

A G E N D A

APRIL 11-13, 2013 ■ LINCOLNSHIRE, ILLINOIS

**Innovating for
Continence:**

**The
Engineering
Challenge**

THURSDAY, APRIL 11

PRE-CONFERENCE WORKSHOPS

2:00 PM – 4:00 PM

WORKSHOP A

BIRTHING NEW IDEAS: ESCAPING THE STATUS QUO

Paul Plsek, BS, MS

Where do new ideas come from, particularly in a situation where “we have always done it this way” is the standard response? In this interactive workshop, we will explore the methods of Directed Creativity™ through a series of small group exercises that help us overcome the fixation with the status quo. This is creativity for serious people, dealing with serious issues. You’ll be amazed at how easy it is to think differently when that is what you set out to do.

4:00 PM – 5:30 PM

WORKSHOP B

INNOVATION AND ENTREPRENEURSHIP IN PRACTICE

Panel: David Hughes, MBA; Mike Marasco, MBA; and Bob Rosenberg, MBA

Moderator: Al Maslov, BSEE, MSEE, MBA

The primary aim of the Innovating for Continence conferences is to stimulate fresh ideas on how best to meet the needs of people with incontinence, but the subsequent challenges of converting fresh thinking into delivered benefit is also vitally important. In this workshop we will explore the practicalities of innovation and entrepreneurship, guided by three distinguished and experienced practitioners: Mike Marasco from the Kellogg School of Management, Northwestern University; Bob Rosenberg from the Booth Business School, University of Chicago; and David Hughes from Technology Sourcing. Whatever your background (academic, business, clinical), or experience level, join us for a lively, thought-provoking session.

4:00 PM – 5:30 PM

WORKSHOP C

HOW THE BOWEL AND BLADDER CAN GO WRONG

*Christopher Payne, MD, FACS and
Christine Norton, PhD, MA, RN*

This session’s content will include an overview of incontinence, including the anatomy of the bladder and bowel, the causes of incontinence, and current treatment options. This workshop is designed for those new to the field or who wish to brush up on their understanding of the bowel and bladder.

5:30 PM – 7:00 PM

ONE OF A KIND OPENING RECEPTION

SPEED “DATING”

David Zehren and Rebecca Tanaka, MA

We’ve all been to opening receptions, but you haven’t been to one like this! We think you will agree (once you’ve

experienced it) that it’s the best opening reception you’ve ever attended! One reason you will like it - and not the most important reason - is there will be plenty of good food. The major reason you will like it is that you will meet several new, very interesting people. And when it’s over you will be awarded a new degree - an MS ORR: Master of Science in Opening Reception Repertoire. Come join us for food and a very good time.

7:00 PM – 9:30 PM

WORKSHOP D

MIX AND MATCH

Alan Cottenden, PhD and Margaret Macaulay, RN, DN

No clinical evaluation ever identified a single incontinence product that met the needs of all test subjects. Rather, because different users have different characteristics, lifestyles and priorities, they find that different products work best for them. Indeed, an individual may benefit from using different products at home or away, daytime or nighttime, for example: mix and match. But working out optimal selections from the plethora of products available is difficult. In this workshop, Alan Cottenden and Mandy Fader will draw on the findings of the recent 5TH International Consultation on Incontinence to address these issues, focusing in particular on recent and ongoing studies to identify the key indicators for product selection. They will also introduce a new international website which aims to make such advice available to consumers, caregivers, clinicians and companies.

7:00 PM – 9:30 PM

WORKSHOP E

PRESENTATION SKILLS

David Zehren and Rebecca Tanaka, MA

Most presentation skills seminars run a full two days, with each participant making four or more practice presentations, all of them videotaped and critiqued. Our facilitator for this session has conducted a few hundred such seminars and he promises to deliver the highlights and the most important tips and tricks in a single session! Three major topics will be covered: 1) Physical delivery skills such as stance and movement, eye contact, vocal energy and animation, and the elimination of non-words; 2) Creating and using PowerPoint or other visuals that help instead of hurt your presentation; 3) Organizing your content for maximum impact: making more Persuasive Presentations and fewer purely Informative Presentations. This will be a fun session and you won’t have to perform publicly and be videotaped... unless you really want to.

