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ASEC 2022 Location

INCOSE UK 2021 Membership Survey Results
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Annual Systems Engineering Conference 2022

ASEC 2022 is heading to… Newcastle Upon Tyne!

We are proud to announce that ASEC 2022 will be taking place at the Crown Plaza, Newcastle on 22nd and 23rd November 2022.

Newcastle is an outstanding location for this year’s ASEC. As well as being a vibrant and thriving city with excellent air and rail links, it is a good location for the Northeast and Scottish groups and there is an engineering faculty at Newcastle University.

The NewcastleGateshead Convention Bureau have been very welcoming and are keen to host our event.

So we look forward to seeing you in Newcastle for ASEC 2022.

The event website is now live.

ASEC 2022 Theme

“Building towards a brighter Future”

asec2022.org.uk

Exploiting Change and Transformation
Moving the Systems Engineering Profession forward
Developing Professionals for the Future
Embedding a Systems Approach in the UK

To keep up to date with the latest ASEC news visit asec2022.org.uk
Call for Content Timelines

**Call for Papers**
- 16 February 2022: Call for presentations issued
- 28 March 2022: Submission of abstracts
- w/c 11 April 2022: Invitation to submit papers
- 09 May 2022: Submission deadline for six-page papers
- 17 June 2022: Review process complete

**Call for Tutorials**
- 16 February 2022: Call for tutorials issued
- 28 March 2022: Submission of abstracts
- w/c 11 April 2022: Acceptance of abstracts
- 09 May 2022: Submission of full tutorial proposals
- w/c 23 May 2022: Final conference tutors will be selected and notified
- 17 June 2022: Submission of words advertising tutorials to the INCOSE UK Secretariat (these will be included in the ASEC 2021 promotional material)

**ASEC 2022 Sponsorship**

ASEC 2022 offers opportunities to promote your business to the delegates and exhibitors. Our events attract senior systems engineers from a broad range of industries, many of whom help to shape investment decisions within their organisations. You can display your company’s products and services at an exhibition stand or raise your company’s profile through sponsorship.

The full description of the opportunities can be found in the sponsorship document online.

- **Online Programme, Handbook and Proceedings (up to 3 Sponsors)** £1,120 (+VAT)
- **Registration** £1,120 (+VAT)
- **“Bring your own bag” £250 (+VAT)**

In 2021 we encouraged our delegates to bring their own bag to ASEC, previously we have provided INCOSE UK branded canvas bags. We felt “bring your own” was a great way for us to promote sustainability by printing less bags and encouraging delegates to recycle bags they already had.

This year we would like to go a step further by securing a sponsor. The sponsor would provide a £250 for the raffle prize, the winning delegate will then be asked to name a charity or cause that promote sustainability which the sponsor will donate the money. The sponsorship document will be released in due course. If you’re interested in any of these packages, please email events@incoseuk.org.

- **Morning Coffee £430 (+VAT)**
- **Afternoon Tea £430 (+VAT)**
- **Lunch £835 (+VAT)**
- **Pre-Dinner Drinks £1,385 (+VAT)**
- **Wine at the Event Dinner £835 (+VAT)**
- **Event Dinner £1,700 (+VAT)**

ASEC attracts a wide diversity of attendees from the Systems Engineering community and delegates from other communities interested in take a Systems Engineering approach to complex systems. From students to experts it facilitates a large networking opportunity, in addition to a valuable learning experience. Indeed, last year, our newest author was also winner of best paper and best presentation.

To keep up to date with the latest ASEC news visit asec2022.org.uk
This data is collected, in part, because it is linked to the Royal Academy of Engineering’s research into Diversity in Engineering. It also gives us a broad overview of the spectrum of people involved in the Systems Engineering field.

