

INVITATION

Connected Health Holst Symposium 2015

Thursday, 26 November 2015

Auditorium, Technische Universiteit Eindhoven, the Netherlands

Organized by Philips Research and

Technische Universiteit Eindhoven

Holst Memorial Lecture 2015



Healthcare Networks Innovative Technology



Prof. Bastiaan R. Bloem, MD, PhD

Department of Neurology,

Radboud university medical center, Nijmegen,

the Netherlands

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Holst Memorial Lecture 2015

The Holst Memorial Lecture and Symposium are organized by Philips Research and the Technische Universiteit Eindhoven (TU/e). This year's Holst Lecture, the 39th since 1977, will be held by Prof. Bastiaan Bloem, consultant neurologist at the Department of Neurology, Radboud university medical center, Nijmegen, the Netherlands. Bastiaan Bloem is founder and director of the Parkinson Centre Nijmegen and is widely regarded as a healthcare innovator.

Symposium Connected Health

The world population is aging, chronic diseases are on the rise, 75% of healthcare expenditure is spent on managing chronic conditions. Consumers want to be more in control of their health and need to do more themselves to keep healthcare expenditures under control. Prevention is becoming more important. Many players are entering the market with health applications and services to support health management. Technology plays an important role in developing connected systems for continuous personal health. How can Connected Health help us to relieve the burden of chronic disease, address the shortage of professionals, decelerate the cost increase to the healthcare system and empower people to lead a healthy life? Eminent speakers from both the academic, healthcare industrial research communities will address scientific and other developments impacting Healthcare in 45 minute presentations.



Holst Memorial Lecture 2015:

Healthcare Networks Innovative Technology

Prof. Bastiaan R. Bloem, MD, PhD

In order to keep healthcare affordable for future generations, we need to implement a drastic transformation at three different levels:

(1) a switch from institutionalized care (where services to patients are largely being delivered by generically active instructions) to one where services are being delivered within specialized, integrated and disease-specific care networks that transcend the traditional barriers in healthcare;

(2) a transition from doctor-centered care to patient-centered care, enabling patients to act as true partners in healthcare; and

(3) a new financial reimbursement system, where the current “fee for services” system is replaced by a “fee for outcome” system that rewards integrated networks for good health outcomes, at a good prize (value-based care). All three goals can be greatly supported by innovative technological solutions that help professionals to collaborate as a team, that support patients in their self-management, and that allow for transparent monitoring of health outcomes and costs.

In his lecture, Bastiaan Bloem will illustrate these developments by reviewing his 10-year experience with the Dutch ParkinsonNet, an award-winning concept that has revolutionized the management of patients with Parkinson’s disease.

ParkinsonNet is a multidisciplinary professional network consisting of around 3000 healthcare professionals from over 12 different disciplines who have received specialized training in the management of people with Parkinson's disease. The network reached full nationwide coverage in the Netherlands in 2010, and is meanwhile being exported to other countries. In his presentation, he will specifically highlight how the ParkinsonNet networks benefit from a range of innovative technical solutions.

At the same time, these same professional networks create an optimal infrastructure for the rapid deployment of technical solutions developed by healthcare companies. In other words: healthcare networks need technology to function optimally, but technological solutions require networks in order to be readily implemented.

Being at the forefront of these developments not only helps to develop an affordable healthcare system in the Netherlands, but also creates unique opportunities to use our experience as a new export product for our country, allowing for globalization of network care.

Holst Memorial Lecture Award Recipient 2015:

Prof. Bastiaan R. Bloem, MD, PhD

Professor Bastiaan Bloem is a consultant neurologist at the Department of Neurology, at Radboud university medical center, Nijmegen, the Netherlands. He received his M.D. degree (with honours) at Leiden University Medical Centre in 1993. In 1994, he obtained his PhD degree in Leiden, based on a thesis entitled “Postural reflexes in Parkinson’s disease”. He was trained as a neurologist between 1994 and 2000, also at Leiden University Medical Centre.

He received additional training as a movement disorders specialist during fellowships at ‘The Parkinson’s Institute’, Sunneyvale, California (with Dr. J.W. Langston), and at the Institute of Neurology, Queen Square, London (with Prof. N.P. Quinn and Prof. J.C. Rothwell). In 2002, he founded and became Medical Director of the Parkinson Centre Nijmegen (ParC), which was recognized from 2005 onwards as centre of excellence for Parkinson’s disease. Together with Dr. Marten Munneke, he also developed ParkinsonNet, an innovative healthcare concept that now consists of 64 professional networks for Parkinson patients covering all of the Netherlands (www.parkinsonnet.nl). Because of the evidence-based quality improvement and significant cost reduction, ParkinsonNet has received multiple awards, including the ‘Pearl Prize for Best National Healthcare Innovation’ in 2011, and the ‘Value Based Health Care Award’ in 2015.

In September 2008, Bloem was appointed as Professor of Neurology, with movement disorders as special area of interest. He is currently Past-President of the International Society for Gait and Postural Research, and is on the editorial board for several national and international journals. He is currently also member of the International Executive Committee of the Movement Disorder Society. In 2009, he joined the board of ZonMw (The Netherlands Organisation for Health Research and Development). In 2011, he was elected as the National Healthcare Hero by the Dutch Ministry of Health. In 2012, he was elected Citizen of the Year for the city of Nijmegen. He has two main research interests: cerebral compensatory mechanisms, especially in the field of gait & balance; and healthcare innovation, aiming to develop and scientifically evaluate patient-centred collaborative care. Prof. Bloem has published over 550 publications, including more than 400 peer-reviewed international papers.



