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THE IEE FORUM ON AUTONOMOUS SYSTEMS

THE IEE FORUM ON
AUTONOMOUS SYSTEMS

Organised by the IEE Systems Engineering
Professional Network

www.iee.org/Events/autonomoussystemsfm

THE IEE
SAVOY PLACE
LONDON
WC2R 0BL
UK

MONDAY, 28 NOVEMBER 2005

KEY BENEFITS

- Gain an in-depth knowledge on the new developments and research in the field of systems engineering
- Keep abreast of the use of autonomous and semi-autonomous systems from experts in this field
- Grasp the vital knowledge to ensure your organisation is at the leading edge in autonomous systems
- Network and share experiences with your peers on the aspect of system design and application



Keynote Speakers

Dr Bill Bardo
Director SEAS DTC
BAE Systems



Prof. Phil Sutton
Research Director
Ministry of Defence



THE IEE FORUM ON

AUTONOMOUS SYSTEMS

WHO SHOULD ATTEND?

The forum has been tailored for

- engineers from
 - defence industry
 - robotics
 - embedded technology sector
- researchers
- academics

KEYNOTE SPEAKERS



DR BILL BARDO
FIEE FInstP

Bill is the Director of the SEAS DTC and a visiting Professor at University College London. He has been engaged in changing undergraduate engineering courses in a Royal Academy of Engineering initiative to introduce more systems content into degree courses. In 2000, he was awarded the Royal Aeronautical Society International Gold Medal in recognition of his contributions to aerospace systems research and engineering in both public and private sectors. Bill is also Chairman of the National Advisory Committee on Systems Engineering, a Founder Member of the UK Chapter of INCOSE and their President for two terms.



PROF. PHIL SUTTON
FIEE FInstP

Phil is Research Director for the Ministry of Defence and a visiting Professor at the Royal Military College of Science, Shrivenham and at Loughborough University. Phil was Head of the Battlefield & Vehicle Systems Department of the newly formed Defence Evaluation and Research Agency (DERA) from 1996-1998, which led on some of the major land procurement and development programmes ie: TRACER and MRAV. Phil has been at the MOD since 1998 in various roles ranging from Director of Corporate Research, Director of Technology Development to his current position today.

INTRODUCTION

Many systems no longer depend on the traditional human operator to achieve some or all of the complex properties and adaptable behaviour patterns necessary to meet demanding operational situations.

Prime drivers for this shift toward systems that comprise minimal or no human element are the benefits of enhanced system performance, reduced life cycle costs and the ability to operate in hazardous or remote environments. Transportation, aerospace, defence and finance are amongst some of the sectors shifting towards replacing the human operator by architectures and implementation technologies that are intended to provide overall system improvements.

We invite you to be a part of this exciting one day event which offers perfect networking opportunities and also involves you in discussions on the latest research developments.

PROGRAMME

MONDAY, 28 NOVEMBER

09.30 REGISTRATION AND REFRESHMENTS

SESSION 1

Chair: Stuart Arnold, Systems Engineering Professional Network Chair, QinetiQ

10.00 Chairman's Welcome
Stuart Arnold, QinetiQ

10.05 Keynote Presentation – Directing Autonomy: the Systems Engineering and Autonomous Systems Defence Technology Centre
Dr Bill Bardo, Director SEAS DTC, BAE Systems

10.20 Autonomy: Beyond OODA?
Joanne Thoms, BAE Systems

10.40 An Architectural Approach to the Challenges Arising from the Exploitation of Autonomous Systems
Martin Field, Systems Engineering Innovation Centre

11.00 REFRESHMENTS

11.25 Keynote Presentation – Autonomous Systems and MOD's Research Agenda
Prof. Phil Sutton, Research Director, Ministry of Defence

11.35 ANSER Past and Present - Multi UAV Experimental Research
Tim White, BAE Systems

11.55 Collaborating Multi Robotic Agents for Operations in Inaccessible Environments
Hani Hagra, Senior Lecturer in Computer Science, University of Essex

12.15 Fundamental Design Issues in Cooperative UV Systems
Maira Smith, Managing Director, Waterfall Solutions

12.35 LUNCH

SESSION 2

Chair: Dr Bill Bardo, Director SEAS DTC, BAE Systems

13.35 Power Line Inspection - an UAV Concept
Dewi Jones, Reader, University of Wales, Bangor

13.55 Automating Answers to Where Am I?
Paul Newman, University Lecturer in Robotics, Mobile Robots Research Group, Department of Engineering Science, Oxford University

14.15 Interactive to Autonomous Systems
Peter Johnson, Head of Computer Science, University of Bath

14.35 Outline Safety Case for the Use of Autonomous UAVs in Unsegregated Airspace
Clive Pygott, Principal Engineer, Systems Assurance Group, QinetiQ

