuity to solve real-world problems and improve lives."

1991
The IEE moves to Stevenage, UK

The IEE merges with the Institution of Manufacturing Engineers

1992
The Mountbatten Medal is established by the National Electronics Council

The IEE Wiring Regulations are adopted by the British Standards Institute as BS 7671

1997
Austin Court opens in Birmingham, UK

US office opens in Edison, New Jersey

2001
The Institution of Incorporated Engineers (IIE) is granted its first Charter

2005
China office opens in Beijing

Beyond the stars...

Universal questions

For at least the last century, we have been broadcasting radio waves and listening to radio signals from space. This has allowed us to realise how much more of the universe there is beyond what we think we know.

Larger and more powerful astronomical instruments have been built in recent decades to look deeper into space. Professor Danielle George, astrophysicist and President of the IET, is part of a large international team working on the observatory of the Dark Universe – the Atacama Large Millimeter/submillimeter Array (ALMA).

The light in these wavelengths comes from vast cold clouds in space, at temperatures of just a few dozen degrees above absolute zero (-273°C), and from some of the earliest and furthest galaxies in our universe.

Astronomers can use this light to study the chemical and physical conditions in these molecular clouds. These regions of the universe are often dark and remain hidden from the visible range of light, but they shine intensely in the radio (millimetric and submillimetric) part of the EM spectrum.

Some of the most persistent questions in astronomy pertain to the origin of the galaxies, stars, planets and molecules that give rise to life. ALMA observes the light emitted by cold temperature objects in space, which allows us to untangle deep mysteries about planet formation. It also helps us uncover the 'digital fingerprints' of complex, even organic, molecules – of which little, if anything, is known, even now.

Within reach

At 57.7 feet long when fully extended and with seven motorised joints, Canadarm2 is a bigger, better, smarter version of the robotic arm that was previously on the International Space Station (ISS). Launched on STS-100 in April 2001, and able to be moved by both ground controllers and the expedition crews, the arm is capable of handling large payloads and helped build the entire ISS orbiting complex. It has even been used to move astronauts around during spacewalks.

Star spotting

Following in the footsteps of the Hubble telescope, the IET Faraday Challenge in 2018 invited teams of students to assist the mission of the James Webb Space Telescope team – to allow us to see far deeper into the universe than ever before.

2006
The IET Skills Survey launched

India office opens in Bangalore

The IEE and IIE merge to form the Institution of Engineering and Technology

2007
The Mark Sargeant Career Achievement Medal for Young Professionals is launched

2008
IET Faraday Challenge Days launched

The first combined edition of E&T magazine is published

2011
Requirements for medical locations first included in BS 7671 Requirements for Electrical Installations (IET Wiring Regulations)

...to life on Mars

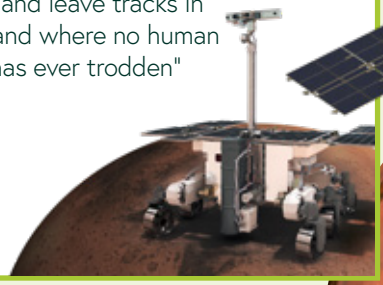
The edge of space

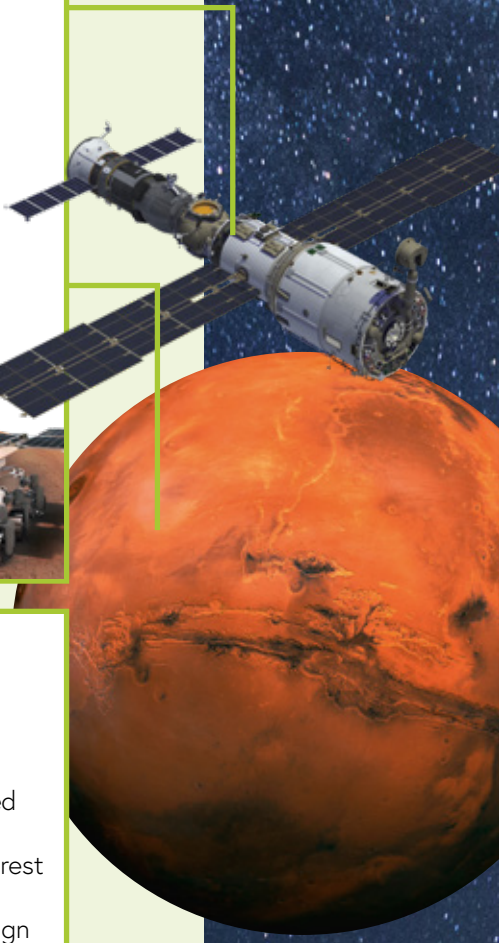
The ionosphere, part of the Earth's upper atmosphere, is home to many orbiting satellites as well as the ISS. Its existence was demonstrated by IEE Honorary Fellow Sir Edward Appleton using radio transmissions. His work was recognised with the Faraday Medal (1946) and a Nobel Prize (1947).

Life on Mars

A Rover from the European Space Agency will form part of the 2022 ExoMars mission. Abbie Hutty, winner of the 2013 IET Young Woman Engineer of the Year Awards, is the Lead Spacecraft Structures Engineer for the ExoMars Rover.

