Welcome

Welcome to the 77th issue of ePreview, the last in 2019, our Silver Jubilee year.

2019 was an important and busy year for INCOSE UK.

Our membership base has increased to around 1000, we have improved control of our expenditure using the new INCOSE UK financial model and negotiated a new Memorandum of Agreement with INCOSE, which allows us greater financial freedom with respect to our obligations to the wider INCOSE. It also saw the publication of a new addition to the Don’t Panic range of books and the release of the Z0 Guide and Poster.

If this was not enough, 2019 was the year we turned 25 and held our 10th ASEC.

Taking place in the Leeds Royal Armouries Museum, ASEC 2019 proved to be a great success and a fitting celebration for INCOSE UK. In this issue we cover the conference in full, highlighting the announcements and congratulating the winners of the Paper, Posters and Presentations awards from the event. The review starts on page 4.

As we look ahead, 2020 is looking to be another busy year for INCOSE UK. In this issue we have an important announcement regarding price increases in the coming year and the INCOSE UK President gives us an update regarding Professional Registration.

Lastly, we would like to wish all of our members a very Happy Christmas, and look forward to continuing to work with you all throughout 2020.
Dear INCOSE UK Member

INCOSE UK continues to go from strength to strength with many successes that will enable us to grow and develop as a professional, well-respected organisation:

1. **Membership** – The membership base has increased to around 1000

   2. **Professional Registration** – We have started to take more control over our Professional Registration process through an application to become a Licensed Member of the Engineering Council

   3. **New Financial Model** – We have introduced a new INCOSE UK financial model allowing us improved control of our expenditure

   4. **New MOA** – We have negotiated a new Memorandum of Agreement (MOA) with INCOSE Central allowing us greater financial freedom with respect to our obligations to the wider INCOSE.

In conjunction with other initiatives (such as new publications, endorsed training providers, events etc.) these measures will allow INCOSE UK to continue to generate the necessary revenue required to drive improvements within the Systems Engineering profession. To ensure we can continue to be successful INCOSE UK has to keep in step with developments within the wider INCOSE and as the largest Chapter we have influence and sway on the international stage.

INCOSE have notified us that from 1 January 2020, they will be increasing the fees for both membership and certification. It has, therefore, been necessary for INCOSE UK to respond by reviewing our fees. As part of this exercise, we have need taken into consideration anticipated exchange rate fluctuations in order to avoid significant losses whilst maintaining the level of service to the membership and protecting our long-term viability.

The review has now been completed and INCOSE UK will be increasing the fees for both membership and certification in line with wider INCOSE from 1 January 2020. INCOSE UK has also reviewed the Professional Registration fees to ensure we remain competitive with the other institutions. These changes can be found in the table below and on the INCOSE UK website.
### INCOSE UK Standard Membership Fees

<table>
<thead>
<tr>
<th>Membership Type</th>
<th>Duration</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member (MInCOSE)</td>
<td>1 year</td>
<td>£135.00</td>
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<tr>
<td>Member (MInCOSE)</td>
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<tr>
<td>Member (MInCOSE)</td>
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<tr>
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</tr>
<tr>
<td>Student</td>
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### INCOSE UK Professional Registered Membership Fees

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<thead>
<tr>
<th>Membership Type</th>
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<tr>
<td>CEng</td>
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</tr>
<tr>
<td>IEng</td>
<td>1 year</td>
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</tr>
<tr>
<td>EngTech</td>
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### INCOSE UK Certification Application Fees

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>ASEP</td>
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</tr>
<tr>
<td>ASEP to CSEP</td>
<td>£170.00</td>
</tr>
<tr>
<td>CSEP</td>
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<tr>
<td>ESEP</td>
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### Certification Renewal Fees

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>ASEP (5 years)</td>
<td>£85.00</td>
</tr>
<tr>
<td>CSEP (3 years)</td>
<td>£85.00</td>
</tr>
</tbody>
</table>

We understand that increases to fees are never welcomed but this action is necessary to ensure the longevity of the profession in the UK that we all hold in high regard.

