



The Institute of Science & Technology One-day Technical Conference 2018



The Professional Body for Technicians by Technicians
Supporting technical staff in Science, technology, engineering, arts, media and IT

20th SEPTEMBER 2018

Crowne Plaza Hotel

Stephenson Quarter | Newcastle | NE1 3SA

KEY SPONSORS



09:30 - 10:00	Registration Refreshments and time to visit the sponsors' exhibition
10:00 - 10:10	Welcome and opening remarks by Terry Croft, MBE FIScT CSci, CEO and Chairman of IST
10:10 - 10:40	Keynote 1 – Dr Kianoush Nazarpour, Reader in Biomedical Engineering, Newcastle University, this talk will review the history of bionic hands and share recent exciting developments in prosthetic control design.
10:45 - 11:30	Workshop 1 – Northumbrian Suite Workshop 2 – Rocket Suite Workshop 3 – Planet Suite Workshop 4 – The Stephenson Room Workshop 5 – Invicta Executive Suite
11:30 - 12:00	Refreshment break and time to visit the sponsors' exhibition and view the competition posters
12:00 - 12:45	Workshop 6 – The Stephenson Room Workshop 7 – Invicta Executive Suite Workshop 8 – Planet Suite Workshop 9 – Rocket Suite Workshop 10 – Northumbrian Suite
12:45 - 13:45	Lunch – time to visit the sponsor exhibition and view the competition posters
13:50 - 14:20	Keynote 2 – Professor Sir Doug Turnbull, Professor of Neurology, University of Newcastle upon Tyne, will be explaining to us which diseases affect the small circle of life.
14:20 - 14:30	Presentation of the Roger Dainty Poster Award
14:35 - 15:20	Workshop 11 – Northumbrian Suite Workshop 12 – Planet Suite Workshop 13 – Rocket Suite Workshop 14 – The Stephenson Room Workshop 15 – Invicta Executive Suite
15:20 - 15:50	Refreshment break – and time to visit the sponsors' exhibition
15:50 - 16:00	Closing Remarks
16:00	Close of Day

Welcome note: The Stephenson Room

Terry Croft, MBE FIScT CSci
CEO and Chairman of IST

Director of the National
Technician Development
Centre



Keynote 1: The Stephenson Room

Dr Kianoush Nazarpour
Reader, Biomedical Engineering

Star Wars, Terminator, Bionic
Hands – Science Fiction or
Reality?



Keynote 2: The Stephenson Room

Professor Sir Doug Turnbull
Professor of Neurology

Diseases affecting the small
circle of life.



Tyne Bridge



Earl Grey's Monument



St Nicholas Cathedral

Workshop 1:
(Northumbrian Suite)

MotoE Electric Superbike

Miquel Gimeno-Fabra
University of Nottingham

Robert Driver
Brunel University



This workshop will take a look at the MotoE dynamic Engineering Competition that challenges teams from all over the world to design and build and race electric motorbikes. The series enables teams to test themselves against the best competitors in the world on iconic race tracks throughout Europe.

Our teams form an inclusive club of manufacturers, technical institutions and privateer constructors who are racing on the same track at the same time to be at the cutting edge of clean technology that powers the next generation of motorsport. The field is level, and the same rules apply to all competitors making this the most open competition that exists today.

Workshop 2: (Rocket Suite)

Plastic – What is the Future?

Jon Harvey
The Environment Agency
Plastics and Sustainability
Team



The Plastics and Sustainability team at the Environment Agency was set up to reduce the plastic tide, we have been successfully doing this by working with many partners. Recent successes have included working with multinational coffee companies, receiving pledges from over 600 children and adding plastic to our bathing water monitoring programme. We will now be exploring how to work on a national and international scale to fully understand the extent of the issue, learn what we can do better and ultimately work in international collaboration to have the greatest impact.

This workshop will explore the issue of plastic and what can be done collaboratively to reduce the plastic entering our environment.

Workshop 3: (Planet Suite)

Just in time learning: Using
QR codes to bring digital
resources to life in the
fashion studio

Marie Slater & Kate Soper
Manchester Metropolitan
University

TRY ME



Fashion students at Manchester Met have always been well supported by a talented team of technicians, and an array of innovative and cutting edge equipment. However, as student expectations of support increase, and technician time at a premium, a new multi-tiered approach to supporting students' learning has evolved to satisfy diverse expectations and demands.

