

**'Innovations in Textiles 2009:
Smart, Nano and Technical Textiles for Medical, Industrial and Clothing Applications'
18th – 19th March 2009
Royal College of Physicians**

Date: Day 1 – 18th March 2009

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| 09.30 - 09.40 | Welcome and Introduction from the Chair
Dr Mark Morrison, CEO, Institute of Nanotechnology |
| 09.45 - 10.15 | 'Textile Nanotechnology - Facts and Fiction'
<ul style="list-style-type: none"> 🌀 Overview of real "nano" textiles on the market. 🌀 Performance of these products in daily use. 🌀 Possible future textile nano products. Dr Jan Beringer, Hohenstein Research Institute |
| 10.20 – 10.50 | 'Use of Nanostructured Materials in Fiber Development'
<ul style="list-style-type: none"> 🌀 The available tools for development of functionalized fibers with main focus on melt spinning. 🌀 Introduction and performance of photocatalytic fibers, controlled-release fibers, reinforced fibers, use of bicomponent fibers. 🌀 Incorporation of nanoparticles within fiber coatings. Dr Giuseppino Fortunato, EMPA St. Gallen |
| 10.55 - 11.15 | Refreshments |
| 11.20 – 11.50 | 'Defence and First-responder Markets'
<ul style="list-style-type: none"> 🌀 Electrical components woven from fabric. 🌀 Textile keypads and keyboards, electrical heaters, sensors, wiring harnesses. 🌀 Applications within defence and related industries. Stan Swallow, Intelligent Textiles Ltd |
| 11.55 – 12.25 | 'Smart Garment Technology for Chemical, Biological, Radiological, Nuclear and Explosive Protective Clothing'
<ul style="list-style-type: none"> 🌀 Nanotechnology as the driver behind many CBRNE textile innovations. 🌀 Protective and comfort enhancing technologies. Cath Rogan, Smart Garment People |
| 12.30 - 13.00 | 'Nanotechnologies for an Optimum Protection and Comfort in Protective Clothing'
<ul style="list-style-type: none"> 🌀 Nanotechnologies for protective clothing. 🌀 Carbon Nanotubes reinforced foams. 🌀 Novel Plastic Optical Fibers. Daniel Crespy, EMPA |
| 13.05 – 14.00 | Lunch |
| 14.05 – 14.35 | 'Role of Nanoparticles as Fire retardants for Thermoplastic Fibres'
<ul style="list-style-type: none"> 🌀 Dispersion of polymer layered silicate nanoclays in different fibre-forming synthetic polymers. 🌀 Melt extrusion of polymer–nano hybrids without/with conventional flame retardants into filaments. 🌀 Effect of nano particles and flame retardant micro particles on fibres' physical, mechanical and flammability properties. Professor Baljinder K Kandola, University of Bolton |
| 14.40 – 15.10 | 'Color-changing and Color-tunable Photonic Bandgap Fiber Textiles'
Prof. Maksim Skorobogatiy, Ecole Polytechnique de Montréal |

15.15 – 15.45	<p>'Elastomeric Opal Polymer Fibres with Stretchable Colour Effects'</p> <ul style="list-style-type: none"> 🌀 Polymer opals suitable for industrial-scale production made by a solvent-free technique. 🌀 Iridescent range of colours produced in durable sheets, ribbons and fibres. 🌀 Flexibility allows reversible and dramatic colour change. <p>Dr David Snoswell, University of Cambridge</p>
15.50 – 16.20	Refreshments
16.25 – 16.55	<p>'SensFloor® and NaviFloor® - Large-area Smart Textile Systems for Building Automation, Ambient Assisted Living, and Robot Navigation'</p> <p>Christl Lauterbach, Future-Shape</p>
17.00 - 17.30	<p>'d3o™: Join the Revolution' (Not available on post-event proceedings CD)</p> <ul style="list-style-type: none"> 🌀 Where it all began – the invention, the company, and the 1st ever application. 🌀 Current applications – where d3o™ is used now. 🌀 The future. <p>Richard Palmer, d3o</p>
17.35	End of day 1

Day 2 – 19th March 2009

09.30 - 09.35	<p>Introduction and Welcome to Day 2 from the Chair</p> <p>Brian McCarthy, TechniTex Faraday Ltd</p>
09.35 - 10.05	<p>'A Modified Process for Improving the Properties of Carbon Nanotube Spun Yarn'</p> <p>Dr Canh-Dung Tran, CSIRO Textile and Fibre Technology (CTFT) Australia</p>
10.10 - 10.40	<p>'Intelligent multi-reactive Textiles in Integrating Nano-filler based CPC-fibres'</p> <ul style="list-style-type: none"> 🌀 Scope and description of INTELTEX. 🌀 General principles of sensing polymers. 🌀 Today achievement and novel potential applications. <p>Hua Deng, Nanocyl S.A.</p>
10.45 – 11.15	<p>'Finishing of Textiles via Plasma Treatment'</p> <ul style="list-style-type: none"> 🌀 Plasma treatment. 🌀 Plasma coating. 🌀 Textile finishing. <p>Dr Guy Buyle, CenTexBel, Belgium</p>
11.20 – 11.40	Refreshments
11.45 – 12.15	<p>'Nanoparticles in Medical Textiles: Opportunities and Challenges'</p> <ul style="list-style-type: none"> 🌀 Market opportunities for nanoparticles in medical textiles. 🌀 Technical risks. 🌀 Market factors. 🌀 Health and environmental issues. <p>Dr Tofail Syed, University of Limerick</p>
12.20 – 12.50	<p>'A Status Quo and Vision for Wearable Technologies in Sports- and Healthcare'</p> <ul style="list-style-type: none"> 🌀 Introduction of the Wearable Technologies (WT) market. 🌀 Actual examples of already established WT products. 🌀 Outlook for new upcoming technologies, which will stimulate this growing market. <p>Christian Stammel, Navispace AG</p>
12.55 – 13.50	Lunch

- 13.55 – 14.25 ‘Applications of Electronic Nose Technology in the Textiles Industry’
- 🌀 The practical use of odour detection technology in the textile industry.
 - 🌀 The direct measurement of anti-odour capability of technical textiles and fabrics.
 - 🌀 Simultaneous anti-microbial efficacy and anti-odour capability of technical textiles and fabrics using a single incubation technique.
- Dr Tim Gibson, Scensive Technologies Ltd
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- 14.30 – 15.00 ‘Golden Wool – A New Woollen Textile for High Value Textiles and Fashion Apparel’
- 🌀 Use of Nanogold.
 - 🌀 The size of the nanogold colourants.
 - 🌀 The technology and products are proprietary.
 - 🌀 Nanogold properties
- Professor Jim Johnston, Victoria University of Wellington
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- 15.05 – 15.35 ‘Economic Impact of Nanotechnology in the Textile Sector’
- 🌀 Current and potential economic impact of nanotechnology in the textile industry
 - 🌀 Existing textile products incorporating nanotechnology
 - 🌀 Drivers and barriers for the use of nanotechnology
- José Conde, Bax & Willems Consulting Venturing, Spain
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- 15.40 - 16.10 ‘Risk Assessment of Nanotechnology Applications in Textiles for Consumer Products’
- 🌀 Identification of knowledge gaps for risk assessment of nanoparticles in general.
 - 🌀 Specific risk assessment issues related to the use of nanoparticles in textiles.
- Susan Wijnhoven, RIVM
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- 16.15 Closing Remarks – Del Stark, Institute of Nanotechnology