Yours sincerely

Philip Savvides
INCOSE UK Financial Director
ASEC 2019 in the INCOSE UK

ASEC 2019, itself in its 10th year, came at the end of INCOSE UKs 25th Anniversary year. Over the next few pages we look back at the conference, reflect on its highlights and cover some of the announcements made at INCOSE UKs flagship event.

After much planning and preparation, ASEC2019 the 10th Annual Systems Engineering Conference had arrived. The conference is always an excellent opportunity to hear about the latest techniques and innovations in Systems Engineering, attend tutorials and learn new skills. This year was also an opportunity for members to celebrate and reflect on 25 years of INCOSE UK.

The Royal Armouries Museum venue in Leeds was secured back in 2017. The intention of the events team was for the venue to feel special, befitting of our anniversary, rather than just a hotel or convention centre and from the feedback of attendees, that goal was achieved.

In terms of papers and presentations, ASEC 2019 saw the introduction of the ‘Best Paper by a New Author and Presenter’ award sponsored by Charterhouse Systems Ltd. It is hoped that with this award, individuals who are new to INCOSE UK and maybe to the world of Systems Engineering, will submit a paper. This year’s winner Vicky Anderson has certainly set a great standard as she also won the Best Overall Paper award and came second in the Best Presentation award category. Congratulations Vicky.

Dyson generously continue to sponsor the Best Paper and Best Poster awards. Details of all the winners can be found on pg 9.

The presentations and papers for ASEC2019 are now available for download by members from incoseonline.org.uk.

This year saw a number of announcements being made throughout the conference, including the launch of the latest in the “Don’t Panic” series by Paul Davies (more information on pg 15) and the launch of Z0 which has been designed to clearly illustrate what Systems Engineering is.
The ASEC 2019 Exhibition Hall saw a significant uplift in the number of stands and there was much commercial activity and informative discussion during the networking breaks.

The 2nd edition of ASEC Proceedings was published, sponsored by QinetiQ along with the event brochure and handbook.

This year INCOSE UK also introduced the ‘Bring your own bag’ concept and delegates who did, were entered into a prize draw. Vicky Anderson was the lucky winner taking home a Z0 poster and a bottle of Inkosi wine.

Activities continued into the evening with pre-Dinner drinks held in the Oriental Gallery of the Royal Armouries Museum. It was a real privilege to have exclusive use of the gallery and
enjoy the historical exhibits whilst networking with other ASEC delegates. Cranfield University kindly sponsored the pre-dinner drinks.

The Event Dinner was held in the Wellington Suite and featured Inkosi wine as part of the Silver Jubilee celebration. At the end of dinner Kirsty Akroyd-Wallis, the INCOSE UK President, highlighted the members who had achieved success in attaining their ASEP, CSEP, ESEP or had become Professional Registered throughout the year. She then went on to announce the outstanding service award recipients (more on pg 12).

The final award of the evening was the newly created ‘President’s Award’. This will be awarded bi-annually by the outgoing INCOSE UK President and recognises an individual whom the President feels has shown extraordinary commitment and support to them during their term of office. This year’s award was presented by Ivan Mactaggart, to Philip Savvides (for more information see pg 12)

And finally, the other networking opportunity worthy of a mention was the Pub Quiz.

As the venue had no hotel rooms attached to it, attendees stayed in a range of nearby hotels. In an effort to encourage networking, a Pub Quiz was planned ahead of the event on the Monday night at the Head of Steam pub, kindly sponsored by QinetiQ. The quiz master, Ian Presland, did a great job in putting together some challenging questions for the teams of six. Of course, the fun began when attendees googled the pub for directions and discovered there were 3 ‘Heads of Steam’ in Leeds. Who knew! The quiz started a little late, but a fun evening was had by all.

For those of you who attended ASEC2019, we hope you found it a productive and useful conference and for those of you who could not join us we hope this will encourage you to join us in 2020, which the events team is now working on.

The next few pages have some feedback from delegates and a selection of photos from the event. A special mention should go to Andy Pickard who kindly took the photos and places no restrictions on use of the photos by INCOSE UK Ltd.

The INCOSE UK Events Team
What was your favourite part of the conference, and why?

