EVENT GUIDE

INCONTINENCE
THE ENGINEERING CHALLENGE X

Organised by

Institution of
MECHANICAL
ENGINEERS

10–11 November 2015
One Birdcage Walk, London

Biomedical Engineering Association
Conference

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OPERATIONAL EXCELLENCE FOR ENGINEERING
MANAGING COMPLEX TECHNICAL ENVIRONMENTS

Organised by
Institution of Mechanical Engineers

23–24 November 2015
London

OPERATIONAL EXCELLENCE IS A JOURNEY TO IMPROVEMENT, FINDING INNOVATIVE WAYS TO ENHANCE COMPANY PERFORMANCE, BOOST ACTIVITY AND EMPOWER EMPLOYEES.

Full agenda available at www.imeche.org/OPEX

THREE WAYS TO BOOK
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Improving the world through engineering
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Dear delegate,

As Chair of the event I would like to welcome you to the Institution of Mechanical Engineers’ Incontinence – The Engineering Challenge X conference. I am delighted to welcome so many of you and hope to be able to meet as many of you as possible during the event.

It’s hard to believe that 20 years have passed since the first Incontinence: The Engineering Challenge meeting and that we are now meeting for the 10th time. The programme for that first, one-day event was very simple. A dozen or so brave people took it in turns to describe their daily experiences of managing their incontinence and explain what they would like the perfect product to do for them. In response – and interspersed with the consumer talks – four eminent scientists and engineers from outside the field shared expertise they thought might have application in it, even though their own experience with incontinence technology was limited: a designer of fluid transport systems aboard space craft, a developer of dental materials, an expert on fibres and another on engineering design. A wonderfully rich mix of delegates came along and their laughter and enthusiastic, cross-disciplinary networking convinced us that the experimental one-off meeting should become a regular event. Our programmes have developed considerably from those early days but opportunities to learn from people with incontinence (Sessions 3 and 11, in the 2015 programme) and from “outside experts” (Sessions 2 and 9) have featured in every conference since. We also aim to learn from experienced clinicians and this time we will be hearing about the likely impact on incontinence care of population ageing in the developed world (Session 8) and about the special needs that we should remember when designing incontinence products for people who are elderly, suffer from dementia, or have particular cultural needs (Session 10). There was too little incontinence research going on in 1995 to contribute significantly to our first programme, but there is much more now and in several sessions at the 2015 event, leading researchers in the field will report on their latest work. Sessions 4 and 12 will focus on management technology for women and men respectively, while Sessions 6 and 13 will concentrate on catheters. A relatively recent approach to research funding for medical technology in the UK has been to encourage the creation of multi-disciplinary, collaborative networks of stakeholders and in Session 5 we will hear about the work of those whose interests include incontinence technology, and learn how we might get involved. Finally, we thought it would be stimulating to peer into the future and speculate on how the field may move on in the next 20 years, so in the last session of the first day (Session 7) a number of experienced clinicians have agreed to seed our discussions as we head off to the evening reception by outlining briefly the new products or breakthroughs they would like to hear about at our 20th conference in 2035!

The conference has been structured to ensure sufficient time for you to meet and network with your peers during the day. The Institution of Mechanical Engineers recognises that knowledge transfer is often as much about sharing common challenges and solutions as it is hearing from companies at the cutting edge of industry. For this reason we have ensured you will have ample opportunity to discuss the formal business of the day in a more informal environment, notably at the conference drinks reception.

If you have any queries please do not hesitate to approach a member of the Institution of Mechanical Engineers’ Knowledge Transfer team who will be happy to help. They are clearly identifiable by their badges.

Upon registration, you will have received a feedback form. Please do take the time to fill this in and hand it back to the registration desk. The Institution of Mechanical Engineers produces some excellent events but to allow the standard and quality to be maintained we need your feedback and suggestions.

Finally, it remains for me to say that I hope you enjoy the Incontinence - The Engineering Challenge X conference and look forward to hearing your feedback on the proceedings.

