

Provisional Programme

Monday afternoon, 7th April

11.00 Registration

12.45 Welcome address by Neville Stanton, University of Southampton.

13.05 Donald Broadbent Lecture: Human Capability by Karen Carr, Professor of Human Systems, Cranfield University
This lecture will explore ways of thinking about ourselves and the systems we create and use, and what they mean for ergonomics and human factors. During the last century, interesting developments in understanding the world have arisen from the embracing of uncertainty. Rather than avoiding uncertainty in a deterministic fashion, these world views are non-deterministic, non-linear and holistic. Such ways of thinking and understanding help us to deal with complexity. How does the discipline of ergonomics and human factors work in such worlds?

Sessions	1 Human Capability Mayflower Suite Chair: Karen Carr	2 Smart Environments & Sustainability Bradford Room Chair: Mike Tainsh	3 Culture, Control & Leadership Winslow Room Chair: Ruth Sims	4 Systems Standish Room
14.00	Integrating science, medicine and technology for sporting performance, Glenn Hunter, EIS, UK	How Do Malfunctions In 'Smart Environments' Affect User Performance?, Chris Baber, University of Birmingham, UK	Visual Meaning As A Tool For Leadership – A Case Study, Peter Nock, HS2, UK	WORKSHOP: Human Factors For Systems Of Systems, Huseyin Dogan, Bournemouth University, UK
14.30	Military Capability - Human Capability: a systems approach, Emma Sparks, Cranfield Defence and Security, UK	Creating A Lasting Commitment For Sustainable Living, Ian Hamilton, Environmental Resources Management Ltd, UK	Learning Conflict Resolution Lessons From Industry To Counter Insider Attacks In Afghanistan, Ryan Meeks, Frazer-Nash Consultancy Ltd, UK	
15.00	Break in the Mayflower Lounge			
Sessions	1 Human Capability Mayflower Suite Chair: Karen Carr	2 Workload & Vigilance Bradford Room Chair: Nora Balfe	3 Usability Winslow Room Chair: Bob Bridger	4 PR & Media Standish Room
15.30	WORKSHOP: Human Capability: science, engineering, art and imagination, Lieutenant General (Retd) Andrew Graham CB CBE, UK	Speaking Under Workload In First And Second Languages: Implications For Training And Design, Chris Baber, University of Birmingham, UK	A user centred design approach to software transition, Rebecca Bartlett, System Concepts, UK	WORKSHOP: PR & Media, Nick Bowman, Mandarin, UK
16.00		Continuous Detection Of Workload Overload: An Fnirs Approach, Horia Alexandru Maior, Univ of Nottingham, UK	WORKSHOP: Quick Tricks In Psychometrics, Bob Bridger, Institute Of Naval Medicine, UK	
16.30 (end 17.00)		Alarm Vigilance In The Presence Of 80DbA Pink Noise With Negative Signal-To-Noise Ratios, Buddhika Karunarathne, Hong Kong University of Science & Technology, HK		An introduction to social media, Guy Osmond, Osmond Ergonomics, UK
17.30	IEHF Annual General Meeting in the Mayflower Suite until 18.30 followed by Dinner in the Boardwalk Restaurant			

Tuesday morning, 8th April

09.30	Plenary Lecture: "The Global Economic Recession: Impact On Workplace Safety And Health"; Dr Jason Devereux, Principal Consultant, Lloyd's Register Consulting			
	This research commissioned by the International Labour Organization provides practitioners with an understanding of how organisational restructuring from the financial crisis and economic recession could impact health and safety. These hazards have the potential to affect both the health and wellbeing of the workforce and also system or process integrity as the economy improves.			
Sessions	1 HF in Product Design Mayflower Suite Chair: Laurence Clift	2 HF in High Value Manufacturing Systems Bradford Room Chair: Sarah Fletcher	3 Lifelong Health & Wellbeing Winslow Room Chair: Patrick Waterson	4 Children's Ergonomics Standish Room
10.30	Beyond Box Ticking – The Role Of Human Factors In Design, Daniel Jenkins, DCA Design International, UK	An Evaluation Of The Ergonomic Physical Demands In Assembly Work Stations: Case Study In Scania Angers Production, Mohsen Zare, Université d'Angers, France	User-Centred Design Of Patient Information For Hospital Admissions And Patient Experience, Alexandra Lang, University of Nottingham, UK	Children's Ergonomics: 'Ergonomics isn't just for grown ups', Jim Taylour, Orangebox, UK
11.00	Break in the Mayflower Lounge			
Sessions	1 HF in Product Design Mayflower Suite Chair: Laurence Clift	2 HF in High Value Manufacturing Systems Bradford Room Chair: Sarah Fletcher	3 Lifelong Health & Wellbeing Winslow Room Chair: Patrick Waterson	4 Behaviour Change Standish Room
11.30	Human Factors And Product Design: Uncomfortable Allies, Eddy Elton, University of Brighton, UK	Using Sherpa To Inform The Design Of Intelligent Automation For Tig Welding, Wil Baker, Cranfield University, UK	WORKSHOP: Human Factors and Healthcare, Patrick Waterson, Loughborough University, UK	WORKSHOP: Behaviour Change, Claire Williams, Human Applications Ltd & Andrew Baird, University of Derby, UK
12.00	Analysis Of Human Factors Issues Relating To The Design And Function Of Bicycles, Derek Covill, University of Brighton, UK	A Computer Software Method For Ergonomic Analysis Utilising Non-Optical Motion Capture, Teegan Johnson, Cranfield University, UK		
12.30	Playing In The Park: Observation And Co-Design Methods Appropriate To Location Based Games For Children, Cathy Grundy, University of Brighton, UK	Ergonomic Issues Arising From The 'Next Manufacturing Revolution', Murray Sinclair, Loughborough University, UK	Retained Guidewires In Central Venous Catheterisation: An Analysis Of Omission Errors, Yi-Chun Teng, University of Cambridge, UK	
13.00	Lunch in the Mayflower Lounge			