“The tutorials on Day 1 and the presentations on Day 2. Both days were very interesting and informative, with a great breadth of presentations from different backgrounds, it was inspiring”

“The sense of camaraderie and community. The participants share a common set of values, are interested in work that presents a common set of challenges, opportunities”

In celebration of the INCOSE UK’s Silver Jubilee year, attendees at this year’s event were given a Silver Jubilee pin. The pin was a great success and could be seen sported upon many a jacket.
What do you consider to be the best aspects of INCOSE UK events?

“Spirit of inclusivity, ‘we’re all in it together’, open desire to gather and listen to feedback, consideration put into the human aspects ”

What did you like most about the Leeds Royal Armouries Museum?

“Very interesting venue, I think museums are the way forward, takes people out of their usual domain, and allows for the headspace to absorb what is going on ”

What was the most inspiring part of ASEC 2019?

“I think the optimism and forward looking topics presented throughout the event from the INCOSE council opening speeches through to the workshops and plenary sessions. It has given me as someone early in their career in SE, confidence of the opportunities to help solve and understand some of the most challenging questions in society.”
Nkosi the Rhino

Attendees to the Conference may have noticed a small stuffed rhinoceros popping up here and there. Meet Nkosi, the Rhino that INCOSE UK have just sponsored. The toy’s real life namesake lives in Folly Farm in Wales but keep an eye out for Nkosi using the hashtag #wheresnkositherhino on Social Media, you never know where he will show up next.

“Fantastic event, many thought-provoking presentations and good networking opportunities with so many systems engineering professionals, all set in a great venue”
Inkosi the Wine

This year’s Conference Dinner was well attended, and those enjoying the good food and atmosphere could also enjoy the Society’s very own wine. Made in South Africa, the wine was very much enjoyed by the attendees and was the perfect way to celebrate INCOSE UK’s 25th Anniversary.

ASEC Improvements

We are always looking for ways to improve your ASEC experience and have received many suggestions as to how we may develop the conference in the future.

“Higher quality papers and presentations”

“More information about the work being done through the various working groups, and how people could get involved”

“More time to speak to everyone. Breaks should be 45 minutes”

“More tutorials added to extra day”

“More campus type events to encourage more socialisation in the evenings and too many different hotels”

“UKAB Powerpoint slides to be displayed in networking area”
ASEC 2019 Awards

As with previous years, there was a high standard of Presentations and Papers at ASEC 2019. Featured below are the winners of the best Presentations, awarded at the event by attending delegates, the winners of the best Papers, selected at review and the winning Systems Research Showcase Competition, sponsored by Dyson.

ASEC 2019 New Author and Presenter Award

This award goes to the best paper by a new Author and Presenter, and has been awarded to Vicki Anderson for Paper and Presentation “The Open Source Satellite Programme: using Systems Thinking and MBSE to align the team and explore the problem”.

We would like to thank Charterhouse Systems Limited for sponsoring this award.

Paper

1st Place:  Vicky Anderson

“The Open Source Satellite Programme: using Systems Thinking and MBSE to align the team and explore the problem”

2nd Place:  Dr Claire Lucas and Dr Thomas Popham

“The opportunities and challenges of Systems Engineering in Undergraduate Programmes ”

We would like to thank Dyson for sponsoring this award.
Presentations

1st Place: Paul Davies
“The Interface Management – the Neglected Orphan of Systems Engineering”

2nd Place: Vicky Anderson
“The Open Source Satellite Programme: using Systems Thinking and MBSE to align the team and explore the problem”

3rd Place: Dr Claire Lucas and Dr Thomas Popham
“The opportunities and challenges of Systems Engineering in Undergraduate Programmes”

Presidents Award

This award goes to Philip Savvides, INCOSE UK Financial Director, for his assistance and input into the successful creation and implementation of the new INCOSE UK financial model enabling INCOSE UK to move from consistent predicted loss to a stable financial position.

Outstanding Service Awards

This award goes to Simon Perry for making a significant contribution to INCOSE UK as volunteer of long standing. He is a significant contributor to the MBSE Working Group and in addition, he has accepted a formal volunteer role as Series Editor on the Don’t Panic series of books and recently suggested the creation of the Conference Proceedings and put in a huge amount of volunteer effort to ensure their success.