Kind regards,

Alan Cottenden
Chairman of Incontinence - The Engineering Challenge X
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<th>Time</th>
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<td>08:45</td>
<td>REGISTRATION AND REFRESHMENTS</td>
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<tr>
<td>09:20</td>
<td>CHAIR’S WELCOME AND INTRODUCTION</td>
<td>Alan Cottenden, Professor of Incontinence Technology, Department of Medical Physics and Biomedical Engineering, University College London &amp; Chairman Board of Trustees, Bladder &amp; Bowel Foundation</td>
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<tr>
<td>09:25</td>
<td>SESSION 1: SETTING THE SCENE</td>
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<td>09:25</td>
<td>INCONTINENCE: THE ENGINEERING CHALLENGE - THE STORY SO FAR</td>
<td>Alan Cottenden, Professor of Incontinence Technology, Department of Medical Physics and Biomedical Engineering, University College London &amp; Chairman Board of Trustees, Bladder &amp; Bowel Foundation</td>
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<tr>
<td>09:45</td>
<td>&quot;PASSING GAS&quot;: HOW ePTFE CAN HELP YOU</td>
<td>Andy Hayhurst, Field Sales Associate, WL Gore and Associates UK Limited</td>
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<td>10:15</td>
<td>COMMUNICATING AND SENSING: HOW THE INTERNET OF THINGS MAY HELP</td>
<td>Sally Day, Senior Lecturer in Electronic and Electrical Engineering, University College London</td>
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<td>10:45</td>
<td>NETWORKING REFRESHMENT BREAK</td>
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<td>11:15</td>
<td>SESSION 3: WHAT WOMEN WANT</td>
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<td>11:15</td>
<td>FEMALE CONSUMER PANEL</td>
<td>Women who live with incontinence will tell their stories and share their priorities for improved products</td>
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<td>12:05</td>
<td>CAN AN INTRAVESICAL PRESSURE-ATTENUATING BALLOON SAFELY REDUCE SYMPTOMS OF STRESS URINARY INCONTINENCE?</td>
<td>Kevin Connors, Founding Partner, Solace Therapeutics</td>
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<td>12:20</td>
<td>SUPPORTING WOMEN WITH TOILETING IN PALLIATIVE CARE: THE FEMALE URINAL</td>
<td>Naomi Farringdon, Emergency Nurse Practitioner and Clinical Academic Fellow, University Hospital Southampton NHS Foundation Trust and University of Southampton Co-authors: T Hill, M Fader, University of Southampton</td>
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<td>12:35</td>
<td>FEMALE OCCLUSIVE DEVICES</td>
<td>Kate Williams, Senior Research Fellow in Nursing, Department of Health Sciences, University of Leicester</td>
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<td>12:50</td>
<td>Q&amp;A SESSION</td>
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<td>14:00</td>
<td>SESSION 5: COLLABORATE TO INNOVATE</td>
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<td>14:00</td>
<td>OVERVIEW OF INCONTINENCE-RELATED NETWORKS</td>
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<td>Speakers include:</td>
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<td>Neville Young, HTC Colorectal Programme Manager, Leeds Institute of Biomedical &amp; Clinical Sciences</td>
<td>Unmet needs identification: Colorectal HTC</td>
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<td></td>
<td>Richard Day, Reader in Regenerative Medicine, Applied Biomedical Engineering Group, Division of Medicine, University College London</td>
<td>Potential solutions: IMPRESS</td>
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<td>Douglas Tincello, Professor of Urogynaecology, Reproductive Science Section, University of Leicester</td>
<td>Evidence generation: Pelvic Floor Group</td>
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<td>Avril McCarthy, MedTech Lead, NIHR Devices for Dignity HTC</td>
<td>Commercialisation: working with industry: D4D HTC</td>
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<td></td>
<td>Adele Long, Director, CX Products &amp; Services</td>
<td>Small Business Research Initiative (SBRI)</td>
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DAY 1  TUESDAY 10 NOVEMBER 2015 (CONT.)

15:10  NETWORKING REFRESHMENT BREAK

SESSION 6: CATHETERS
Chairled by Mandy Fader, Professor of Continence Technology, Faculty of Health Sciences, University of Southampton

15:30  QUANTIFICATION OF REASONS FOR UNPLANNED CATHETER CHANGES: AN AUDIT OF THE SHEFFIELD COMMUNITY
Martin Slovak, Research Associate, NIHR Devices for Dignity HTC, Sheffield Teaching Hospitals NHS

15:45  UNDERSTANDING CATHETER-ASSOCIATED PROTEUS MIRABILIS CRYSTALLINE BIOFILMS: THE APPLICATION OF ADVANCED MICROSCOPY TECHNIQUES
Sandra Wilks, Senior Research Fellow, Centre for Biological Sciences, Faculty of Natural and Environmental Sciences, University of Southampton Continence Management Group, Faculty of Health Sciences, University of Southampton
Co-authors: M Fader, Continence Management Group, Faculty of Health Sciences, University of Southampton; CW Keevil, Centre for Biological Sciences, Faculty of Natural and Environmental Sciences, University of Southampton

16:00  THE DEVELOPMENT OF A RAPID, COST-EFFECTIVE AND ACCURATE POINT-OF-CARE DIAGNOSTIC DEVICE FOR DETECTING URINARY TRACT INFECTIONS IN PRIMARY CARE
Nicola Morris, Research Manager, Bristol Urological Institute

16:15  INTERMITTENT CATHETERISATION: ENGINEERING THE SURFACE FOR PATIENTS AND THE INDUSTRY
Colin McCoy, Chair in Biomaterials Chemistry, School of Pharmacy, Queen's University Belfast

16:30  AN ENGINEERING APPROACH TOWARDS A MORE DISCRETE AND EFFICIENT DRAINAGE TUBE DESIGN
Alberto Marzo, Lecturer in Mechanical Engineering and Biomechanics, University of Sheffield
Co-authors: A Melis, Mechanical Engineering Department, INSIGNIO Institute for Silico Medicine, University of Sheffield; R Sablotni, J Unger, University of Applied Sciences, Hochschule Niederrhein, Germany; AD McCarthy, CR Chapple, NIHR Devices for Dignity Healthcare Technology Co-operative, Sheffield Teaching Hospitals

16:45  Q&A SESSION

SESSION 7: THE NEXT 20 YEARS
Chairled by Ian Sutherland, Professor of Biomedical Engineering, Brunel University