What is your gender?
- Male: 84%
- Female: 14%
- Prefer not to say: 2%

What is your age?
- 18 - 29: 23.40%
- 30 - 40: 18.09%
- 41 - 50: 17.02%
- 51 - 60: 23.02%
- 61+: 1.06%
- Prefer not to say: 1.06%

What level of volunteering are you able to /willing to do?
- Join the Council: 20.69%
- Look to assist the Council in a deputy or assistant role: 9.20%
- Join a Working Group Committee: 14.04%
- Engage in a Working Group: 35.63%
- Do some form of outreach – STEM/Awareness: 14.94%
- Be an assessor/reviewer Certification: 11.84%
- Be an assessor/reviewer Professional Registration: 22.99%
- Be a Professional Registration Advisor: 21.88%
- Watch and Learn: 13.33%
- Other: 12.79%
- Good for your career development: 46.51%
- Gain leadership: 12.79%
- Enables you to connect with others: 14.94%
- Help to further the cause of SE: 23.40%
- Other: 11.49%

Comments
- Personal Satisfaction, giving back, legacy.
- Help others in the pursuit of their Systems Engineering career goals.
- Knowledge Sharing
- Helping the country skill up for the next generation.
- Integration with other engineering societies, best practice, etc.
- Work benefits
- Help other engineers and show that it's not only good but interesting

If you would like to volunteer, what are the barriers stopping you from volunteering?
- Not enough time: 61.11%
- Company won’t give their approval: 30.56%
- Other: 8.33%
Which technical conference or training events have you attended in the last two years?*

- INCOSE UK ASEC: 51.61%
- INCOSE International Workshop: 24.19%
- INCOSE UK Training Day: 1.61%
- Endorsed Training Provider Session: 6.45%
- Meet the Authors: 19.35%
- Professional Development Online Session: 48.39%

*This was a multiple choice question, therefore the figures given represent the answers received rather than the total of those who answer the question.

Would you like to see more online courses offered through INCOSE UK?

- Yes: 51.72%
- No: 44.83%
- Not Sure: 3.45%

What type of courses would you like?

- MBSE, SysML, HIS: Approaches
- Design, Requirements, Analysis, Thinking, Integration, Testing and Management: Systems
- ASEP, CSEP, ESEP, Certification Support: Professional Development

If you have attended the Professional Development Zoom calls, did you find them useful?

- A little useful: 18.18%
- Very useful: 18.32%
- A lot useful: 62.39%
- Did not attend: 20.27%

What aspects could INCOSE UK improve or introduce that would bring added value to your membership?

The comments were largely positive, with many people requesting local, UK events and more online activities. There was also a strong call for more community interaction and engagement and better and easier access to free resources, papers, books and new developments.

Why do you hold membership with INCOSE UK?

- Professional Development
- Access to INCOSE UK resources and training
- Networking
- Growth within their field
- Professional recognition
- Certification and Registration
- The only SE focused institution in the UK
- Promote SE
- Keeping aware of developments in SE
- Keeping aware of SE activities and new ideas
- Furthering SE careers
- Improving Skills
- Interaction with like minded people

Professional Development

Which of the following qualifications would you consider?

- CEng: 44.93%
- ASEP: 19.46%
- CSEP: 52.70%
- ESEP: 20.27%
- EngTech & Eng received no responses.

If you have attended the Professional Development Zoom calls, did you find them useful?

- A little useful: 18.18%
- Very useful: 18.32%
- A lot useful: 62.39%
- Did not attend: 20.27%
INCOSE UK 2021 Survey

Do you engage with INCOSE International?

- Often: 51.58%
- Never: 16.84%
- Sometimes: 31.58%

The INCOSE UK Council would like to thank you for your membership and ask if you would like to share anything else.

Are there any areas in which you feel that INCOSE UK has improved upon or exceeded your expectations over the past year? E.g. events, communication, Professional Development?

- ASEC
- Publications Stream
- Improved Support for Professional Registration
- PD and Webinar events
- Inclusion
- The change to IfSE
- Diversity, equality and inclusion activities
- Good quality SE resources
- Adjusting to the pandemic
- Communication
- ASEC Papers
- PD Support

The INCOSE UK would like to congratulate Seyi Asa, Tom Aldous and Nathan Drury for being elected to the Early Careers Forum Committee.

ECF Election Results,

Events Coordinator - Seyi Asa

“I’m excited to be a part of the ECF committee this year. I look forward to working with the members of the committee to enhance and aid in the development of early career System Engineers through the development, direction, and coordination of various events.”