FRIDAY, APRIL 12

FIRST DAY OF CONFERENCE

8:00 AM — 8:45 AM

BREAKFAST

8:45 AM — 9:00 AM

OPENING REMARKS

Alan Cottenden, PhD

9:00 AM — 9:30 AM

THE UBIQUITOUS BIOFILM

Bill Keevil, PhD, FAAM

Biofilms are everywhere. They coat the pebbles on the beach, the clinker in wastewater treatment beds, the surface of your teeth and - of particular relevance to this conference - polymer surfaces in and on the body, such as catheters and urine drainage bags. Comprising a mix of microorganisms, extracellular polysaccharides and DNA scaffolds, and environmental components, they often do little harm, but in some contexts - such as the drainage lumens of catheters, they can have catastrophic effects. In this lecture, Professor Bill Keevil - a microbiologist based at Southampton University, England - will describe the nature and properties of the biofilms encountered in incontinence products and suggest possible strategies for disrupting their deleterious behaviors.

9:30 AM — 10:00 AM

SKIN HEALTH AND INCONTINENCE IN ELDERLY PEOPLE

Hans Smola, MD

Normally, our skin does a remarkable job of protecting us from the world outside: it stops us from drying out, and harmful chemicals and microbes from coming in, and cushions us from everyday knocks and scuffs. However, wearing incontinence products for sustained periods can disrupt its function leading to mechanical, chemical or microbiological damage. In this lecture, Professor Smola - a dermatologist based at Paul Hartmann AG, Germany - will describe his work to understand the pathophysiology of such incontinence associated dermatitis - particularly among elderly users of incontinence pads - and to develop technologies that are kinder to their skin.

10:00 AM — 10:15 AM

DISCUSSION

10:15 AM — 10:35 AM

BREAK

10:35 AM — 11:35 AM

PATIENT PANEL

A key step in successful engineering design is to establish a clear understanding of what consumers want and what matters to them; what are their perspectives and priorities.

In this session we will hear from a panel of people, each having many years managing their incontinence. We will ask them to describe: how their bowels and bladders misbehave; how they currently manage (including describing the strengths and weaknesses of their current products); what their incontinence stops them from doing (easily) that they would like to do; and finally to describe what their perfect product would need to do.

11:35 AM — 12:15 PM

KEYNOTE SPEECH

CONTINENCE AND BIOENGINEERING

Robert Linsenmeier, PhD, Honorary President

How can engineers contribute to restoring continence? Has a biomedical engineer done anything for incontinent people yet? Most people cannot name a single famous engineer of any type, even though the critical role of engineers dates back to the achievements of antiquity. Until sometime in the late 1800s, scientists who designed practical things, some of whom are very famous, generally were not called engineers. When specific education of engineers became common, it was too late for many individuals to become recognized by the public. It is often difficult to identify the outstanding contribution of a particular engineer. Engineering progresses incrementally and by teams. But, whether we know the people or not, engineering has been necessary to the invention and production of all continence care products to date. Bioengineers, the ones who understand biology most deeply, have a special role to play in the future in technical solutions that are sensitive to the biology. Using a cloudy crystal ball, we can predict that advances in many current areas within biomedical engineering are likely to be important, including biomaterials, biosensors, and neural engineering.

12:15 PM — 1:30 PM

POSTER SESSION

Lunch will be served during this session.

1:30 PM — 2:00 PM

INCONTINENCE AND OBESITY: A CHALLENGING COMBINATION

Susan Gallagher, PhD, RN

Managing incontinence can be challenging enough, but add in obesity and the challenges multiply. Currently, 67% of Americans are obese or overweight - the prevalence of severe obesity among women (BMI greater than 40) is expected to double by 2020, increasing from 6.1% to 12.8%. Therefore, the proportion of people with incontinence who are obese is also substantial and growing rapidly. In this lecture, Susan Gallagher - an RN with The Celebration Institute in Houston - will review the particular problems that obesity brings to managing incontinence - for example, using urinary drain bags, handheld urinals and commodes, sourcing sufficiently large and well-fitting incontinence pads, skin care products, odor control, locating

FRIDAY, APRIL 12 *Continued*

the urethra for clean intermittent catheterization, and more – this lecture presents specific opportunities for designers interested in products to meet the direct and indirect needs of this emerging population.