17:00  PANEL SESSION: PRODUCTS OF THE FUTURE: THE PAPERS WE WANT TO HEAR IN 2035
Speakers include:
Mandy Fader, Professor of Continence Technology, Faculty of Health Sciences, University of Southampton
Christine Norton, Professor Clinical Nursing Practice Research, King’s College London
Douglas Tincello, Professor of Urogynaecology, Reproductive Science Section, University of Leicester
Adrian Wagg, Professor of Healthy Ageing, Faculty of Medicine & Dentistry, University of Alberta
Steve Miles, Clinical Nurse Specialist, Dorset Healthcare Continence Advisory Service

17:30  CHAIR’S CLOSING REMARKS
Alan Cottenden, Professor of Incontinence Technology, Department of Medical Physics and Biomedical Engineering, University College London & Chairman Board of Trustees, Bladder & Bowel Foundation

17:35  CLOSE OF DAY 1 & EVENING RECEPTION

DAY 2  WEDNESDAY 11 NOVEMBER 2015

8:30  REGISTRATION AND REFRESHMENTS

9:00  CHAIR’S WELCOME AND RECAP OF DAY 1
Alan Cottenden, Professor of Incontinence Technology, Department of Medical Physics and Biomedical Engineering, University College London & Chairman Board of Trustees, Bladder & Bowel Foundation

SESSION 8: SETTING THE SCENE
Chairled by Alan Cottenden, Professor of Incontinence Technology, Department of Medical Physics and Biomedical Engineering, University College London & Chairman Board of Trustees, Bladder & Bowel Foundation

9:05  THE TIMES, ‘THEY ARE A-CHANGIN’
Adrian Wagg, Professor of Healthy Ageing, Faculty of Medicine & Dentistry, University of Alberta

SESSION 8: NEW PERSPECTIVES II
Chairled by Rory Smith, Trustee, Bladder & Bowel Foundation
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<td>9:35</td>
<td>THE U-BEND AND BEYOND</td>
<td>Andy Drinkwater, Senior Consultant, WRc plc</td>
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<tr>
<td>10:05</td>
<td>WHAT DOES THE NOSE KNOW?</td>
<td>Pamela Dalton, Member, Monell Chemical Senses Centre, Philadelphia</td>
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<td>10:35</td>
<td>NETWORKING REFRESHMENT BREAK</td>
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<td>11:00</td>
<td>INCONTINENCE AND OLD AGE: WHAT ARE THE SPECIAL NEEDS?</td>
<td>Dr Danielle Harari, Consultant Physician, Continence Lead, Oncology-geriatrics Lead, Department of Ageing and Health, Guy's and St Thomas' NHS Foundation Trust and Senior Lecturer, Kings College London</td>
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<tr>
<td>11:15</td>
<td>CULTURAL PERSPECTIVES ON INCONTINENCE</td>
<td>Veronica Haggar, Team Lead - Adult Integrated Continence Service, Homerton University Hospitals</td>
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<td>11:30</td>
<td>A PRACTICAL APPROACH TO ADDRESSING INCONTINENCE AT LUNCH CLUBS FOR OLDER PEOPLE</td>
<td>Katherine Jeays-Ward, Project Manager, NIHR Devices for Dignity HTC, Sheffield Teaching Hospitals Co-authors: M Flude, S Herrick, Voluntary Action Sheffield; S Holroyd, The Bladder and Bowel Foundation, A Jimenez-Aranda, NIHR Devices for Dignity HTC, Sheffield Teaching Hospitals</td>
</tr>
<tr>
<td>11:45</td>
<td>INCONTINENCE AND DEMENTIA: WHAT ARE THE SPECIAL NEEDS?</td>
<td>Lynne Corner, Director of Engagement, Dementia Innovation Hub, Newcastle University</td>
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<td>12:00</td>
<td>Q&amp;A SESSION</td>
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<td>Men who live with incontinence will tell their stories and share their priorities for improved products</td>
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<tr>
<td>13:50</td>
<td>APPLIED TECHNOLOGY FOR INCONTINENCE - CHANGING THE PARADIGM FROM ABSORPTIVE TO EVACUATIVE</td>
<td>Mark Harvie, Engineer/Pilot, President, Omni Medical Systems Co-author Mark Plante, Surgeon, Chief - Division of Urology, Department of Surgery, Program Director - Urology Residency Program, University of Vermont College of Medicine;</td>
</tr>
<tr>
<td>14:15</td>
<td>THE INFLUENCE OF PENILE CLAMP DESIGNS ON THE INTERNAL MECHANICAL STATE OF SOFT TISSUES</td>
<td>A Levy, A Gefen, Department of Biomedical Engineering, Tel Aviv University; M Fader, D Bader, Faculty of Health Sciences, University of Southampton</td>
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<tr>
<td>14:30</td>
<td>BOXER SHORTS: THE DEVELOPMENT OF A DISTINCTLY MALE WASHABLE ABSORBENT PRODUCT FOR NIGHT-TIME USE</td>
<td>Bridget Clancy, Research Nurse, Continence &amp; Skin Health Group, University of Southampton; Alan Cottenden, Professor of Incontinence Technology, Department of Medical Physics and Biomedical Engineering, University College London &amp; Chairman Board of Trustees, Bladder &amp; Bowel Foundation; Margaret Macaulay, Research Nurse, Continence &amp; Skin Technology Group, University College London; Mandy Fader, Professor of Continence Technology, Faculty of Health Sciences, University of Southampton</td>
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<td>14:45</td>
<td>METHODS TO MEASURE THE BREATHABILITY OF ABSORBING INCONTINENCE PRODUCTS</td>
<td>Shabira Abbas, Senior Scientist, SCA Hygiene Products AB (Sweden)</td>
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<tr>
<td>15:00</td>
<td>Q&amp;A SESSION</td>
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<td>15:10</td>
<td>NETWORKING REFRESHMENT BREAK</td>
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For the most up-to-date and detailed programme for the event, please visit www.imeche.org/incontinence