In this workshop we will explore the creative journey from hard copy how-to help guides, to QR codes situated in the fashion studios. The supporting resources first evolved from paper to digital guides, which are now located in the virtual learning environment. Students' now have access 24/7 to a multitude of written and video support guides. We have gone one step further, by using QR codes located in the fashion studios, students have mobile access to these guides, at the moments they need them most. We will share our lessons learnt during this process, the benefits we have identified along with our vision for the future.

Workshop 4:
(The Stephenson Room)

A technician's eye view of
the history of science

Andy Connelly
University of Leeds



Technicians have long been the invisible members of the scientific and artistic workforce. Initiatives like the *Technician Commitment* and *Technicians Make it Happen* are changing that for us; however, technician's involvement in the making and recording of scientific knowledge has long been hidden.

In this workshop Andy Connelly looks at the lives of some fascinating technicians from the history of science*. Through their stories he starts to develop a history of technicians influence on science and on the production of scientific knowledge.

Workshop 5:
(Invicta Executive Suite)

Centrifugation Clinic

Peter Rignall
Eppendorf



This workshop will be delivered on Centrifugation techniques:

- How to properly use your centrifuge – a focus on health and safety
- A guide to different types of centrifuges and what applications they are used for
- How to extend the life of your centrifuge – a guide to good practice and maintenance

Workshop 6:
(*The Stephenson Room*)

CERN – working on the
edge of technology

Raymond Veness
CERN



This workshop will give you an outlook of examples of engineering technology that is being developed for the Large Hadron Collider and other particle accelerators. Raymond will show how technicians and engineers (who make up 2/3 of CERN's staff) are a key component in recent discoveries such as the Higg's Boson.

Workshop 7:
(*Invicta Executive Suite*)

Our WorkFit Journey at the
Environment Agency

James Trout
Environment Agency



This workshop will take a look at how working with the Downs Syndrome Associations WorkFit programme, gave some talented people an opportunity to help improve the environment for everyone.

This workshop is for anyone who would like to see how to increase diversity within their workplace.

Workshop 8: (*Planet Suite*)

The history and ethics of
laboratory animal research

Mark Ariaans
University of Sheffield



Most of the medicines we use today have been developed and tested using animal models. Many advancements in life sciences have also relied heavily on laboratory animal research. Although many people in our society and also within the scientific community have strong reservations about animal research, at this point in time alternatives to animal models for studying complex biological processes are limited. This means that each of us is faced with a very difficult personal dilemma: "Do I believe that medical and scientific advancement is sufficiently important to justify experimentation on animals?"

As is the case with many ethical dilemmas, there is no clear-cut solution and the answer to this question will differ for each person. This workshop definitely does not claim to have the answer. Nor does it try to convince attendants one way or the other. Its aim is to provide people with information to help them make up their own minds. The session will explore the history of animal research, its potential applications and legal and practical restrictions, and discuss some of the most common ethical and practical considerations surrounding animal research.

Workshop 9: (*Rocket Suite*)

ULT Freezers and
Sustainability

Sarah Wright
Eppendorf



This workshop will be delivered on -80oC (ultra-low temperature) freezers:

- How to recognise good ULT freezers
- Energy efficiency and sustainability
- How to extend the life of your freezer – a guide to good practice and maintenance

Workshop 10:
(*Northumbrian Suite*)

Technical Staff Performance
Management 'The First
Conversation'

Mark McDonagh
Staffordshire University

Paul Walsh
Manchester Metropolitan
University



All managers have to deal with performance issues but getting it right can be tricky. This interactive session looks at a model for performance feedback conversations and applies it to a technical setting. It is aimed at those new to management, particularly people making the transition from technical expert to team leader, and will focus on the sometimes, daunting first conversation. Using video case study, participants will have the opportunity to explore with colleagues different approaches to performance conversations.

Workshop 11:
(Northumbrian Suite)

The Future of Technical Services: How to Make Friends and Influence People

Richard Cutting & Karen Henderson
Senior Technical Managers Network



"Do we have a national strategy for development and implementation of a sustainable business model for technical services? If yes, who defines this and how? Is this fit-for-purpose and does it encompass all aspects, including the development of the technical workforce and spaces of the future? If not, do we need an overarching strategy of this type?"