2:00 PM – 2:30 PM

STIGMA AND INCONTINENCE

Kenneth Southall, PhD

Managing incontinence effectively is about much more than containing leakage. Incontinence can affect the whole person. Those who have it often experience an erosion of how they see themselves, and a degradation of how they are - or perceive they are - seen by others: it is a stigmatizing condition. In this lecture, Dr. Kenneth Southall - researcher at Institut Raymond-Dewar in Montreal - will explore the nature of stigma, especially as it relates to incontinence, and explain its significance for people with incontinence, their caregivers and those seeking to design products that address not just physical requirements, but those of the whole person.

2:30 PM – 2:45 PM

DISCUSSION

2:45 PM – 3:10 PM

BREAK

3:10 PM – 3:40 PM

INCONTINENCE IN CONTEXT

Geoff Fernie, PhD

Many people with incontinence have to manage their misbehaving bladders hampered by, for example, reduced mobility, manual dexterity or visual or mental acuity, and ever mindful of their susceptibility to pressure sores. In this lecture, Geoff Fernie - Institute Director, Research, Toronto Rehabilitation Institute and Professor, University of Toronto - will draw on his wide experience in helping people take a wholistic approach to using technology to manage multiple disabilities to provide insights into tackling some of the confounding factors that can make the management of incontinence and toileting particularly challenging.

3:40 PM – 4:10 PM

NEUROPROSTHETICS FOR BLADDER CONTROL: PAST, PRESENT, AND FUTURE

Nick Donaldson, PhD

The idea of tackling bladder control problems using implants designed to stimulate the right nerves at the right times is very attractive. However, it is fraught with challenges that demand expertise across a broad range of engineering disciplines as well as a good understanding of the physiology and pathophysiology of the bladder. In this lecture, Professor Nick Donaldson - Bioengineer at University College London in England - will outline the history of bladder neuroprosthetics, starting from the pioneering work of Giles Brindley (with whom he worked as a young engineer),

describe more recent concepts and to what extent they have been demonstrated, and discuss the feasibility of developing an implant for treating neurogenic incontinence.

4:10 PM - 4:20 PM

DISCUSSION

4:20 PM – 4:50 PM

INTERNATIONAL AND NATIONAL STANDARDS: WHO NEEDS THEM?

Håkan Leander and Anne Farbroth, PhD

International and national standards are intended to help users, producers and purchasers of products by providing definitions, measurement methods and giving guidance on how to assess important functions. In the context of incontinence, there are several standards for the capacity of absorbent incontinence products, another on how quickly a urine drainage bag will empty, and several more for in-use evaluation as well as guidelines for product evaluations from a user and usage perspective. But how are these standards used, by whom, and why? Who writes them? And is it true that standards can both stimulate and stifle innovation? In this lecture, Håkan Leander and Dr. Anne Farbroth will draw on their experience as members of International Standards subcommittee TC173/SC3 on urine absorbing and containing products to provide some answers and food for thought. In doing so, they would like to acknowledge how much they have learned from Dr. Jim Abbott who, as long-time Chair of TC173/SC3, has presided over the creation of around a dozen standards in the urine absorbing and containing areas over the last two decades.

4:50 PM – 5:00 PM

DISCUSSION AND SUMMARY

30TH ANNIVERSARY GALA DINNER

6:30 PM – 8:00 PM

COCKTAILS AND SILENT AUCTION

8:00 PM – MIDNIGHT

DINNER AND DANCING

SATURDAY, APRIL 13

8:00 AM – 8:45 AM

BREAKFAST

8:45 AM – 9:15 AM

COST AND COST-EFFECTIVENESS:

THE HEALTH ECONOMICS OF INCONTINENCE TECHNOLOGY

Heather Gage, PhD

How do you measure what is the cost of managing incontinence for healthcare services and for individuals? The costs of buying pads, catheters, and other products are easy to calculate, but what about the costs of any associated clinician time, and of preventing and treating incontinence associated dermatitis and bladder infections, for example? And how do you quantify value for money: whether one approach to managing incontinence is more cost-effective than another? Drawing on her experience in applying the tools of health economics to incontinence management, Professor Gage -

health economist at Surrey University, England - will review the range of tools available and give examples of how they can be used to address these important issues.

9:15 AM – 9:45 AM

LESSONS FROM THE MILITARY

Phillip Gibson, PhD

The modern soldier relies heavily on sophisticated technology to function effectively, including a rich variety of fabrics and other materials for clothing, ballistic protection and healthcare, for example. In this lecture, Dr. Phil Gibson - Materials Research Engineer at the U.S. Army Natick Soldier Research, Development and Engineering Center, Natick, MA - will draw on his experience in working with such materials to suggest how insights and lessons from his field may help those seeking to develop more effective incontinence care technology.

