Monitoring Technology & Applications for Ambient Assisted Living
Advancements in the home and mobile devices for the elderly and disabled
5th July 2006, RIBA, London

By the year 2010 it is estimated that 16.3% of the UK population will be made up of people over the age of 65. It is therefore vital that the needs of this ever-increasing section of society are addressed through innovation and research into novel sensor applications for the home and mobile devices.

This event will provide a unique forum in which to access the region's academic brilliance, and gain detailed knowledge of the cutting-edge research and developments in the field of assisted living. More specifically this event will consider: ◆ What are the latest advancements in sensors for security and medical applications in the home of the elderly? ◆ What are the biggest challenges in body sensor networks for the elderly and infirm? ◆ What are the most up-to-date issues in signal processing for assisted living? ◆ What opportunities are there for collaborative research and partnerships between the commercial and academic sectors?

17.45   Registration with tea and coffee

18.15   Introduction to aims and objectives of LTN
Peter Hicks, Technology Consultant, **London Technology Network**

18.30   Introduction to the main challenges for care of the elderly and disabled in the home
  ◆ Highlighting the importance of integration of design and social acceptance into novel technologies for the aging population
  ◆ Emphasising the concept that existing technologies have relevant applications in the elderly and disabled care marketplace
  ◆ Evaluating the importance of academic/commercial collaborations to move forward
  ◆ Addressing the concerns surrounding intrusion and funding implications for future research
Chair: Professor Heinz Wolff, Emeritus Professor of Bioengineering, **Brunel University**

18.40   Outlining the latest developments in body sensor networks (BSNs)
  ◆ Addressing the technical challenges related to biosensor design, power scavenging, and low power wireless communication
  ◆ Examining the need for autonomic sensing including context-aware sensing, multisensor fusion and data mining
  ◆ Evaluating the challenges and opportunities of BSN for general well being monitoring and elderly care
  ◆ Assessing the future of elderly medical care and chronic disease management
  ◆ Exploiting the advantages achieved through academic/commercial partnerships
Professor Guang-Zhong Yang, Director, The Royal Society/Wolfson MIC Laboratory, Department of Computing, **Imperial College London**

18.55   Networking received signals from telecare sensors into recognisable patterns and events
  ◆ Highlighting the current and future technological developments for activity and event monitoring (telecare) for the elderly
  ◆ Methods of recognition and context awareness from analysis of diverse networked signals i.e. viewing the home as a unit not just an individual
  ◆ Gauging the associated benefits of telecare networks for care of the elderly and disabled
  ◆ Expressing the need for academic research in a range of areas related to assistive technologies
Dave Foster, Head, Business Development, **Initial Attendo Ltd**

19.05   Establishing evidence of daily living activities from non-intrusive sensors using advanced data analysis
  ◆ Assessing the recent developments in intelligent systems for monitoring the behaviour of the elderly and disabled in the home
  ◆ Developing systems that have the ability to modify their response by automatic/semi-automatic learning
  ◆ Interacting with the user: How to report behavioural changes
  ◆ Addressing the need to work with academia to maximise the potential output of research
Dr Basim Majeed, Principal Research Professional, Intelligent Systems Research Centre, **BT Group Chief Technology Office**

19.20   Question and answer session with the audience and speaker panel

20.00   Networking wine and buffet reception & poster sessions from across London and the South East's universities showcasing their latest research

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All events are by INVITATION ONLY

SPEAKER PROFILES

Basim Majeed - BT GROUP CHIEF TECHNOLOGY OFFICE

Basim is a Principal Research Professional at the Intelligent Systems Research Centre within BT Research and Venturing. He holds a Masters degree and PhD degree in Intelligent Control Systems from the University of Manchester. He is a member of the IEE and the IEEE, and a Chartered Engineer. He has published many papers in the areas of intelligent control, fault detection and isolation in dynamic systems, signal processing and intelligent data analysis. Since joining BT in 2003, he has taken the lead role in the intelligent data analysis project within the Care in the Community Centre. He is also leading a research team working on the application of soft computing techniques in real-time business process intelligence.