This award also goes to Kevan Boll and Stephan Gregory for their support of the INCOSE UK certification examination process throughout 2019. The support of participants in their experience before and during the day meant that INCOSE UK were able to offer an enhanced experience to members and further consolidate INCOSE UK’s strength and development in SE Professional Programme.
The systematic derivation & evaluation of extended enterprise processes from system architectures

Alison McKay, Alan de Pennington, Richard Chittenden, Thomas Hazlehurst, Richard Baker, Tony Waller

“"The systematic derivation & evaluation of extended enterprise processes from system architectures"
Proceedings

The published proceedings from ASEC2019 proved to be a popular product at the event, with INCOSE UK nearly selling out the print run. A few copies are still available to purchase from the INCOSE UK online store.

ZO Poster and Guide

ASEC 2019 saw the debut of the ZO poster. And Guide
Designed to clearly illustrate what Systems Engineering is without going into complicated detail, both the poster and guide are available to purchase in the INCOSE UK online store.
We are pleased to announce the publication of a brand new addition to the Don’t Panic series.

Interface definition and management is an essential part of Systems Engineering.

Without these, Integration across Interfaces can be a major source of delays, missing functionality or poor performance in the introduction of new systems. Issues around interface management in particular are poorly explored in the engineering literature.

This book aims to address these issues, equipping readers with some practical methods and best practice tools for improving their definition and management of interfaces.

Paul Davies, the author, describes himself, increasingly inaccurately, as semi-retired. He has nearly forty years’ experience in all aspects of Systems Engineering across the energy, defence and aerospace, and rail domains. He has been a popular presenter and tutorial lead at many INCOSE events, both in the UK and internationally. To prevent boredom in retirement, Paul delivers consultancy and training in all aspects of Systems Engineering. This is his first book.

Don’t Panic - The Absolute Beginners Guide to Managing Interfaces is now available from the INCOSE UK online store.
It can be difficult to know when you move from being a “novice” to a fully-fledged engineer, or when you stop being the “new hire” in the office and become an established member of the Systems Engineering community. The ECF aims to provide support and guidance through these initial steps, and continue with you through career milestones and goals.

Addressing this transition was a key topic at this year’s ECF Workshop. Using Systems Thinking methods, the workshop aimed to identify ideas, views and concerns regarding career paths in Systems Engineering. Focusing on these goals produced an incredibly varied set of milestones and ideas from a range of delegates, from objective concepts such as confidence and independence, to much more concrete markers including leadership roles and your own contribution to SE.

This variation simply reinforces the notion that “graduating” from your early career is entirely dependent upon the individual, and the ECF makes it its goal to inspire and motivate you as you move along this path, regardless of what markers you choose to use to define your progression.

Early next year the ECF is going to run the same workshop with members of the UK Advisory Board who are already established in their careers. Not only as a comparator and alternative viewpoint, but as part of a wider Future of Systems Engineering (FUSE) initiative to explore what may be required for a career in systems engineering in the future. Look out for this in the next edition of ePreview.

The ECF will always welcome anyone who would like to connect and engage with other individuals new to Systems Engineering and those that wish to mature their understanding and application of Systems Engineering in general. Keep watch for upcoming committee elections and future ECF events and see you next year for ASEC 2020!
ECF Elections

In line with the ECF Terms of Reference, the posts of Student Liaison and Group Liaison roles are due for election. The call for nomination forms for the positions of ECF Student Liaison and ECF Group Liaison are available to download by following the relevant links.

The deadline for nominations is **Monday 16th December 2019** and the nomination forms need to be returned to emmajane@incoseonline.org.uk.

If only one nomination is received then that individual will be elected uncontested and no vote will take place.

If there is more than one nomination, members of the Forum will receive details of the candidates no later than **18th December 2019**.

There will then be a 4-week window, during which time members can vote for their preferred Chair candidate. Members should cast their vote by emailing emmajane@incoseonline.org.uk.

The vote will close on **Monday 13th January 2020**.

The results will be announced via email on **Tuesday 14th January 2020**.

Please note: Only members of the Early Careers Forum can stand for election and each member has one vote per position. The TORs for each position can be found on the **ECF area of the website**.
Many INCOSE UK members have been in contact with us in recent months, not least for much anticipated updates on the progress of INCOSE UK in pursuing ‘Licenced Member’ status with the Engineering Council. Below is an update from INCOSE UK President Kirsty Akroyd-Wallis to inform members of progress.