9:45 AM – 10:00 AM

DISCUSSION

10:00 AM – 10:45 AM

CHALLENGES OF THE BOWEL

Christine Norton, PhD, MA, RN

This session will present an update on the latest technological developments for treating and managing fecal incontinence. Bowel problems create many unique issues as well as those in common with urinary incontinence. The presentation will also use video vignettes of people talking about their challenges with bowel control and the solutions they would like to see developed.

10:45 AM – 11:05 AM

BREAK

11:05 AM – 11:35 AM

QUANTIFYING QUALITY: HOW DO YOU MEASURE THE IMPACT OF INCONTINENCE TECHNOLOGY ON THE QUALITY OF LIFE OF CONSUMERS?

Adrian Wagg, MD

Incontinence doesn't kill you, but it can seriously erode your quality of life, causing embarrassment, discomfort and limiting your activities and social life. Effective management with incontinence products can make a big difference, but how can you measure that difference? In particular, how can you compare the impact on quality of life of different products and use the information to help in making purchasing choices? In this lecture, Adrian Wagg - Professor of Healthy Ageing at the University of Alberta in Edmonton, Canada - will describe recent and ongoing work to develop robust and validated methods for measuring the impact of incontinence products (and other elements of incontinence management) on the quality of life of older users in care homes.

11:35 AM – 12:05 PM

AUXETIC MATERIALS: TECHNOLOGY IN SEARCH OF PROBLEMS

Steven B. Warner, PhD

Auxetic materials are weird: when you stretch them, instead of getting narrower they get fatter. They can be based on metals, polymers, or textiles; some of them have been around for years, but for all their fascination, they have yet to find many commercial uses. Perhaps their unique properties could be harnessed to solve incontinence technology problems. In this lecture, Dr Steve Warner - Materials Scientist at the University of Massachusetts, Dartmouth - will describe and demonstrate the properties of auxetic materials and suggest how they might be exploited in tackling incontinence.

12:05 PM – 12:20 PM

DISCUSSION

12:20 PM – 1:30 PM

LUNCH

1:30 PM – 2:50 PM

CONTRIBUTIONS FROM THE INCONTINENCE INDUSTRY

(Each presentation will be 20 Minutes)

A NEW IMPLANTED, REMOTE-CONTROLLED, TELEMETRY-ADJUSTABLE URETHRAL VALVE FOR SEVERE URINARY INCONTINENCE (UI)

Peter Sayet, Inventor,

President/CEO, Precision Medical Devices, Inc.

The history of surgical interventions to restore continence to those with compromised urethral closure mechanisms is extensive; in particular, the Artificial Urethral Sphincter has been in use for over 30 years and more recently, a variety of tension-free vaginal tapes (TVT) have come to the market. In this lecture, Peter Sayet - President /CEO of Precision Medical Devices, Inc. - will describe the work of his company to develop a new implant device whose closure pressure on the urethra can be adjusted telemetrically, post-surgery, by the attending physician, while the valve's open/close function is remotely activated by the patient using a simple car-key-like wireless control. He will outline the design specification for the device and describe the design approach that was taken to produce prototype devices for evaluation, and present data from recent laboratory and clinical studies to show how the work is progressing towards an effective product.

TOWARDS THE PERFECT INCONTINENCE PAD

Chuck Stocking, JD,

President, Principle Business Enterprises, Inc.

The perfect incontinence product would - among other things - absorb fluid rapidly, contain urine reliably without leakage and help preserve the user's skin health...in the end providing 6 to 8 hours of protection for uninterrupted activity. But although products have improved enormously

in these respects in recent years, they are not yet perfect. In this presentation, Chuck Stocking - owner of Principle Business Enterprises, Inc. - will present technical and clinical data describing his firm's recent work with colleagues and collaborators to better understand user/absorbent-product interactions and develop more effective solutions to critical needs, paying particular attention to the basics of moisture management and skin health.