This session will be interactive and aimed at gathering information in order to answer the above. We will also seek to gauge overall levels of interest in forming a group of Technical Managers/Directors who would look strategically at the delivery of technical services, at a national level. One of the main objectives of this group will be horizon-scanning in order to anticipate and respond proactively to both internal and external factors, including societal, political and economic changes.

Workshop 12: (Planet Suite)

Professional Registration? At my age?

Frank Fletcher
University of Sheffield



This workshop is aimed at Everyone, but with an emphasis on promoting Professional Registration in mid/late career.

I was late discovering Professional Registration and since being awarded Registered Scientist (RSci) status, I have had the privilege of being invited to deliver a presentation at Universities in the north of England where I have been able to share my thoughts about the benefits of Professional Registration, regardless of age.

Workshop 13: (Rocket Suite)

CPD: A practical toolkit for building your portfolio

Jemma Walker
Birmingham Women's Hospital



This session is aimed at Science Council Registrants at all levels and people who are required to do Continuing Professional Development (CPD). The workshop will encourage and support technical staff in developing their CPD portfolios. Discussing the tools, tricks and tips that work and sharing ideas on how to avoid the pitfalls of CPD.

Workshop 14:
(The Stephenson Room)

The Technician Commitment: A practical workshop on Technicians making it happen

Jon Kelly & Sarah McCafferty
University of Edinburgh



This session will give background and share experiences and examples from the University of Edinburgh followed by group work and discussion on e.g. who to engage with to progress the Technician Commitment initiatives at your institute; what are achievable goals etc.

PROUD SUPPORTER OF THE
Technician Commitment

Workshop 15:
(Invicta Executive Suite)

Giving yourself a boost – how to feel valued for what you do

Charlotte Ashley-Roberts
Institute of Physics



By the end of this workshop you will understand:

- How to ensure you recognise your own achievements
- How to recognise the value you bring to your organisation and gain confidence in your abilities
- How to gain external recognition for your skills

The workshop is aimed at all technicians, particularly in science and engineering organisations.

The Institute of Science & Technology Awards

The Roger Dainty Best Poster Prizes – Win upto £150 Amazon Gift card

We will be offering three prizes for the Best Poster and this is in honour of Roger Dainty MBE, FIScT. It's your chance to share your work experience with others in an informal way, to tell a story in pictures and/or words.

Please email wendymason@istonline.org.uk if you would like to submit a poster and we can arrange to reserve space in the hall. The Amazon gift card will be presented in the afternoon session of the event.





Attendance / CPD certificates will be sent to your emails after the conference to all delegates.

There will be an IST professional registration desk open all day, with IST staff available to help with your application or any advice, should you need it, please drop in.

Because there is a limit on the size of some of the technical talks / workshops we will ask you to choose your 3 talks/workshops (one from each session) before you attend on the day, full details will be sent one month before the event for all delegates. Please reply promptly to secure a place on a workshop. We cannot guarantee a place will be available on the day.

For professionally registered delegates (RSciTech, RSci, CSci), and also those delegates considering applying for professional registration, the conference and its workshops will contribute significantly to your professional and personal development (PPD). The programme includes 2 highly motivational talks from keynote speakers, plus 3 technical workshops (chosen from the 15 available) throughout the day. The conference also provides opportunities to participate through poster presentations, networking, and supplier/manufacture stands. All these will add considerably to your personal development, annual PPD score, and enhance your CV.

Exhibitors

Asynt

huber
high precision thermoregulation

KMF

SARSTEDT

TELEDYNE ISCO
Everywhere you look™

**Brammer
Buck &
Hickman**

Powered by
RUBIX

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scientific
Inspired Solutions for your Laboratory

**SCIENTIFIC
LABORATORY
SUPPLIES**



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LABORATORY TECHNOLOGY

CEM

IOP Institute
of Physics

eppendorf

Julabo
THE TEMPERATURE CONTROL COMPANY

radleys
innovations for chemistry

TECQUIPMENT

YORLAB

Career Zone Supporters

**National
Technician
Development
Centre**
PARTNER AFFILIATE

UBMA
University Bioscience Managers Association

HEaTED

WORKFiT
Connecting employers and employees

**Down's Syndrome
Association**
A Registered Charity No. 1061474