Group Liaison - Tom Aldous

“I am excited to start my role in the ECF committee as group liaison! Over the coming year, I hope to continue and improve the collaboration and engagement with all the other INCOSE UK groups, helping ECF’s development and bringing fresh ideas to the industry! Please get in touch if you can help with our INCOSE handbook series running throughout the year!”

Outreach and Communications - Nathan Drury

“I first heard about Systems Engineering in my master’s year of aeronautical engineering, and ever since I haven’t been able to shake the thought of ‘why didn’t I hear about this sooner?’ As such, I’m excited to do my part in increasing awareness of what I believe to be an incredibly valuable approach to engineering, yet one that the vast majority of people have never heard about. I also want to continue to learn more about Systems Engineering, and a great way to do that is by teaching others!”

We would like to thank all those members who took time to complete the survey.

There are some useful and interesting findings coming out of the survey which will be used to influence our future direction as we grow the organisation and start looking for new initiatives to pursue.

Ian Gibson
President, INCOSE UK
The session was concise and well organised, even though there could be endless courses on these topics.

Keary was an informed, approachable facilitator and an excellent communicator – he was able to describe and present the course details in an engaging way using fun and effective analogies. The practical exercises were excellent for us to see how the techniques and theory work in practice.

I’m fairly new to systems engineering and found this course extremely valuable. Keary was fantastic at presenting the content in an easy to follow and logical way. He was great at keeping us engaged, which in my opinion is absolutely key especially in a virtual setting. I’m looking forward to implementing some of the new tools I learnt in my day-to-day work.

It was agreed that although enjoyable the group practical exercises would have been preferable in-person rather than on-line. So, we are pleased to announce that we are taking bookings for the next Endorsed Training Provider event at Marsh Farm Hotel, Swindon.
Professional Registration

We would like to congratulate the following members who have attained CEng, EngTech and IEng. Members listed have given their consent to be published.

Greg Cipollone
Urte Steponkute

Professional Development

Professional Development Sessions

16th March 2022 at 12pm (GMT) SEP Certification Clinic
Attend this session to gain a better understanding of INCOSE UK SEP Certification. The session will be an open forum for discussion and will cover an overview of the requirements to apply for each level and details of the application process. Input from a recent candidate and a Certification Application Reviewer will be included along with a Q&A.

All sessions are delivered via Zoom. To register please email: profdev@incoseuk.org

CTI Introduces SE-ZERT® Courses in 2022

The SE-ZERT® program is a vocational qualification issued by the German INCOSE Chapter (GISE).

The value of SE-ZERT® for individuals:

- promotes professional development as a systems engineering practitioner
- qualifies technical, social and context-dependent competencies
- supports continuous education as a personal competitive advantage
- establishes future-oriented action for successful collaboration within project teams

CTI Introduces SE-ZERT®
Courses in 2022

The booking system for the SEP Exam on Wednesday 6th April 2022 is now open.

In order to gain ASEF or CSEP accreditation it is necessary for INCOSE UK members to pass the certification knowledge examination.

INCOSE UK are offering their members the opportunity to sit a paper version of this exam, which is based on the INCOSE Systems Engineering Handbook v4 and consists of 100 multiple choice questions.

Candidates will have 100 minutes to complete the examination and extra time can be allowed for those members who meet certain qualifying criteria.

Membership of INCOSE UK is required for anyone wishing to register for and sit the examination.

Those candidates who achieve a successful outcome must then apply for ASEF or CSEP, via the INCOSE UK online application process, in order to receive their accreditation. This attracts an additional fee.

For more general information and cost on the Certification Process with INCOSE UK download our U1- guide to Professional Certification HERE.

Professional Registration Transfers, Additional Membership and Dual Registration Clinic
Professional Registration Webinar
C/D/E Competences Clinic
Professional Registration Webinar

Certification SEP Exam: Wednesday 6th of April

Urte Steponkute - CEng Case Study

Urte is a Model Based Systems Engineering (MBSE) Lead and Leonardo and has recently attained her CEng.

Urte says that, though it’s early days in her career, gaining the CEng has given her more confidence as an engineer that her knowledge and professionalism is recognised by the INCOSE UK community and the Engineering Council.

You can read the rest of Urte’s Case Study online.