Dave Foster - INITIAL ATTENDO LTD

David is head of business development for Initial Attendo and a non-executive director for the Telecare Services Association (formerly ASAP). He has worked within the telecare field for over 17 years as a designer, systems architect, business developer, and director of a care monitoring centre. He began his career with a diploma in electronics engineering, starting work for Ferranti Computers in 1982 as a project design engineer on Nuclear power station projects. His 'telecare' career began in 1989 when he joined the newly formed Shorrock Community Care and over the past 17 years he has worked with all of the major suppliers in the community care and telecare market place, driving forward the design and development of monitoring and telecare solutions. He has been influential in developing many of the response monitoring solutions that are employed, and in use today throughout the UK, Europe and USA.

Guang-Zhong Yang - IMPERIAL COLLEGE LONDON

Professor Yang is director of the Royal Society/Wolfson MIC Laboratory in the Department of Computing at Imperial College. This department was rated 5* at the last RAE, and has been placed among the top ten departments worldwide by several academic surveys. His research has been focussed on biomedical imaging, sensing and robotics. He coined the term Body Sensor Networks (BSNs) and is widely regarded as the founder of this ever-expanding research field. Professor Yang has received several major international awards including the I.I. Rabi Award from the International Society for Magnetic Resonance in Medicine. He is Director of Medical Imaging, Institute of Biomedical Engineering, Imperial College, Chairman of the Imperial College Imaging Sciences Centre, founding Director of the Royal Society/Wolfson Medical Image Computing Laboratory at Imperial College, and co-founder of the Wolfson Surgical Technology Laboratory. In 2001, he was honoured the Royal Society Research Merit Award in Medical Image Computing.

Heinz Wolff - BRUNEL UNIVERSITY

Heinz graduated in Physiology and Physics and probably was the first individual to call himself a "Bioengineer". He has worked as the director of Bioengineering Divisions, for the MRC, at both the National Institute for Medical Research, and the Clinical Research Centre. Whilst serving as the UK delegate on the EC Standing Committee on Bio-Medical Engineering Research, he coined the phrase "Tools for Living", to describe any technology, intended to enhance the quality of life of people suffering from a disability. In 1983 he founded the self-financing, Institute for Bioengineering at Brunel University, which he directed until 1995. He leads a double life, sharing his professorial duties with those of a scientific entertainer on Radio and TV and as a prolific lecturer. He is now Emeritus Professor of Bioengineering at Brunel, leading a team concerned with technological innovation, which will have an impact on major social problems.

Peter Hicks - LONDON TECHNOLOGY NETWORK

Peter joined London Technology Network in June 2003, specialising in hardware and mechanical engineering. Peter works with a range of London university departments, including electronic, electrical and mechanical engineering, materials, physics, and aeronautics, where his 25 years of experience helps commercial organisations and academics to effectively transfer and exploit knowledge. Before joining the LTN team, Peter worked as one of the General Managers of ARM Holdings PLC, where he successfully introduced a range of products including the PrimeXsys platform. Prior to this, Peter ran the ARM Consulting Business unit for three years, offering electronic design services to the semiconductor industry.

See what participants said about previous LTN events:

"Thank you for the very valuable event"
R. Suzuki, *Associate Director,* **EISAI EUROPE**

"The organisation itself was excellent…The Q&A session was very valuable"
A. Brandle, *Head of Intelligent Environments,* **MICROSOFT RESEARCH**

"These events are superbly organised"
A. Thornton, *Business Development Manager,* **KING'S COLLEGE LONDON**

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London Technology Network
Ideas into Action

LTN's Mission:
To help technology-intensive companies be more effective and efficient in their "knowledge acquisition" from London's universities.
Each month, London Technology Network brings together industrial and academic thought leaders in the most powerful new technologies, both on the stage and in the audience. LTN discussions identify common technology platforms shared across industries and disciplines, and explore how industry, government and academia can collaborate to introduce and exploit these technologies. Attendees build personal networks that foster efficient transfer of technology and drive down the cost and time to deliver new products to market. Through the London Innovation Relay Centre we also run a series of workshops to help London companies identify their technology needs and find suitable technology partners across the EU.