Alongside this, interest in Certification continues to grow, with many members, new and long-standing, participating in recent exams held either by INCOSE UK or onsite with their employer. This interest has resulted in an uplift in numbers of those who are SEP certified some of whom are recognised in the article below. At the recent ASEC event those who had attained accreditations were highlighted in the after dinner recognition slides. 2018-2019 saw an increase of 4 CEng, 1IEng, 62 ASEPs, and 15 CSEPs. We would like pass our congratulations on to all of them for this outstanding achievement and encourage all members to continue their professional development with INCOSE UK.

Sadly this edition of ePreview also highlights the end of an era as Ian Presland, the Professional Development Director decides to step down from his role. Ian has been the force behind many of the recent professional development initiatives and has provided encouragement and support to the professional development staff at the INCOSE UK secretariat as well as supporting countless members their personal aspirations. We would like to thank Ian for all of his help and contributions and look forward to working with his interim replacement, Ivan Mactaggart, in the short term and the new Professional Development Director when the role is appointed in May 2020.

### Engineering Council Licenced Member Application

**Kirsty Akroyd-Wallis, President of INCOSE UK**

You may be aware that the SEE ceased operating and surrendered their licence with the Engineering Council, effective 1\(^{st}\) August 2019; removing our ability to offer a route to Professional Registration. Since then, the INCOSE UK Council have appointed a project team to find a solution that will enable us to continue to offer this professional benefit.

We are therefore pleased to be able to announce that INCOSE UK has made an application to become a fully Licenced Member of the Engineering Council. If successful, this will provide us with the ability to recommend our members for Professional Registration directly to the Engineering Council, removing the previous need to enter an approved affiliation with a third party Professional Institution.

The INCOSE UK application was formally submitted on 28\(^{th}\) October, and will be reviewed in full by the Engineering Council on Monday 2\(^{nd}\) December. Following this review, the recommendations of the Review Panel will be forwarded to the Engineering Council’s decision-making body mid Q1 2020. At this point we will be in a position to announce the outcome.
There is naturally a lot of work still to do; however, we are confident that the INCOSE UK Professional Registration services will be in place significantly ahead of the transfer deadline for our existing Professional Registrants.

Throughout the process, INCOSE UK’s Professional Registrants, Mentors and Assessors have been hugely supportive, with many offers to assist or volunteer for the committees that will need to be in place should we be successful. This support has been extremely welcome, and we hope to be able to contact you soon with some opportunities to be part of the Professional Registration team.

If there are any further questions please get in contact with us on profdev@incoseonline.org.uk

Ian Presland to step down

After eight years, Ian Presland will be stepping down as our Professional Development Director.

During his time in the role, Ian has helped INCOSE UK

- Establish the Online INCOSE SE Certification programme in the UK
- Establish a route to Professional Registration for systems engineers through INCOSE UK
- Develop Competency based route to ESEP and CSEP, which was successfully piloted by the UK
- Establish paper exams for INCOSE UK

Ian will be missed by all those who worked with him on the Council and I hope you will join us in wishing him all the best as he moves onto the next stage of his career.

Professional Development Director

Sadly, Ian Presland, our Professional Development Director has decided to stand down following several years of incredible voluntary effort to the benefit of the INCOSE UK membership. Those of you who were at ASEC had the opportunity to join in our formal thanks to Ian for his sterling work.

The position of Professional Development (PD) Director was not due for re-election until the Autumn of 2021; therefore, the UK Council has made a decision to hold a mid-term election to fill the role. This role will run for approximately 18 months rather than the usual 3 years to maintain step with the other INCOSE UK Council Directors.

This is an excellent opportunity for an appropriately qualified volunteer to take a vital yet fulfilling role on INCOSE UK Council.
Due to the nature of the role, which requires ownership and governance of our formal Professional Development Programmes, there is a minimum qualification required as follows:

- The candidate must be Professionally Registered as a Chartered Engineer at the point of election and for the remainder of the term
- It is preferred that the candidate is Professionally Certified as CSEP or ESEP

This role comes at an exciting time for INCOSE UK’s professional development offerings. We are in the process of moving through an application to become a Licenced Member of the Engineering Council, and working towards implementation of the Competency Based CSEP. The successful candidate for the role will be given opportunity for a gradual takeover of these programmes as part of a strong handover.

