



Defence Academy
of the United Kingdom

Cranfield
UNIVERSITY

Systems Engineering for Defence Symposium

Systems Approaches for Future Defence Capability

15-16 February 2012 Shrivenham, UK



systems@shrivenham

Overview

The Defence Academy of the United Kingdom at Shrivenham is hosting a symposium on Systems Engineering for Defence, sponsored by the Director of Safety and Engineering, who is responsible for MOD's Engineering Strategy. The event, organised by the Department of Informatics and Systems Engineering of Cranfield Defence and Security at the Defence Academy, is one of the series of Symposia at Shrivenham, to be run on Wednesday 15th and Thursday 16th February 2012 in the Defence Capability Centre Conference Hall. The theme will be "Systems Approaches for Future Defence Capability", the timing of which could not be more apposite. We do hope you will join us.

What is the Symposium about and why should you attend?

The task of developing and maintaining future defence capability has never been more challenging. The world in which defence operates is now highly uncertain, with missions now being required at short notice with previously unexpected adversaries and allies. At the same time, operational capabilities are being transformed through the introduction of digital technology often with characteristic timescales which can be orders of magnitude shorter than for conventional defence procurement. Major equipments are getting more complex and society is rightly expecting better performance from the organisations – government and industry – which are responsible for developing capabilities to time, cost and performance. The publication of the Defence Reform Review makes this clear, and further transforms the landscape in which all parties will have to operate.

The response to these complex and interconnected challenges spans all parts of the defence community: military, project and procurement management, financial/commercial and technical. This symposium will concentrate on the moves being made to develop a strategy for defence engineering, and the special contribution which can be made by the systems community.

The issues the professional engineer can be expected to address – in both client and supply communities - has grown

from the already complex business of designing and building large systems, ie 'conventional' systems engineering, and now embraces the broader issues of across-project integration, technology pull-through and reuse, support to capability and programme management, and embracing the softer side of the engineering approach, so-called 'systems thinking'.

This symposium will examine the subject against a number of themes:

- Overall strategy for engineering in Defence, the rationale, what MOD is doing and how might others contribute
- Engineering management of projects and programmes, and the role of engineers in informing decision-making
- Competencies required for future systems professionals, both hard and soft
- Skills development and associated educational responses required from the academic community

The event will take place over two days. Day 1 will start with keynote and other senior speakers from the stakeholder community, followed after lunch by break-out sessions to explore the above themes, led by recognised leaders. These will report back in plenary session on Day 2, with a number of additional technical papers, concluding with a panel session. The main conclusions will be recorded and circulated as required to attendees and decision-makers.

Who will be there?

The symposium is sponsored by Howard Mathers, MOD's Director of Safety and Engineering, who is responsible for its Engineering Strategy. He will give a keynote address and members of his staff will attend the whole conference. It should therefore be of interest to those who wish to influence the direction of MOD's thinking, as well as their own organisational responses, which include: engineering managers, technical directors, senior and practising engineers and academics with responsibility for education and research in the field. Those from outside defence may also have benefit from participation and bring other experiences to the debate.

How can you contribute?

Through presentations, discussion groups and plenary sessions, the purpose is to encourage cross-fertilisation of ideas, the development of new perspectives and the challenging of current thinking. Time is planned into the programme to allow formal and informal discussions both in the main lecture theatre, break out sessions and during the breaks for coffee, lunch and tea, and during the inclusive symposium buffet supper, all of which provide an ideal and convivial focus for networking and discussing issues with your professional peers who are each addressing the challenges from their own perspective. Proceedings on DVD will be available at the end of the symposium, free to all delegates.

You can contribute further by presenting a paper to complement those provided by invited speakers. If you wish to submit a paper on the above themes, please complete the **Abstract Submission Form** and return it, together with your abstract of 200 words, by **7th October 2011**. Papers should be planned to take 30 minutes including questions. Those selected will be informed by 21st October, with a final programme published in early November 2011.

Timings and Registration

Registration on arrival will begin at 0830hrs on Wednesday 15 February at the Defence Capability Centre Conference Hall at the Defence Academy of the United Kingdom, Shrivenham.

If you wish to attend, please visit www.symposiaatshrivenham.com/sed to register and pay online or complete and return the attached **Registration Form**, to the address below before **20th December 2011**.

Sponsorship

There are opportunities for sponsoring this event. The name of the sponsor, with logo, will appear in the symposium programme and will be advertised before each break in the programme. Depending on the level of sponsorship, additional benefits may be available (complimentary registration fees, display spaces etc). Please contact us as soon as possible to discuss options of sponsorship and the benefits to be gained.

Abstract submission

TO BE RETURNED BY 7 OCTOBER 2011

If you would like to submit a paper on the theme described opposite, please complete this form and send an abstract of your presentation.

Notes

1. Your presentation should be planned to take 30 minutes including questions
2. Your abstract of 200 words should be typed and attached to this proforma
3. Please return your abstract by **7 October 2011**
4. Acceptance of papers will be notified in **21 October 2011**

Title of paper: _____

Name of presenter: _____

Company: _____

Address: _____

Tel No: _____

Fax No: _____

E-mail: _____

Display space

TO BE RETURNED BY 6 JANUARY 2012

A complimentary half page advertisement in the symposium programme is available to those who book display space. Please see the **Display Space Application** online or below for options and costs.