HOW TO GET THERE

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Tel: 020 7307 3888
Fax: 020 7307 3763
Website: www.riba-venues.com
or
General Enquiries:
Tel: 020 7580 5533
Fax: 020 7255 1541
Website: www.architecture.com

Transport Information

National Rail
The RIBA is in easy reach via London Underground from all London National Rail Stations.

Further information on timetables and realtime train information at:
www.nationalrail.co.uk
or 08457 484950

Underground
The nearest underground stations are:

Regents Park
(Bakerloo Line)

Great Portland Street
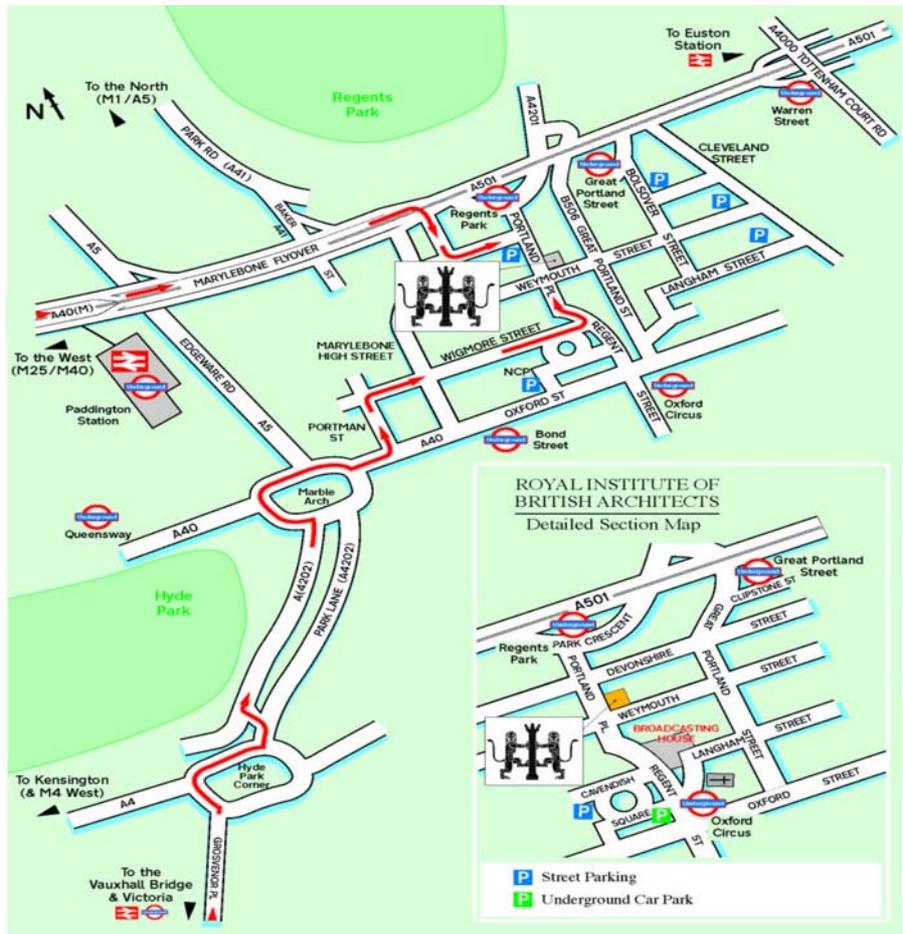(Circle, Metropolitan and Hammersmith and City Lines)

Oxford Circus
(Victoria Line, Central and Bakerloo Lines)

Information and journey planners for the London Underground at:
www.thetube.com

Parking and Congestion charging
The RIBA is inside the London congestion charging area, information about the scheme can be found at:
www.cclondon.com

Details of parking in the area surround RIBA can be found at:
www.masterpark.org.uk

Travel information for all of London can be found at:
www.transportforlondon.gov.uk
or by calling 020 7222 1234.

ROYAL INSTITUTE OF BRITISH ARCHITECTS
Detailed Section Map

P Street Parking
P Underground Car Park

Locator Map

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