14.55 REFRESHMENTS

15.20 Information Exchange for Autonomous Systems
Paul Kimber, SELEX

15.40 Resilient Real-Time Communications Across Meshed Networks Under Adverse Conditions
Paul Webb, Business Development, Roke Manor Research

16.10 A Semi-Autonomous Generic Network for Seamless Personalised Services at Home & Elsewhere
Prof. K Kambiz Madani, University of Westminster

16.20 Open Discussion
Your opportunity to recap the afternoon's topics and ask the speakers further questions.

16.50 CLOSE OF EVENT

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AUTONOMOUS SYSTEMS

One person per form only (forms may be photocopied)

Organised by the IEE Systems Engineering Professional Network
THE IEE, SAVOY PLACE, LONDON WC2R 0BL, UK: MONDAY, 28 NOVEMBER 2005
www.iee.org/Events/autonomoussystemscfm

Registration (Please complete in CAPITALS)

Family Name																Title (Mr, Mrs, Miss etc)			
Name																Job Title			
IEE/IIE/Other membership																Membership No			
Name of Organisation (for name badge)																			
Address for Correspondence																			
Town/City						Postcode						Country							
Business Telephone																Fax			
Email																			
Do you have any dietary or other requirements?																			
How did you hear about this event?																			
Flyer in the post <input type="checkbox"/> Email <input type="checkbox"/> Advert (IEE publication) <input type="checkbox"/> Advert (Other) <input type="checkbox"/> Website <input type="checkbox"/>																			
Other (please specify) _____																			

Fees and charges (Please complete the appropriate box)

Registration fees include attendance at the forum, a copy of the forum notes, morning and afternoon refreshments and lunch.

	Charge per person	£	p
Early Bird Rate until 7 Nov 2005			
IEE Member	£165.96 (+ £29.04 VAT= £195.00)		
Non Member	£208.52 (+ £36.48 VAT= £245.00)		
Standard Rate from 7 Nov 2005			
IEE Member	£208.52 (+ £36.48 VAT= £245.00)		
Non Member	£251.06 (+ £43.94 VAT= £295.00)		
IEE Member *Student/Retired	£85.11 (+ £14.89 VAT = £100.00)		
Group Discount Booking – 3 places for the price of 2 (please fill in a separate form for each delegate)			
Group Booking Member	£331.92 (+ £58.08 VAT = £390.00)		
Group Booking Non Member	£417.02 (+ £72.98 VAT = £490.00)		
*All students must have their applications endorsed by their Professor or Head of Department.	Total Remittance		

Payment Details Payment must accompany this registration form. Registration will only be confirmed on receipt of the full payment.

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LIST OF EVENTS FOR 2006

- UML FOR SYSTEMS ENGINEERING – PROCESS MODELLING
7 March 2006
The IEE, Savoy Place, London
- AN INTRODUCTION TO UML 2.0 FOR ENGINEERS AND MANAGERS
8-9 March 2006
The IEE, Savoy Place, London
- REQUIREMENTS DAY 2006
2 October 2006
The IEE, Savoy Place, London
- INTRODUCTION TO REQUIREMENTS COURSE
3 October 2006
The IEE, Savoy Place, London
- COALITION, CAPABILITY AND SYSTEM ENGINEERING
7 November 2006
The IEE, Savoy Place, London

For further information, please call Ela Banerjee, Professional Network Manager, on +44 (0)1438 765699 or send an email to ebanerjee@iee.org.uk

The IEE Forum on Autonomous Systems Organisers

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THE IEE FORUM ON
AUTONOMOUS SYSTEMS
28 November 2005

The IEE, Savoy Place,
London WC2R 0BL, UK

www.iee.org/Events/autonomoussystemscfm

Conditions of Booking

Forms should be received no later than **Monday, 21 November 2005**. Please note that reservations cannot be made by telephone. All participants registering less than one week before the date of the event are advised to bring a copy of their registration form with them.

Cancellation

In the event of cancellation and provided that written notice is received seven days prior to the event, a refund of 50% of the total fee will be made. If no notice of cancellation is received, no refund can be made. The IEE reserves the right to cancel any event. In this case, the full fee will be refunded unless a mutually convenient transfer can be arranged. Details of event changes or cancellations are available by phoning +44 (0)1438 765 650

Name Substitutions

Name Substitutions are accepted at any time by fax or email.
Fax: +44 (0)1438 765659
Email: Eventscs1@iee.org

Supporting organisations

Members of supporting organisations who can provide evidence of their affiliation will be admitted at members' rates.

Delegates with Special Needs

The IEE aims to offer fully accessible events to all its delegates. Please help us to accommodate any individual needs that you may have by attaching a note to the registration form. We will contact you to discuss this as necessary.

The IEE is not, as a body, responsible for the views or opinions expressed by individual authors or speakers.

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