Tuesday afternoon, 8th April

Sessions	1 HF in Product Design Mayflower Suite Chair: Eddy Elton	2 HF in High Value Manufacturing Systems Bradford Room Chair: Teegan Johnson	3 Lifelong Health & Wellbeing Winslow Room Chair: Andree Woodcock	4 Human Error Standish Room
14.00	Referability: Making Things Easy To Refer To, Gisle Andresen, Norwegian University of Science & Technology, Norway	Investigating The Impact Of Product Orientation On Musculoskeletal Risk In Aerospace Manufacturing, Sarah Fletcher, Cranfield University, UK	NHS Managers' Utilisation Of Information Resources To Support Decision-Making In Shift Work, Patrick Waterson, Loughborough University, UK	WORKSHOP: Is 'Human Error' The Handicap Of Human Factors?, Steven Shorrock, Eurocontrol, France
14.30	Human Factors Contributions To Consumer Product Safety, Bonnie Novak, Consumer Product Safety Commission, USA	Effect Of Industrial Robot Gesture Motions On Users' Understanding And Trust, Gilbert Tang, Cranfield University, UK	Evaluating The Universal Navigator With Consumers With Reduced Mobility, Dexterity & Visual Acuity, Phil Day, NCR, UK	
15.00	Student Design Exhibition Presentations		Efficacy Evaluation Of Recreational Picture Colouring In Elderly Nursing Home Patients, Shinichiro Kawabata, Kyoto Institute of Technology, Japan	
15.30	Break in the Mayflower Lounge			
Sessions	1 HF in Product Design Mayflower Suite Chair: Derek Covill	2 HF in High Value Manufacturing Systems Bradford Room Chair: Teegan Johnson	3 Lifelong Health & Wellbeing Winslow Room Chair: Patrick Waterson	4 CPD Standish Room
16.00	Design Debate: Human Factors and Product Design: How do they become better allies? Eddy Elton & Laurence Clift	Relationships Between Degree Of Skill, Dimension Stability, And Mechanical Properties Of Composite Structure In Hand Lay-Up Fabrication Method, Tetsuo Kikuchi, Toyugiken Co Ltd, Japan	As I Am Now, So Shall You Become, Andree Woodcock, Coventry University, UK	WORKSHOP: CPD
16.30 (end 17.00)		Human Factors Analysis In Risk Assessment: A Survey Of Methods And Tools Used In Industry, Nora Balfe, Trinity College Dublin, Ireland	Healthy Ageing In The Construction Industry: Background And Preliminary Findings, Stephanie Eaves, Loughborough University, UK	
17.00	Exhibitors' Drinks Reception in the Mayflower Lounge			
18.00	Dinner in the Boardwalk Restaurant			
19.30	Quiz Night in the Mayflower Suite sponsored by Taylor & Francis			

Wednesday morning, 9th April

09.00 Plenary Lecture: "Socio-technical thinking and practice" by Chris Clegg, Professor of Organisational Psychology, University of Leeds

The objectives of this paper are to describe a socio-technical systems framework and its application in a number of different domains. I will make the case for the use of systems thinking to address some of the 'grand challenges' facing society and argue for the use of such ideas predictively (rather than simply after the event). I will outline the need for the development of methods and tools to support such work, and, in short, argue the case for being 'braver'. In the lecture I will describe some work in progress on which colleagues and I from the Socio-Technical Centre are working. These projects include work with Arup, Rolls-Royce, Yorkshire Water, NHS, Go Science (BIS), DCLG and the Cabinet Office. I will include analyses of a number of disasters including those at the Hillsborough Football Stadium, the King's Cross Underground Fire, the Bradford City Stadium Fire, and the Deepwater Horizon Oil Spill.