- This programme is subject to change.
- The Institution is not responsible for the views or opinions expressed by individual speakers.
15:30 DEVELOPMENT OF A CLEANING METHOD FOR MULTI-USE OF UNCOATED PVC CATHETERS
Nicola Morris, Research Manager, Bristol Urological Institute;
Debbie Delgado, Research Nurse, Bristol Urological Institute, North Bristol NHS Trust

15:50 PANEL PRESENTATION: ADVANTAGES AND DISADVANTAGES OF SINGLE-USE AND MULTI-USE CATHETERS FOR INTERMITTENT INCONTINENCE
Miriam Avery, Research Nurse, Continence & Skin Health Group, University of Southampton;
• Sam Sartain, Research Nurse, Continence & Skin Health Group, University of Southampton;
• Jacqui Prieto, Senior Clinical Academic Research Fellow, Continence & Skin Health Group, University of Southampton;
• Margaret Macaulay, Research Nurse, Continence & Skin Technology Group, University College London;
• Mandy Fader, Professor of Continence Technology, Faculty of Health Sciences, University of Southampton

16.00 PANEL PRESENTATION: ADVANTAGES AND DISADVANTAGES OF SINGLE-USE AND MULTI-USE CATHETERS FOR INTERMITTENT INCONTINENCE
Miriam Avery, Research Nurse, Continence & Skin Health Group, University of Southampton;
• Sam Sartain, Research Nurse, Continence & Skin Health Group, University of Southampton;
• Jacqui Prieto, Senior Clinical Academic Research Fellow, Continence & Skin Health Group, University of Southampton;
• Margaret Macaulay, Research Nurse, Continence & Skin Technology Group, University College London;
• Mandy Fader, Professor of Continence Technology, Faculty of Health Sciences, University of Southampton

16:10 Q&A SESSION

16:20 CHAIR’S CLOSING REMARKS
Alan Cottenden, Professor of Incontinence Technology, Department of Medical Physics and Biomedical Engineering, University College London London & Chairman Board of Trustees, Bladder & Bowel Foundation

16:30 END OF CONFERENCE

SPEAKERS AND CONTRIBUTORS

ALAN COTTENDEN
PROFESSOR OF INCONTINENCE TECHNOLOGY
AT UNIVERSITY COLLEGE LONDON
Alan Cottenden initiated the Incontinence: The Engineering Challenge conference series in 1995 to provide a multidisciplinary forum to inform, inspire and encourage those interested in developing incontinence technology. In 2007 he helped the US Simon Foundation – of which he is a board member – to launch Innovating for Continence, a sister conference series with similar aims. He chairs the Bladder and Bowel Foundation’s board of trustees and chaired the teams contributing the incontinence technology chapter to all the International Consultations on Incontinence. In 2013, along with Mandy Fader and colleagues, he launched a website to widen the availability of the information and advice of the book chapter (HYPERLINK “http://www.continenceproductadvisor.org/” "http://www.continenceproductadvisor.org/"

KEVIN CONNORS
FOUNDING PARTNER, SOLACE THERAPEUTICS
Kevin Connors is a Founder and Executive Director of Solace Therapeutics, Inc.. He is also General Partner of Spray Venture Partners, a venture capital firm focused on new early-stage medical device opportunities. Mr. Connors has spent his career forming, financing, and operating companies that develop innovative technologies that solve unmet medical needs. His interest in incontinence began in 1991, when he was CEO of a surgical products company focused on SUI that was subsequently acquired by Boston Scientific. Mr. Connors holds a BS in Electrical Engineering from the University of Notre Dame, a MS in Electrical Engineering from the University of Dayton, and a MBA from Harvard Business School.

NAOMI FARRINGTON
EMERGENCY NURSE PRACTITIONER AND CLINICAL ACADEMIC FELLOW,
UNIVERSITY HOSPITAL SOUTHAMPTON NHS FOUNDATION TRUST AND UNIVERSITY OF SOUTHAMPTON
Naomi Farrington is a post-doctoral Clinical Academic Fellow, meaning that she divides her time between the University of Southampton and University Hospital Southampton NHS Foundation Trust, where she works as an Emergency Nurse Practitioner in the Acute Oncology Unit. Her academic background is in the field of archaeology and anthropology, and she holds a PhD from the University of Cambridge. Primarily, her research interests lie in the field of continence management in end of life care, a much-neglected area that requires attention. She is also interested in improving the experience of older people undergoing treatment for cancer.
NEVILLE YOUNG
HTC COLORECTAL PROGRAMME MANAGER, LEEDS INSTITUTE OF
BIOMEDICAL & CLINICAL SCIENCES

Neville Young is currently responsible for helping develop partnerships across industry, academia & the NHS helping to drive medical innovations that improve the healthcare of individuals affected by colorectal disease. He was awarded a PhD in molecular embryology from Kings College London in 2000. He then worked at the Institute of Cancer Research in London for 5 years followed by 3 years at the University of Queensland investigating tumour signalling pathways. He then managed the clinical drug research portfolio for the University of Leeds and LHTH from 2008 till 2014. In this role he worked with multiple stakeholders to deliver high quality clinical research in Leeds.