Greg Cipollone
Urte Steponkute

Interview Preparation Clinic
SEP Certification Clinic
C/D/E Competences Clinic
Professional Registration Webinar
Professional Registration Webinar

Visit our website to register for an upcoming course today!

REGISTER TODAY!
Certification

We would like to congratulate the following members who have attained ASEP, CSEP and ESEP since the last ePreview. Members listed have given their consent to be published.

Case Studies

Graham Houghton - CSEP Case Study

Graham is a recent CSEP currently working as a Project Engineering Manager for PPP/Sellafield. Having successfully gained ASEP accreditation in 2020, Graham was keen to demonstrate to himself that his practical knowledge and experience gained in project engineering management over the past 12 years was sufficient to achieve CSEP accreditation.

You can read the rest of Graham’s Case Study online.

John Caulfield - CSEP Case Study

John is a Senior Engineering Manager at Cavendish Nuclear Limited who has just passed his CSEP exam. When asked what advice he would give future CSEP candidates, John says “Just do it, you probably have more SE experience than you think. I would recommend attending an INCOSE UK SEP Certification Clinic prior to starting your application and talk to colleagues who have already been through the process”.

You can read the rest of John’s Case Study online.

INCOSE UK News

Inclusion and Diversity in Systems Engineering Event

We are delighted to invite you to take part in our second Inclusion & Diversity event in partnership with Optima Systems Consulting to celebrate and share good practice and positive actions as well as to help launch our new Inclusion Support Network.

Event details:

Date: Thursday 3 March 2022
Time: 1pm until 5pm followed by networking reception
Location: Clifton Pavilion, Bristol Zoo Gardens, BS8 3HH (Map)

Hosted and arranged by Optima Systems Consultancy as Platinum Sponsors, the event is free and everyone welcome (non-members too). Expect a lively and interactive event with inspirational speakers, open discussions, great insights, and the opportunity to meet and network with other fellow professionals across different sectors.

CLIFTON PAVILION
BRISTOL ZOO GARDENS
03.03.22 | 1PM-6.30PM
INCLUSION & DIVERSITY
IN SYSTEMS ENGINEERING

Inspirational Speakers | Workshops
Panel discussions | Networking

REGISTRATION OPEN!
https://tinyurl.com/3p9f3twy
**INCOSE UK News**

**I'm A Volunteer and I do...**

**Beth Fitzpatrick**

Beth has done a variety of different types of volunteering, from participating in STEM activities to taking on more leadership positions. Beth is currently the Deputy Chair of the INCOSE UK Early Careers Forum and has agreed to take part in our "I'm a Volunteer and I Do" feature.

Beth says she gets "...exposure to a vast community of brilliant people and their skills. I learn a lot about different industries and the social and technical application of Systems Engineering" and urges people to get involved with volunteering.

The full feature can be [read here](#).

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**I'm A Systems Engineer and I do...**

**Jessica Korzeniowska**

Jessica is a systems engineer working at the UK Atomic Energy Authority and the recipient of the Best Paper, Best Paper by a New Author and Best Presentation at ASEC 2021.

She kindly took part in our regular "I'm a Systems Engineer and I Do" feature. When asked about what advice she would give a systems engineer who may be worried about becoming pigeon-holed in a particular discipline early on in their career Jessica said "Systems Engineering gives you the opportunity to work across so many different industries and types of technology, that you can end up with a very varied experience and have lots of options".

The full feature can be [read here](#).

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**I'm A Systems Engineer, I'm A Volunteer Features**

Over the years we have spoken to a wide variety of systems engineers and INCOSE UK Volunteers about why they do what they do, how they got into it and what advice they would give to others wishing to follow in their footsteps.

The full archive of Systems Engineers’s is available [here](#), and the Volunteer’s archive can be [found here](#).

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**INCOSE UK News**

**Paper Presentation - 2nd March 2022, 12.30**

"Bringing the Seven Samurai to Life: Managing complexity in capability delivery through time using Systems Thinking"

**Presented by Tom Ogden**

INCOSE UK would like to invite you to take part in the upcoming presentation. "Bringing the Seven Samurai to Life: Managing complexity in capability delivery through time using Systems Thinking".