Sessions	1 Transport: Operations Mayflower Suite Chair: David Golightly	2 Systems: Preparing for the Future Bradford Room Chair: Ella-Mae Hubbard	3 Hazards, Risks & Comfort Winslow Room Chair: Dan Jenkins	4 Occupational Safety & Health Standish Room Chair: Stuart Shirreff
10.00	Understanding Human Decision Making During Critical Incidents In Dynamic Positioning, Linda Sorensen, Vestfold University College, Norway	Introduction To Human Factors Integration And A Brief Historical Overview, Bob Bridger, Institute Of Naval Medicine, UK	Perception Of Self-Motion Headings When Subjected To Near-Threshold Visual And Inertial Motion, Beisheng Bao, Hong Kong University of Science and Technology, HK	Don't lose your grip! The HAVmeter Digital Monitoring System, Stewart McNaughton, Reactec, UK
10.30	Break in the Mayflower Lounge			
Sessions	1 Transport: Operations Mayflower Suite Chair: Sarah Sharples	2 Systems: Preparing for the Future Bradford Room Chair: Clare Pollard	3 Hazards, Risks & Comfort Winslow Room Chair: Ellie Mowbray	4 Occupational Safety & Health Standish Room Chair: Stuart Shirreff
11.00	Designing Visual Analytics For Collaborative Activity: A Case Study Of Rail Incident Handling, Chris Baber, University of Birmingham, UK	Managing The Lifecycle Of Your Robot, Murray Sinclair, Loughborough University, UK	Factors Contributing To The Perceived Slipperiness Rating, Wen Ruey Chang, Liberty Mutual Research Institute for Safety, USA	Delivering healthy computing to the GSK Global Field Force, Martina Clooney, GSK, UK
11.30	Vigilance: Evidence And Application, Laura Pickup, University of Nottingham, UK	Human Factors Integration Training For Systems Engineering Professionals, Ella-Mae Hubbard, Loughborough University, UK	Predictors Of Injury Amongst White-Water Raft Guides Working In The UK, Iain Wilson, Loughborough University, UK	Ergonomic improvements with the Edinburgh Swager, Kevin Tesh, J&J Medical Ltd, UK
12.00	Operators In Tunnel Control – Analysing Decisions, Designing Decision Support, Sebastian Spundflasch, Ilmenau University of Technology, Germany	A Framework For Human Assessment In The Defence System Engineering Lifecycle, Will Tutton, Dstl, UK	The Study On Effectiveness Of Bamboo Charcoal For Improving Work Efficiency In Learning Environment, Hiroki Nishimura, ARC EDU Co Ltd, Japan	The Aging Workforce and the Patheon Approach, John McLaughlin, Patheon, UK
12.30	Lunch in the Mayflower Lounge			

Wednesday afternoon, 9th April

14.00 Institute Lecture: "Ergonomics, Resilience and Reliability – to ERR is human" by Jon Berman, Greenstreet Berman Ltd

This Lecture will discuss the role of ergonomics in providing reassurance that reliance on such systems is not misplaced, whilst also maintaining a robust intolerance of poor performance. If resilience is about the design, management and operation of the system, then it is firmly within the domain of ergonomics. If ergonomics is fully to support resilience and high reliability, then it must continue to engage at all levels within the socio-technical system – and demonstrably offer benefits at each level.

15.00 Just a Minute Poster Presentations

Each poster presenter will have just one minute to outline their work as detailed in their poster, and they will each have only one or two PowerPoint slides with which to illustrate it. After all presentations have been heard, everyone will be able to view the posters on display and meet the presenters to discuss their work in more detail.

- ◆ Development Of A Human Factors Assessment Framework For Land Vehicles, Rebecca Saunders Jones, Dstl, UK
- ◆ Ergonomics Of Parking Brake Application - A Factor To Fail?, Valerie Noble, Loughborough University, UK
- ◆ Proposed Decision Model For Contemporary Memorials, Philippa Davies, De Montfort University, UK
- ◆ Level Of Comfort Of Customers Affected By Expert Manicurist And Non-Expert Manicurist, Sojun Isobe, nailsalon Today, UK
- ◆ Relationship Between Kansei Evaluation And Pricing Decision To Kyo-Yuzen-Zome With Different Pastes, Takashi Furukawa, Kyoto Institute of Technology, Japan