RICHARD DAY
READER IN REGENERATIVE MEDICINE, APPLIED BIOMEDICAL ENGINEERING
GROUP, DIVISION OF MEDICINE, UNIVERSITY COLLEGE LONDON

Richard Day is a Reader in Regenerative Medicine at University College London and leads a programme of translational interdisciplinary research investigating the application of biomedical engineering to unmet clinical needs. This includes incontinence prevention and management, particularly the development of novel biomaterial-based devices for tissue regeneration and multi-disciplinary methods for improving tissue function. An example of this is the TIPS microparticle technology developed by his group, which is about to enter a Phase I first-in-man clinical safety. He is co-director of the IMPRESS network established to encourage the uptake of engineering science applied to incontinence research.

DOUGLAS TINCELLO
PROFESSOR OF UROGYNAECOLOGY, REPRODUCTIVE SCIENCE SECTION,
UNIVERSITY OF LEICESTER

Douglas Tincello graduated in medicine from the University of Edinburgh in 1990. His early training was completed in Edinburgh, where he his interest in obstetrics and gynaecology began. He spent two years as a research fellow in the Medical Research Council Centre for Reproductive Biology, where he completed his Doctorate degree. In 1993 he moved to Liverpool to complete his clinical training where he developed his interest in urogynaecology, working with Dr David Richmond at the Liverpool Women’s Hospital. He spent one year as a clinical research fellow and subsequently moved into an academic post as clinical lecturer in Liverpool University in 1999. He was appointed as Senior Lecturer in Urogynaecology at the University of Leicester in April 2002 and has now established a portfolio of clinical, qualitative and laboratory based research in urogynaecology, leading the Prolapse and Incontinence Group.

ADELE LONG, DIRECTOR,
CX PRODUCTS & SERVICES

Adele Long spent a few years in the brewing industry before moving into medical research. In recent years she has worked for the Department of Health in intellectual property management and commercialisation, and was Director of BUI-BioMed, the technology arm of the Bristol Urological Institute. Adele is now a freelance consultant for research and innovation into medical devices, with a particular interest in the development of continence devices that are both functional and meet the requirements of users.

MARTIN SLOVAK
RESEARCH ASSOCIATE, NIHR DEVICES FOR DIGNITY HTC, SHEFFIELD
TEACHING HOSPITALS NHS

Martin Slovak is a Research Associate with NIHR Devices for Dignity HTC, specialising in the development of innovative technology to improve care for people with continence problems. He is also a trainee Clinical Scientist at Sheffield Teaching Hospitals. He has completed the prestigious EU Marie Curie Urology Research Scientist Programme and published his work in various national and international conferences and journals. The findings from his PhD research are used to inform about novel developments of electrical stimulation treatment techniques for the patients with overactive bladder symptoms.

SANDRA WILKS,
SENIOR RESEARCH FELLOW, CENTRE FOR BIOLOGICAL SCIENCES,
FACULTY OF NATURAL AND ENVIRONMENTAL SCIENCES, UNIVERSITY OF
SOUTHAMPTON CONTINENCE MANAGEMENT GROUP, FACULTY OF HEALTH
SCIENCES, UNIVERSITY OF SOUTHAMPTON

Sandra Wilks is a Senior Research Fellow at the University of Southampton, working within the Centre for Biological Sciences and the Faculty of Health Sciences. She has more than 15 years experience in biofilm research with a particular interest in developing improved detection methods for complex microbial communities. She has helped develop new molecular and imaging processes which allow accurate (and low level) detection of viable but non-culturable bacteria. Having been awarded a University of Southampton Institute for Life Sciences Knowledge Mobilisation Fellowship in Healthcare Technologies, she is using these techniques to investigate biofilm development and persistence on urinary catheters.
SPEAKERS AND CONTRIBUTORS

NICOLA MORRIS  
RESEARCH MANAGER, BRISTOL UROLOGICAL INSTITUTE  
Nicola Morris is the BUI-BioMed Research and Laboratory Skill Centre Manager for the Bristol Urological Institute. Nicola is a microbiologist with interests in catheter associated urinary tract infections (UTI) and has over 15 years post-doctoral experience in the field of long term urinary catheter management.

COLIN MCCOY  
CHAIR IN BIOMATERIALS CHEMISTRY, SCHOOL OF PHARMACY, QUEEN’S UNIVERSITY BELFAST  
Professor Colin McCoy is Chair of Biomaterials Chemistry in the School of Pharmacy at Queen’s University Belfast. His expertise is in the design of systems to improve the performance of biomaterials, particularly medical devices. A key focus is in prevention of infection, either through development of surfaces resistant to bacterial adherence or triggered drug delivery, and a further focus is on high-performance coatings for improved comfort and reduced trauma. His research has attracted in excess of £4M of funding, and is the author of more than 100 publications and several patents in biomaterials, drug delivery and chemical signalling.