Capability is generated at an enterprise level through the delivery and maintenance of complex Systems of Systems (SoS) [ISO/IEC/IEEE21839 (ISO, 2019)]. Managing the delivery of this capability is usually delegated to a programme or portfolio, whereby the SoS is partitioned into deliverable chunks, and responsibility given to a delivery vehicle (Project or Product) for its realisation through a defined lifecycle.

Often these partitioned elements will come together at a certain point to maintain or uplift the capability being delivered. Being able to visualise this through time is often difficult, and the focus of a delivery vehicle is on its given objectives, rather than understanding the impact it is having on the wider SoS. This can increase risk associated with capability delivery, and without a holistic view, the dependencies cannot be fully understood by the programme.

Recently we have been using the Seven Samurai methodology [Martin, J. 2004] to understand how a large-scale brownfield SoS, such as a communications satellite constellation, evolves through time. Applying the idea that the "intervention" system is the intended outcome of a delivery vehicle, and assuming the key events in capability, either degradation or improvements, are "problems" that occur within the context system, this paper will demonstrate that frameworks such as Seven Samurai can be used to describe capability evolution through time, and identify and trace interventions back to the problems they are solving.

This paper will use the examples above to demonstrate that is possible to add a time dimension, by considering several instantiations of the seven systems, where the previous Modified Context (S1*) becomes the next Context System (S1). It will then show the value of this representation, by showing how the Problems (P1), Interventions (S2) and Deployed Systems (S4) can be used to describe the activities and dependencies managed by a programme and its projects (S3), and inform its delivery and acceptance approaches.

To book for this presentation, click the More Info button on the event entry in the calendar.

Watch this space as more presentations are planned for the near future.
The Engineering Community

‘Engineering Ethics: Maintaining society's trust in the engineering profession’ – 6pm, 21 February

The ‘Engineering Ethics’ report proposes a series of actions for the engineering profession to take forward with the aim of promoting a more ethical culture within engineering.

It has been produced by the joint Engineering Ethics Reference Group (EERG), established by the Engineering Council and the Royal Academy of Engineering (RAEng) in 2019, chaired by Professor David Bogle CEng FICE MFR Eng, Deputy President of the Institution of Chemical Engineers (IChemE).

The launch event, which is free to attend, will include a panel discussion with Professor Bogle, Chi Onwurah MP, Engineering Council Chairman Professor Chris Atkin CEng FRSA FRAE FREng, Dr Ollie Folayan CEng FICE, co-founder of the Association for Black and Minority Ethnic Engineers (AFBE-UK), and others.

Register to attend at 6pm on 21 February: https://www.raeng.org.uk/events/events-programme/2022/february/engineering-ethics-report-launch

INCOSE UK Publications

The Don’t Panic titles are a series of short, thorough and easily-digestible guides on a number of Systems Engineering topics. The series began in 2017 and has expanded to four titles. With more planned in the coming years, the Don’t Panic series is perfect to dip your toe into various approaches to Systems Engineering you may not be familiar with.

Available in eBook and Paperback format

INCOSE UK Calendar

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<td>Equality, Diversity and Inclusion Event</td>
<td>Further information on page 17.</td>
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<tr>
<td>16 Mar 22</td>
<td>SEP Certification Clinic</td>
<td>Via Zoom. To register email <a href="mailto:profdev@incoseuk.org">profdev@incoseuk.org</a></td>
</tr>
<tr>
<td>5 - 7 Apr 22</td>
<td>Endorsed Training Provider Event</td>
<td>Marsh Farm Hotel, Royal Wootton Bassett</td>
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<td>6 Apr 22</td>
<td>SEP Exam</td>
<td>Marsh Farm Hotel, Royal Wootton Bassett</td>
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<tr>
<td>22 - 23 Nov 22</td>
<td>ASEC 2022</td>
<td>Crowne Plaza, Newcastle Upon Tyne</td>
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ADVERTISE WITH INCOSE UK

INCOSE UK is a Professional Engineering Institute (PEI) focused on Systems Engineering.

With over 1,000 members coming from diverse backgrounds covering purchasers, system developers and academics and representatives including aerospace, automotive, defence, transportation, communication and telecommunications, INCOSE UK is the best place to get your message across.

Please contact advertise@incoseuk.org for more information