16.00 Break in the Mayflower Lounge

Sessions	1 Transport Operations Mayflower Suite Chair: Cyriel Diels	2 User Systems Bradford Room Chair: Huseyin Dogan	3 Hazards, Risk & Comfort Winslow Room	4 Occupational Safety & Health Standish Room Chair: Terry Woolmer
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16.30	The Effect Of Driver Advisory Systems On Train Driver Workload And Performance, David Large, University of Nottingham, UK	User Systems Architectures, Functions and Job and Task Synthesis, Mike Tainsh, Lockheed Martin, UK	WORKSHOP: Hazards, Risk & Comfort, Ken Parsons, Loughborough University, UK	Human Factors and Ergonomics in the Health and Safety Executive, Mike Gray, HSE, UK
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17.00 (end 17.30)	ERTMS Train Driving - In Cab Vs. Outside: An Explorative Eye-Tracking Field Study, Arzoo Naghiyev, University of Nottingham & Network Rail, UK	East: A Method For Investigating Social, Information And Task Networks, Neville Stanton, University of Southampton, UK		Sunstrom PPE Case Study, Stuart Shirreff, KDC, UK
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19.00 Drinks Reception in the Atrium

19.45 Annual Dinner & IEHF Awards Ceremony in the Mayflower Suite.

Thursday morning, 10th April

Sessions	1 Transport: Journey Experience Mayflower Suite Chair: Ruth Sims	2 User Systems Bradford Room Chair: Mike Tainsh	3 Musculoskeletal Disorders Winslow Room Chair: Alex Lang	4 Vehicle Design Standish Room Chair: Neil Mansfield
09.30	Car And Lift Sharing Barriers, Andree Woodcock, Coventry University, UK	Using N Squared Analysis To Develop The Functional Architecture Design For The High Speed 2 Project, Peter Nock, HS2, UK	Physiological Workload And Perceived Exertion Of Female Labourers In Harvesting Activities, Renuka Salunke, University of Agricultural Sciences, India	Motorcycle Ergonomics, Izzat Nor, Universiti Teknologi MARA Malaysia
10.00	Will Autonomous Vehicles Make Us Sick?, Cyriel Diels, Coventry University, UK	Decommissioning: The Transition From Operating Facility To Demolition, Clare Pollard, AREVA RMC, UK	Predicting Isometric Rotator Cuff Muscle Activities From Arm Postures And Net Shoulder Moments, Xu Xu, Liberty Mutual Research Institute for Safety, USA	Better Vehicle Design For All, Sukru Karali, Loughborough University, UK
10.30	Measuring Quality Across The Whole Journey, Andree Woodcock, Coventry University, UK	The Analysis Of Incidents Related To Automation Failures And Human Factors In Flight Operations, Wen-Chin Li, Cranfield University, UK	Ergokita: Analysis Of The Musculoskeletal Strain Of Nursery School Teachers, Eva-Maria Burford, Institute for Occupational Safety and Health of the German Social Accident Insurance, Germany	Motorcyclist Muscle Fatigue Index: An Effort To Help Reduce Motorcycle Accidents, Helmi Rashid, Universiti Teknologi MARA Malaysia
11.00	Break in the Mayflower Lounge			
11.30	<p>Keynote: "Making better things: The role of human factors in user experience design", David Gilmore</p> <p>Human Factors and User Experience design have developed relatively independently and from different traditions and yet they both share the all important goal of making better things for people to use. Human Factors pre-dates computer systems and grew from industrial engineering and psychology, with a focus on large socio-technical systems, whereas user experience design has grown from interaction design with an emphasis on internet experiences and e-commerce. At GE (and elsewhere) these worlds are colliding, as the consumerization of IT brings mobile devices and expectations of consumer-level simplicity to industrial work environments. Which leads to a key question – what is the relationship between human factors and user experience design? How do they work together? What do they each contribute to the other? In this talk, I intend to explore these questions through looking at a variety of projects I've been involved with, or close to, over the past 30 years.</p> <p>David Gilmore is a Senior UX Scientist in the Connected Experience Labs at GE's Software Center of Excellence in California, leading the user experience research that ensures that the experiences, software and systems being designed at GE meet user and customer needs without disrupting business. Over the course of a deliberately diverse career, David has blended academic teaching and research with product design practice, in both consulting and corporate environments. Throughout it all he has been predominantly interested in the phenomenological end of the spectrum, striving to understand the nature and the uniqueness of the human experience, whilst paradoxically identifying the universal design opportunities that result. Along the way he has contributed to the design of many different things – including the £1 coin and 20p piece, the HFES Award winning Evenflo stroller, one of the first internet appliances (3COM's Ergo Audrey), the Vocera badge communicator, as well as numerous mobile apps, computer systems and computer peripherals.</p>			
12.30	Close of conference & lunch in the Boardwalk Restaurant			