ALBERTO MARZO  
LECTURER IN MECHANICAL ENGINEERING AND BIOMECHANICS, UNIVERSITY OF SHEFFIELD  
Dr Alberto Marzo is a Lecturer at the Department of Mechanical Engineering, The University of Sheffield. He has a degree in Mechanical Engineering from the University of Cagliari, Italy, and a PhD from the University of Sheffield. In the early stages of his PhD he was awarded the David Crighton Fellowship, and spent one year of his doctoral studies at the Department of Applied Mathematics and Theoretical Physics at the University of Cambridge. Here he investigated the theory behind flows through elastic vessels. In 2011-12 he worked as a Principal Research Scientist for the NHS (Devices for Dignity) to support technology development for people with long-term disabilities. Dr Marzo’s research area stands at the interface between engineering and the life sciences. It is firmly rooted in engineering and mathematics in the context of fluid mechanics, but has a strong emphasis on clinical interpretation and translation of engineering technologies into clinical tools.

CHRISTINE NORTON  
PROFESSOR CLINICAL NURSING PRACTICE RESEARCH, KING’S COLLEGE LONDON  
Christine Norton PhD MA RN is Florence Nightingale Foundation of Clinical Nursing Research at King’s College London and Imperial College Healthcare NHS Trust. A leading clinical academic in gastrointestinal nursing, Christine has an extensive research grant and publication record in functional bowel disorders, notably faecal incontinence and constipation. She has also chaired international and national (NICE) guidelines on faecal incontinence. His current joint appointment is to support other nurses and midwives to develop their own clinical academic careers and to build capacity and capability by developing funded research that addresses current patient needs and priorities in acute care.

DR DANIELLE HARARI  
CONSULTANT PHYSICIAN, CONTINENCE LEAD, ONCOLOGY-GERIATRICS LEAD, DEPARTMENT OF AGEING AND HEALTH, GUY’S AND ST THOMAS’ NHS FOUNDATION TRUST AND SENIOR LECTURER, KINGS COLLEGE LONDON  
Danielle Harari is a consultant and senior lecturer in geriatric medicine at Guy's and St Thomas' Hospital. She is the medical continence lead there and was previously awarded Hospital Doctor of the Year for Continence Care. She has conducted research in urinary and faecal incontinence and constipation in older people, individuals with spinal cord injury, and with stroke. She is the Royal College of Physicians programme lead for continence, and sits on the All Party Parliamentary Group for Continence, and the NHS England Excellence in Continence Care group to advise on national policy, commissioning and quality standards. She also has developed and published on innovative geriatric-liaison services for older people in surgery, acute medicine and cancer services. She is currently clinical lead for a Health Improvement for Innovation programme called ‘No catheter, No CAUTI aiming to embed a catheter safety bundle across a number of hospitals in the South of England.

ADRIAN WAGG  
PROFESSOR OF HEALTHY AGEING, FACULTY OF MEDICINE & DENTISTRY, UNIVERSITY OF ALBERTA  
Dr Adrian Wagg qualified from the London Hospital Medical College in 1988. He was appointed as a Senior Lecturer and Consultant in General Internal and Geriatric Medicine to University College London Hospitals in 1997. In 2010 he was appointed Professor of Healthy Ageing and Division Director for Geriatric Medicine at the University of Alberta in Edmonton, Canada. He has an academic and clinical interest in urinary incontinence and has published over 140 peer reviewed publications, chapters and reviews on the subject. He is General Secretary of the International Continence Society. He holds grants from CIHR, the EU and industry. He is a co-investigator in projects funded by AIHS. He has spoken widely and is nationally and internationally recognised.
SPEAKERS AND CONTRIBUTORS

STEVE MILES
CLINICAL NURSE SPECIALIST, DORSET HEALTHCARE CONTINENCE ADVISORY SERVICE

Stephen Miles is a Clinical Nurse Specialist and Team Lead for the Continence Advisory Service in Dorset. After a twenty one year farming career, came into nursing as a mature student in 1993, training in Winchester. Roles within both hospital and community settings as a District Nurse. Came into the Continence ‘field’ in 2003 as a Continence Advisor in Winchester and now in Dorset.

Other roles have included Academic Practitioner at Southampton University responsible for the ‘Continence Module’ and input into other pre – reg courses. Also past Chair of the RCN Continence Care Forum Committee and currently Chair of Southern Counties Continence Forum.

ANDY DRINKWATER
SENIOR CONSULTANT, WRC PLC

Andy Drinkwater has over 30 years’ wastewater experience, working in the UK and overseas. He has traditional sewerage planning, design and construction experience as well as a wealth of research and design knowledge. Andy specialises in sewerage operations and related issues working both in a technical and project management role. A wide range of projects have been undertaken relating to so called flushable products, Andy is currently lead UK technical expert on an ISO group developing a technical specification.

Andy also provides expert witness advice and has also given advice to UK government regulators and agencies, and overseas investment banks.

PAMELA DALTON
MEMBER, MONELL CHEMICAL SENSES CENTRE, PHILADELPHIA

Pamela Dalton is a Senior Scientist and Member at the Monell Chemical Senses Center in Philadelphia, a non-profit, multidisciplinary, basic research institute devoted to the study of smell, taste and chemical irritation. Dr Dalton received her PhD from New York University in Experimental Psychology and her Master in Public Health from Drexel University. Her research program explores the interaction between cognitive and sensory factors in both the positive and negative responses to odor. Her work has been supported by grants from the National Institutes of Health, with additional funding from the DOD, private foundations and industry collaborations. The research she conducts utilizes both laboratory chamber studies and field studies to investigate a variety of topics in chemosensation, including the perception and control of malodor, the role of social and non-social odors in both eliciting and reducing stress, the effects of occupational and residential pollutant exposures on chemosensory function and chemical communication of emotional states. She has published widely on the human response to odors in both health and disease states.