"If everything goes to plan something that I have helped design will go to another planet, see things no human eye has seen, and leave tracks in the sand where no human foot has ever trodden"





See the light

In 1873, Willoughby Smith presented a ground-breaking paper on the properties of the element selenium to the Society of Telegraph Engineers. While testing the high resistance properties of the metal for his work involving submarine telegraph cables, he discovered photoconductivity.

Smith later became President of the STE&E (1883) and his work has led to developments in multiple fields, including managing the imbalance of static charge created by the photoelectric effect on spacecraft and in understanding the behaviour of moon dust.

An idea that's out of this world

In a survey conducted by the IET, nearly half of children (46%) stated that the idea of one day visiting space is a key factor for their interest in STEM subjects, while over half (52%) said they would like to design products for a life on Mars.

2012

IET *FIRST*® LEGO® League launched in the UK

The IET Code of Practice for Electric Vehicle Charging is published

Wiring Regulations Digital went live

Savoy Place transformed into House of Qatar for the 2012 London Olympics

2013

The Apprentice and Technician of the Year Awards are launched

Diamond Jubilee Scholarships are established to support the UK engineering pipeline

The IET Achievement Medals are launched, amalgamating previous named medals into five annual awards for excellence in engineering, technology, and applied science

150
1871 - 2021

Our 150th anniversary celebrations started back in October 2020, when Professor Danielle George became the President of the IET. While a lot of activities planned for the year have gone virtual, we still hope it will be the start of an ongoing conversation, not just about the significant positive impact engineers are having, and will continue to have, on our world, but also to change the narrative on what being an engineer really means.

The IET President's Address 2020

#DifferenceMakers

The world needs inspiring engineers now more than ever, which is why we need to connect with young people and show them what engineering and technology really is, sharing how STEM can contribute to solving problems that they're passionate about.

To do this, and leave a legacy behind from our anniversary year, we created a global #DifferenceMakers campaign; a social movement showcasing incredible people and the positive impact they're having, and inspiring young people to join us in engineering a better world.

We're telling stories of innovators, activists, researchers and business pioneers who are using STEM to solve a variety of challenges across the globe – focusing particularly on how we can engineer a more sustainable future. We want to give a global platform to showcase how these people are contributing to making a real difference, and more importantly – to inspire young people to take action themselves.

IET DIFFERENCE MAKERS

2015
The IET Volunteer Medal is launched

2016
Savoy Place is officially reopened by HRH The Princess Royal after a major refurbishment

2017
40-year anniversary of the IET Young Woman Engineer of the Year Awards

2020
Inspec reaches 20 million records

Naomi Climer takes office as the first female President of the IET

Engineering Open House Day launched

The IET Guide to Electrical Installations in Medical Locations is published

2019
The Present Around the World competition goes online, widening global access

The IET re-engineers its brand to enrich its versatility, and better reflect its diverse membership and ever-increasing portfolio

IET The Institution of Engineering and Technology

2021

The IET celebrates its 150th anniversary

What's next?

As we look to the IET's next chapter, we will be staying true to our purpose; continuing to deliver solutions to evolving global challenges and remaining relevant in an ever-changing world.

Five Societal Challenges

To survive and thrive over the next 150 years, we're looking beyond our immediate horizon to how we will make a difference – starting with the next decade and our 2030 strategy.

We have identified five Societal Challenges where the engineering profession and the IET can make an impact. Each is inspired by the United Nations 17 Sustainable Development Goals, the European Union's Horizon 2020 challenges and the UK's Industrial Strategy Grand Challenges.

1. **Sustainability and Climate Change**
   helping the planet through sustainable living
2. **Digital Futures**
   helping improve people's lives through technology
3. **Healthy Lives**
   helping people live healthier lives
4. **People-centric Infrastructure**
   helping ensure that the future has infrastructure that is based around human needs
5. **Productive Manufacturing**
   helping manufacturing become more efficient and effective to meet people's future needs

Our strategic themes

These themes bring together our knowledge and expertise in providing engineering and technology solutions to our audiences (members, volunteers, practitioners, academia, researchers and industry) so that they can feel supported to meet the needs of broader society:

- Engineering excellence
- Skills, learning and networks
- Innovation and policy
- Research solutions
- Education

How we'll do it

We have to continue to **inspire, inform** and **influence** the many audiences that we serve, while remaining a diverse home for engineering and technology. We're committed to reflecting and representing the breadth and depth of the engineering community, and as a professional home for life – we want to ensure everyone feels included and represented, whatever their background.

The Institution of Engineering and Technology

150
1871 - 2021

Celebrating 150 years of making a difference

Our offices

London, UK
T +44 (0)20 7344 8460
E faradaycentre@ietvenues.co.uk

Stevenage, UK
T +44 (0)1438 313311
E postmaster@theiet.org

Beijing, China
T +86 10 6566 4687
E china@theiet.org
W theiet.org.cn

Hong Kong
T +852 2521 2140
E adminap@theiet.org

Bangalore, India
T +91 80 4089 2222
E india@theiet.in
W theiet.in

New Jersey, USA
T +1 (732) 321 5575
E ietusa@theiet.org

@TheIET

theiet.org