**ELECTRICAL NEUROMODULATION FOR URINARY INCONTINENCE:
A NEW APPROACH**

Mike Tracy, PhD, Johnson & Johnson Global Surgery Group
Most physicians and scientists support the theory that faulty communication between the central nervous system and the bladder plays a role in OAB. Stimulation of sacral nerves through transcutaneous or implanted electrodes has been shown to relieve the clinical symptoms of OAB. In an effort to translate the therapeutic effect of neuromodulation into a noninvasive therapy, a transdermal amplitude modulated signal (TAMS) was evaluated. TAMS is a novel waveform technology that safely passes through the outer skin layers, effectively targeting nerves, usually without sensation, via a noninvasive, self-contained, weekly patch that is applied with the aid of a placement tool and controlled by a wireless handheld remote control.

**ENGINEERING A BETTER LIFE:
THE STORY OF A NEW MALE BLADDER MANAGEMENT SYSTEM**

*Mark Harvie, Inventor,
President, Omni Measurement Systems, Inc.*
Commercialization of the AMXD® led to the evolution of the GEN II URINCare Advanced Bladder Management System. The GEN II URINCare System is non-invasive and designed with sensor driven technology within the male cup. Upon sensing urine, Omni's patented sensor triggers the control device to activate and immediately pump urine away from the skin, keeping the user dry, providing advanced incontinence and wound care that reduces the risk of complications associated with urinary incontinence.

2:50 PM – 3:05 PM
DISCUSSION

3:05 PM – 3:20 PM
BREAK

3:20 PM – 3:50 PM
CLEAN INTERMITTENT CATHETERIZATION: PAST, PRESENT, AND FUTURE
Katherine Moore, PhD, RN

Clean intermittent catheterization (CIC) has revolutionized bladder management for millions of people of all ages worldwide since its introduction to general care in the late 1970's. Inserting a catheter for just as long as it takes to empty the bladder has proven to have many advantages over indwelling catheterization and catheters for IC now come in a variety of designs. But there are a number of important unresolved questions relating to their use. In this lecture, Katherine Moore – Professor of Nursing at the University of Alberta, Edmonton – will give a brief history of IC and review the research evidence on user satisfaction and urinary tract infections concerning such issues as single versus multiple use or lubricious versus non-lubricious (hydrophilic) coatings. Along the way, she will suggest where further work to overcome some existing limitations might yield products to better serve some groups of users.

3:50 PM – 4:00 PM
DISCUSSION

4:00 PM – 5:00 PM
WHAT WORKS FOR WHO AND WHY?

*Panel: Diane Newman, DNP, CRNP, FAAN, BCB-PMD;
Christine Norton, PhD, MA, RN; Margaret Macaulary RN, DN;
Katherine Moore, PhD, RN
Moderator: Alan Cottenden, PhD*

In this workshop we will present an international panel of expert nurses with the details of a range of people who live with intractable urinary and/or fecal incontinence and ask them to suggest the products most likely to meet their management needs. In the process, we will learn not only what works best for whom and why, but also identify the limitations to existing products which, if they were overcome, would deliver added benefits.

5:00 PM – 5:15 PM
SUMMATION AND INTRODUCTION OF 2015 HONORARY PRESIDENT

5:15 PM
WINE AND CHEESE PARTY

PLANNING COMMITTEE

The following people have generously donated their time to the development, coordination and planning of the 2013 conference:

Alan Cottenden, PhD

Professor of Incontinence Technology
University College London
London, England

Peter Bulla

Vice President USA
LABORIE
Burlington, Vermont, USA

Margot Damaser, PhD

Associate Professor of Biomedical Engineering
Cleveland Clinic Lerner College of Medicine
Cleveland, Ohio, USA

Cheryle B. Gartley

Founder and President,
The Simon Foundation for Continence
Chicago, Illinois, USA

Mary Radtke Klein

Assisted Living Associates
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Neurobiology & Physiology, and Ophthalmology,
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Adjunct Professor of Urology in Surgery,
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Christine Norton, PhD, MA, RN

Professor of Clinical Nursing Innovation
Imperial College Healthcare NHS Trust London
and Buckinghamshire New University
London, England

Christopher K. Payne, MD, FACS

Director of Female Urology and Neurourology
Associate Professor of Urology at Stanford School
of Medicine, Stanford University
California, USA

PANELISTS

The Simon Foundation for Continence wishes to thank our panelist for their valuable contributions:
Dianna Hill, Iris King, Lee Krizka, Sherrie Palm, Thomas Rowland and Joy Wagner.



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