VERONICA HAGGAR
TEAM LEADER – ADULT INTEGRATED CONTINENCE SERVICE, HOMERTON UNIVERSITY HOSPITAL NHS FOUNDATION TRUST

Veronica Haggar trained as a nurse at the Middlesex Hospital, London, before specialising in the field of Older People and gaining an interest in Continence Care. She has worked as a Continence Nurse Specialist for over 20 years in a variety of roles. This has included a project in the East End of London looking at the continence needs of the Bangladeshi community, Continence care in both primary and secondary care, a research nurse and 4 years working for the Association for Continence Advice. She has completed her MSc in Advanced Practice in Health and Social Care, which has led her to becoming an independent prescriber. She has just taken up the role of Team Leader for the Adult Integrated Continence Service at the Homerton University Hospital NHS Foundation Trust.

KATHERINE JEAYS-WARD
PROJECT MANAGER, NIHR DEVICES FOR DIGNITY HTC, SHEFFIELD TEACHING HOSPITALS

Katherine Jeays-Ward has seven years’ experience of managing complex multidisciplinary projects across a range of organisations and sectors. Recent projects have included working closely with patients to widen patient engagement in device development and the delivery of a patient-led event around dignity and independence, and the Expanded Newborn Screening project, which resulted in national policy change around the routine screening of newborn children in the UK and significantly improved health outcomes for around 30 children per year. Prior to moving into project management, Katherine obtained a PhD in developmental genetics from the Institute of Cancer Research, and spent a further four years as a post-doctoral research associate at the University of Sheffield.

LYNNE CORNER
DIRECTOR OF ENGAGEMENT, DEMENTIA INNOVATION HUB, NEWCASTLE UNIVERSITY

Dr Lynne Corner is Director of Engagement at the Newcastle University Institute of Ageing and Faculty of Medical Sciences. She also directs the Dementia Innovation Hub and VOICEnorth – an organisation dedicated to involving the public on research and innovation around ageing.

She has been involved in research and innovation on ageing for over 20 years and has a particular interest in evidence based design and solutions for frail older people and people living with dementia.
SPEAKERS AND CONTRIBUTORS

DAN BADER
PROFESSOR OF BIO-ENGINEERING AND TISSUE HEALTH, HEALTH SCIENCES, UNIVERSITY OF SOUTHAMPTON
Dan Bader after a PhD in Biomechanics at Southampton, Dan Bader moved to Oxford University, where his research focused on engineering aspects of pressure ulcer prevention. He later moved to Queen Mary, University of London (QMUL) as Lecturer in Biomaterials and, in 1999, as Professor of Medical Engineering. In 2011, he joined the Faculty of Health Sciences in Southampton. He has published over 185 scientific papers and edited three books. Since 2000, he has been a Part-Time Professor in Soft Tissue Remodelling in Eindhoven University. He is Editor of the Journal of Tissue Viability.

DR NICOLA HERON
PROGRAMME DIRECTOR, NIHR DEVICES FOR DIGNITY HTC, SHEFFIELD TEACHING HOSPITALS NHS
Nicola is the Programme Director for the NIHR Devices for Dignity Healthcare technology Co-operative. Prior to joining D4D in 2009, Nicola worked in the pharmaceutical industry as a medicinal chemist and project lead in the oncology and inflammation disease fields and has published over 45 research papers and patents. She has extensive experience in drug discovery and medical device development across both private and public sectors. Nicola holds a PhD in Organic Chemistry from Boston College, USA where she focused on the development of novel synthetic methodologies. She also holds an Exec MBA from Sheffield University. She is a Non-Executive Director for Devices for Dignity Ltd and sits on Research and Innovation Boards at a number of NHS organisations.
SPONSORS AND MEDIA PARTNERS

SPONSORS

IMPRESS
The IMPRESS project aims to facilitate collaboration between patients, healthcare providers and engineering and science experts in the field of incontinence technologies. The intention is to understand the challenges faced in the management of incontinence and to generate a transformation in sentiment towards incontinence technologies. IMPRESS will educate 20 Incontinence Technology Advocates chosen from the engineering and science community and then use their knowledge and interactions with patients and clinical staff to create a self-sustaining network whose work will bring novel technologies to address the extensive range of clinical challenges caused by this condition thereby changing the lives of patients.

WELLMAN
Wellman International is the largest European producer of polyester staple fibres, for specialised end uses, including Hygiene/Personal Care, Healthcare and Technical Applications.

Within its Hygiene & Healthcare Portfolio, Wellman offer a range of highly functional fibres with liquid management/distribution, moisture/vapour transportation, temperature control and antimicrobial properties. All fibres demonstrate excellent performance and resilience characteristics.

At its facility in Cavan Ireland, Wellman employ a dedicated R&D department committed to the development and evolution of new technologies and specialised fibres in the area of fluid distribution and management in particular, and so optimising the role of fibre in managing conditions such as incontinence.