Your completed application needs to be returned by **6th January 2012**.

We now offer the opportunity to book and pay for display space online.

Go to: www.symposiaatshrivenham.com/sed and follow the instructions.

Please reserve the following display space (to include power sockets, chairs and tables).

(tick as applicable)

Single Space (3m x 2m) **£ 550**

Double Space (6m x 2m) **£ 900**

Outdoor Display Space (6m x 4m) **£ 900**

CHEQUE

I enclose a cheque for £_____ payable to CRANFIELD UNIVERSITY

INVOICE

Please invoice the company quoting Purchase Order No _____
(if applicable)

TELEPHONE PAYMENT WITH CREDIT/DEBIT CARD

I will telephone Symposia at Shrivenham on +44 (0) 1793 785529 with my credit/debit card details.

Display Manager: _____

Company: _____

Address: _____

Tel No: _____

Fax No: _____

E-mail: _____

Please Note: Display personnel need to register as delegates if they wish to attend symposium presentations and meals.

Commercial Visibility



We are offering you the opportunity for long term commercial visibility, renewable every 12 months, on the wall space of the exhibition hall, the venue for refreshments during each of our events and indeed an increasing number of MOD prestigious events in the Defence Capability Centre at the Defence Academy. Please visit www.symposiaatshrivenham.com for details.

These forms, when completed, should be returned please to:

Mrs Lynn Anderson

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Swindon SN6 8LA, United Kingdom

Tel: +44 (0) 1793 785648

Fax: +44 (0) 1793 785325

E: lynn@symposiaatshrivenham.com

Further details of this symposium, updated regularly, may be found on our website.

Systems Engineering for Defence Symposium

15-16 February 2012

TO BE RETURNED BY 6 JANUARY 2012

Surname: _____

Firstnames: _____

Date of Birth: _____

Rank/Title/Decorations: _____

Nationality: _____

Position: _____

Company: _____

Address: _____

Post/Zip Code: _____

Country: _____

Tel No: _____

Fax No: _____

E-mail: _____

The Small Print

CANCELLATIONS. Substitutions are welcome and may be made at any time, at no charge, provided the organisers are informed prior to the start of the event. If you have to cancel your booking, please do so in writing to Cranfield University. Cancellation up to 10 working days prior to the start date is subject to a £100 administration fee, after which, regrettably, no refund can be made. Refunds will be processed after the event.

PROGRAMME CHANGES. It may be necessary, for reasons beyond the control of the organisers, to change programme content, speakers and/or timing of the event. Neither Cranfield University nor the Defence Academy is liable for any changes.

DATA PROTECTION. If you have received correspondence from us where the personal or company details are incorrect, please contact Symposia at Shrivenham so that we may update our records. Cranfield University gathers and manages data in accordance with the Data Protection Act 1998. The information may be used to update you on our other events and courses. Please tick this box if you do not wish us to do so. If requested, we would like to make your contact details available to other attendees at this event. Please tick this box if you do not wish us to do so

Full Terms & Conditions for Cranfield University apply and will be supplied on request.

Registration

We now offer the opportunity to register and pay online.

Go to: www.symposiaatshrivenham.com/sed and follow the instructions.

Accommodation

Preferential hotel rates have been negotiated for this event at the hotels listed below. A complimentary bus service between these hotels and the Defence Academy is available. Please book your accommodation directly with the hotel quoting Reference **DACU**.

- BLUNSDON HOUSE HOTEL
Tel: +44 (0)1793 721701 **£ 89.00** per night bed & breakfast
- BROOK MADISON HOTEL
Tel: +44 (0)1793 831333 **£ 75.00** per night bed & breakfast
- JURYS INN SWINDON
Tel: +44 (0)1793 445600 **£ 65.00** per night bed & breakfast

Further information is available at: www.symposiaatshrivenham.com/sed

- I will use the bus pickup service from hotel named above.
- I have made my own accommodation arrangements
- I am entitled (UK) to and require Mess accommodation, if available, for the night of **15 February**
Service number: _____
- I will attend the supper on **15 February**
- Please specify any dietary requirements:

Costs

Registration fees

(tick as applicable)

- Speakers of Submitted Papers **£ 175**
- UK Government **£ 245**
- UK MOD/Military **£ 50***
- All other delegates **£ 625**
- EARLY BIRD OFFER: book and pay online before 21 December **£ 570**

This includes lunch on 15 and 16 February, supper on 15 February and all beverages during symposium sessions.

**For the first 50 applicants, thereafter the cost will be £100.*

Payment

(VAT is not payable)

- CHEQUE**
I enclose a cheque for £ _____ payable to CRANFIELD UNIVERSITY
- INVOICE**
Please invoice the company quoting Purchase Order No _____
(if applicable)
- TELEPHONE PAYMENT WITH CREDIT/DEBIT CARD**
I will telephone Symposia at Shrivenham on +44 (0) 1793 785529 with my credit/debit card details.