The timeline for the election is as follows:

- Terms of Reference are being reviewed and updated in December
- Call for Nominations will be issued in January/February
- An election will take place March/April
- The successful candidate will be appointed in May

In the meantime, the Professional Development role will be covered by Ivan Mactaggart as Immediate Past President. However, please note that the current management of our existing programmes will remain unchanged: the Competency Based Certification Programme will continue to be managed by Ian Presland and the application to Licensed Member of the Engineering Council will continue to be managed by Kirsty Akroyd-Wallis.

If anyone has interest in the role, please do contact the INCOSE UK Secretariat or one of the UK Council Members who will be able to provide further information.

**SEP Certification Examinations**

As interest in the SEP Certification programme grows, INCOSE UK have been offering members the opportunity to sit a paper version of the examination.

Several companies have taken advantage of the opportunity to host examinations onsite for their employees and INCOSE UK have been keen to offer this opportunity to the wider membership.

The paper examination offers benefits to those in the Certification process. In many organisations groups of candidates undergo training and study together. For them, it means that everyone completes the process at the same time. For their employers it is easier to track and benchmark progress. It also means that an exam can be held onsite, thus avoiding multiple T&S claims and time out of the business to attend exam centres.
Interestingly, feedback from recent candidates has shown us that some candidates prefer the format which allows them to reflect on and change previous answers more easily than in the electronic system.

If you think your organisation would be interested in hosting an examination please contact Lynn Davis on profdev@incoseonline.org.uk for more details.

Following the success of exams during 2019, INCOSE UK are scheduling more exams to be held throughout 2020.

- **Friday 20th March 2020** – Atkins Bristol 10am
- **Friday 19th June 2020** – Atkins Bristol 10am
- **Friday 25th September 2020** – Venue TBC

Details of pricing are currently being finalised. If you would like more details please contact profdev@incoseonline.org.uk to register your interest.

### Systems Engineering Professional Certification

We would like to send congratulations to the following members who have attained ASEP and CSEP since the last preview.

Members listed have given their approval to be published.

#### ASEP

- Lois Chang
- Vince Gapay
- Anthony Gudgin
- Lee Knight
- Steven McKay
- John McKinley

#### CSEP

- Mohammad Saeed
- Rebecca Grinham
- Grant McLaren
- Ashkay Lakhani
- Jake Atkin, Adam Benson, Paul Daly, Christopher Hogwood, Richard Holden, Chris Martin, Nicholas McGrogan, Anthony McCready

#### Henry Oyelekan, Luke Fischer

- Job Oliebi
SE Foundations

UPCOMING COURSES 2020

17-19 FEB
Hamburg, Germany

16-18 MAR
Zürich, Switzerland

"Experienced trainers with good practical examples." - Thomas Schaub, ABB

"Presentation of the course was very dynamic and interactive with very few dead times. It is clear that the trainers are masters of the methods." - Gael Close, Melexis

"Both trainers have a lot of experience in different industries which is of high value." - Roger Newbould, ABB

To register, email:
info@se-training.net

SE-Training GmbH
SE-Training GmbH
@SE_Courses

CHE: 213.487.931
www.se-training.net
Outreach Overview

The purpose of Outreach activity for INCOSE UK is to spread the recognition and influence of the profession within the UK, and thereby increase the value provided by the profession to the national economy.

Strategic Objectives

1. Increase the extent of adoption of Systems Engineering by UK Government financed programmes in order to provide better Value for Money to UK from capital expenditure on development.

2. Increase the extent of adoption of Systems Engineering by complex industrial sectors in order to improve their effectiveness and efficiency in the conduct of development.

These objectives align directly with INCOSE UK Strategic Goal 2: Government, Academic and Industrial organizations in the UK increasingly apply and recognize Systems Engineering. They also support INCOSE UK Strategic Goal 1: INCOSE UK is a recognized authority for Systems Engineering in the UK, maintaining status as a sustainable and professionally managed Learned Society.