MEDIA PARTNERS

UCL CONTINENCE & SKIN TECHNOLOGY GROUP
www.ucl.ac.uk/medphys/research/continence
UCL's Department of Medical Physics and Biomedical Engineering is one of the largest medical physics departments in the UK. We have exceptionally close links with major teaching hospitals, as well as excellent academic research.

The Continence & Skin Technology Group is a joint department with Medical Physics in the UCLH NHS Trust, and so our staff work side-by-side with hospital physicists, clinical doctors and other health professionals. This close liaison with clinical colleagues in this exciting field enriches our research and teaching.

BIOMEDICAL ENGINEERING ONLINE
www.biomedical-engineering-online.com
BioMedical Engineering OnLine is aimed at readers and authors throughout the world with an interest in using tools of the physical sciences to advance and understand problems in the biological and medical sciences. There are biomedical engineers in countries throughout the world, and the results of their work are scattered and often difficult to access. This publication promotes the rapid and free accessibility of articles for biomedical engineering researchers everywhere. The result is a worldwide community of biomedical engineers who are linked together by their various research interests and their values in promoting benefits to all of humanity.

BLADDER & BOWEL FOUNDATION
www.bladderandbowelfoundation.org
The Bladder and Bowel Foundation (B&BF) is the UK wide charity for people with bladder and bowel control problems. B&BF provides information and support services, including a confidential helpline, for anyone affected by these conditions as well as their families, carers and healthcare professionals.

The charity’s mission is to inspire change and create opportunities to enable people with bladder and bowel control problems to have a voice and equal choice.

We aim to:
- Raise awareness of bladder and bowel control problems amongst the general public and healthcare professionals.
- Give access to information and support regarding the treatments, products and services for people with these conditions.
DISABLED LIVING

www.disabledliving.co.uk

Disabled Living is a charity which provides impartial information about equipment (assistive technology) and services for disabled adults, children, older people and the professionals who support them. With a team of health and social care professionals, together with knowledgeable information officers, Disabled Living can offer solutions to what may seem unmanageable problems.
REGISTRATION AND OTHER INFORMATION

REGISTRATION

The registration desk is situated in the Marble Hall.

If you have any queries throughout the event, please go to the registration desk where a member of the organising team will be more than happy to help.

BADGE

You are required to wear your badge at all times. Should you lose your badge, please go to registration where we will make a new one for you.

EVALUATION FORM

Your pack will also include an evaluation form. We are really keen to hear your feedback so please make sure that you fill out your evaluation form and hand it back to us at registration before you leave. Alternatively you can email it to eventenquiries@imeche.org

REFRESHMENTS AND LUNCH

Refreshments and lunch will be served in Watt (ground floor).

**Tuesday, 10 November 2015**

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<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>08:45</td>
<td>Welcome tea &amp; coffee</td>
</tr>
<tr>
<td>10:45</td>
<td>Networking refreshment break</td>
</tr>
<tr>
<td>13:00</td>
<td>Networking Lunch</td>
</tr>
<tr>
<td>15:10</td>
<td>Networking refreshment break</td>
</tr>
<tr>
<td>17:35</td>
<td>Close of Day 1 and drinks reception</td>
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**Wednesday, 11 November 2015**

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<tr>
<td>08:30</td>
<td>Welcome tea &amp; coffee</td>
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<tr>
<td>10:35</td>
<td>Networking refreshment break</td>
</tr>
<tr>
<td>12:10</td>
<td>Networking Lunch</td>
</tr>
<tr>
<td>15:10</td>
<td>Networking refreshment break</td>
</tr>
<tr>
<td>16:30</td>
<td>Close of conference</td>
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FIRE PROCEDURE

In case of fire alarm, please evacuate the building through the nearest fire exit. Once outside the building, please follow the clearly marked external fire route signs which will lead you to the main assembly point which is in front of the Cockpit Steps, 1-minute walk to the left after leaving the IMechE’s building.

CLOAKROOM & TOILETS

The cloakroom is located in the lower ground next to the registration desk. This is a self service, unmanned cloakroom. It is strongly recommended that delegates do not leave any valuable items. The venue and IMechE cannot be held responsible for any loss or damage to items left.

WIFI & INTERNET ACCESS

To access complimentary Wi-Fi, select the ‘IMECHE’ network and use the password ‘george1847’.

ONSITE CONTACT DETAILS

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
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<td>Alice Aniello</td>
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<td>Callum Hogg</td>
<td>Sponsorship Executive</td>
<td>+44 (0)20 7973 1309</td>
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<tr>
<td>Tina Churcher</td>
<td>Registration</td>
<td>+44 (0)20 7973 1258</td>
</tr>
</tbody>
</table>
THE HEALTHCARE TECHNOLOGIES STUDENT AND EARLY CAREER AWARDS 2016

25 February 2016
One Birdcage Walk, Westminster, London
Free to attend

The 2016 Healthcare Technologies Student and Early Career Awards, hosted by the IET and the IMechE are now open. Finalists will be invited to be present at the awards on the 25 February 2016 in London.

Award categories:
IET Dennis Hill Award (£300)
IET J.A Lodge Award (£500)
IET William James Awards (£400)
IMechE Vicon Award (£250)
IMechE JRI Award (£250)

Find out more about each specific category and submit your entry: www.imeche.org/events/L6322

Key dates:
Submission deadline: 07 December 2015
Notification deadline: 25 January 2016

Find out more:
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