The Outreach Challenge

Systems Engineering and the Value Proposition for its effective use are not widely known and understood across UK Government either at the political level or within the departments and those advising them. Consequently, it is under used in many areas of government procurement, resulting in suboptimal performance of development programmes, typically leading to overspend and delay – sometimes even failure to deliver. Yet the need for its widespread adoption has never been more pressing due to the increasing complexity of technical challenges in many areas of advanced economies and the competitiveness of the global economic climate.

Promoting the appropriate use of Systems Engineering is an activity that has potential for significant benefit at a national level both in gaining better value from public expenditure and in assisting a variety of industrial sectors to be more competitive in their internal and export markets. Communicating the value proposition of Systems Engineering is challenging, and providing effort from those with the knowledge and skills who can effectively do so across a variety of audiences can only be viably pursued with the backing of a collaboration of relevant professional organizations and well organized volunteer effort.
You can help! Volunteers needed!

There is a wide variety of volunteer roles available to assist in Outreach activities across a wide range of projects. Involvement qualifies as CPD activity. Successful outcomes aid the profession, and will be recognised. For offers of support or queries please speak to Chris Lamb, Outreach Director—outreach-director@incoseonline.org.uk

Projects

| Material: Inventory current outreach material and support updates or generating new material |
| Contact: Coordinated, targeted engagement with Industry & Government to support SE influence |
| Training: Develop and roll out coherent training to support effective outreach projects |
| Envoy: Generate a cohort of SE Envoys who can actively promote SE to the widest audiences |
| Funding: Identify, assess and manage funding applications to support INCOSE outreach efforts |
| Quick Wins: Identify, analyse & implement activities that disproportionally promote INCOSE |

Support needed

| Material: Project Manager, Reviewers, Authors |
| Contact: Project Manager, Coordinator, Authors, Contact Leads |
| Training: Project Manager, Coordinator, Authors, Trainers |
| Envoy: Project Manager, Coordinator, Envoys |
| Funding: Project Manager, Coordinator, Volunteer |
| Quick Wins: Project Manager, Coordinator, Volunteers |

The full Outreach poster is available online from the INCOSE UK website.

Think Engineer

Just a reminder that Think Engineer books and supporting slides are available to assist with STEM activities aimed at Key Stage 2. There has also been an interest shown by members in supporting STEM presentations at Key Stage 3. If you are interested in using or assisting in developing a presentation aimed at that age group, please get in touch via outreach-director@incoseonline.org.uk

Think Engineer can be purchased from the online store.
## Events Calendar

<table>
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<tr>
<th>Date</th>
<th>Details</th>
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<tbody>
<tr>
<td>9th December 2019</td>
<td><strong>Bristol Local Group : Model Bases System Engineering : Experiences from the implementers</strong></td>
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<td></td>
<td>Model-Based Systems Engineering (MBSE) has been an increasingly important component to good Systems Engineering practice for some time. However the successful implementation and adoption of MBSE approaches has proved difficult for many organisations. This discussion describes the challenges and potential solutions based on the experiences from members of the INCOSE MBSE Working Group and a case study that addresses the implementation of a product reference architecture using an MBSE approach.</td>
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<tr>
<td></td>
<td>To book for this event, please <a href="#">follow this link</a></td>
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<td>25 - 28th January 2020</td>
<td><strong>INCOSE International Workshop</strong></td>
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<tr>
<td></td>
<td>Torrance Marriot Redondo Beach - 3635 Fashion Way, Torrance, California 90503 - USA</td>
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<td>To book for this event, please <a href="#">follow this link</a></td>
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<tr>
<td>3rd February 2020</td>
<td><strong>Service Systems Engineering</strong></td>
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<tr>
<td></td>
<td>Rolls-Royce, WH73 PO Box 3, Filton, Bristol, BS34 7QE, UK Sat nav postcode - BS34 6QA</td>
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**INCOSE UK Communications Director**  
Hazel Woodcock

**INCOSE UK** is the UK Chapter of the International Council on Systems Engineering.

The *ePreview* newsletter is provided free of charge to our members, on an ad hoc basis. The aim of this publication is to keep our members informed of developments within the UK Chapter and to shine a spotlight our regular events, as well as promote and encourage participation.

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