Prof. Bastiaan R. Bloem, MD, PhD

Symposium Program

10.00 hrs	Registration	
10.30 hrs	Opening	Frank Baaijens, Rector Magnificus TU/e
10.35 hrs	Introduction	Symposium Chairs: Jan Bergmans, TU/e Franklin Schuling, Philips
10.45 hrs	'Stop Talking, Start Doing'	Lucien Engelen, Director Reshape Centre for Innovation at Radboud university medical center, Nijmegen
11.30 hrs	Telehealth-enabled Care: Preparing for the new Landscape of Healthcare	Julie Reisetter, Chief Nursing Officer for Telehealth at Banner Health, Phoenix, Arizona
12.15 hrs	Lunch	
13.45 hrs	Clinical Decision Support Systems & Connected Health	Bart De Moor, Full professor Department of Electrical Engineering ESAT-STADIUS, KU Leuven and Scientific Director of the iMinds Future Health Department
14.30 hrs	Leading Digital Transformation	Jeroen Tas, CEO Healthcare Informatics Solutions and Services, Royal Philips Electronics
15.15 hrs	Concluding Remarks	Chair
15.30 hrs	Break	
16.00 hrs	Word of Welcome	Henk van Houten, General Manager Philips Research
16.05 hrs	Holst Memorial Lecture 2015  Healthcare Networks Innovative Technology	Bastiaan Bloem Department of Neurology, Radboud university medical center, Nijmegen
17.00 hrs	Award Ceremony and Reception	Frank Baaijens, Rector Magnificus TU/e

Participation

Participation (Symposium + Holst Memorial Lecture) is free of charge.

Registration however is mandatory; the number of seats available is limited. Registered participants will receive a confirmation.

The venue for the 2015 Holst Memorial Lecture and Symposium is the Auditorium, Technische Universiteit Eindhoven, Eindhoven, the Netherlands.

Further information:

Conference Office TU/e
Telephone +31 40 247 4000
E-mail: conferences@tue.nl
Website: www.tue.nl/holst

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10.45 hrs:
'Stop Talking, Start Doing'

Lucien Engelen

Director RE shape, Center for Innovation at Radboud university medical center, Nijmegen

Lucien Engelen (*1962) has worked since 2007 at the Radboud university medical center, Nijmegen, as Head of the regional emergency healthcare network. He also advises the Board in terms of changes in healthcare enhancing the participation of the patients and their informal care in their own disease, working towards raising the level of participation in Health(care), research and education. He is founding Director of the Radboud REshape Center, that acts on the convergence of technology and patient empowerment. Creating breakthrough programs, creates alliances (i.e. Philips, Apple and MaRS Canada) compiles foresights and products (if industry lacks progression) itself.

At Radboud university medical center, Nijmegen, Engelen is Director Radboud REshape Center, Head of the Regional Emergency Network and Advisory of the Executive Board. Other formal positions include Chief Imagineer Dutch National IT Institute for Healthcare NICTIZ, Core Faculty Singularity University Exponential Medicine, Silicon Valley. Lucien Engelen was named one of the initial 150 world thought leaders and invited to blog on LinkedIn Today as part of the influencers program (550.000+ followers). Dutch National TV future-affairs program Backlight (Tegenlicht) aired a documentary on his vision and approach to change healthcare into a more participatory. Engelen is author of several books, essays, chapters and scientific articles on the change of healthcare and was awarded with the Radboud Medal 2015, the Dr. Michael Medal 2015 by Dutch Surgery Association and the TIM 2015 as most inspirational leader in IT.



11.30 hrs:
**Telehealth-enabled Care:
Preparing for the new
Landscape of Healthcare**

Julie Reisetter Msc

Chief Nursing Officer for Telehealth at Banner Health, Phoenix, Arizona

Julie Reisetter has over 30 years of healthcare experience in a variety of roles throughout the U.S. Her professional journey has included clinical and leadership positions in Iowa, Colorado, California and Arizona. In 2011, Julie was selected as Banner Health's first Chief Nursing Officer for Telehealth Services where she is responsible for the development, implementation and sustainability of innovative Telehealth solutions across the care continuum.

Banner Telehealth currently provides critical care services to patients in over 450 beds at 24 facilities across 5 states. In addition, Banner TeleAcute services are available at three full surveillance facilities: Banner Gateway, Banner Ironwood and Banner Ft Collins. In 2013, Banner partnered with Philips to develop the Intensive Ambulatory Care program. Branded Banner iCare™, the service is currently providing innovative Telehealth services to over 500 complex, chronic patients. Ms. Reisetter's educational background includes a Bachelor of Science in Nursing from the University of Iowa and a Master's in Science from the University of California - San Francisco.



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13.45 hrs:
**Clinical Decision Support
Systems & Connected Health**

Bart De Moor

Full professor Department of
Electrical Engineering ESAT-STADIUS,
KU Leuven and Scientific Director of
the iMinds Future Health Department

Bart De Moor (*1960) obtained his Master Degree in Electrical Engineering in 1983 and a PhD in Engineering in 1988 at the KU Leuven. For 2 years, he was a Visiting Research Associate at Stanford University (1988-1990). Currently he is a full professor at the Department of Electrical Engineering in the research group STADIUS and the Scientific Director of the iMinds Future Health Department.

His research interests are in numerical linear algebra, algebraic geometry and optimization, system theory and system identification, quantum information theory, control theory, datamining, information retrieval and bio-informatics (see publications on www.bartdemoor.be).

He is or has been the coordinator of numerous research projects and networks funded by regional, federal and European funding agencies. Currently, he is leading a research group of 10 PhD students and 4 postdocs and in the recent past, about 80 PhDs were obtained under his guidance. His work has won him several scientific awards (Leybold-Heraeus Prize (1986), Leslie Fox Prize (1989), Guillemin-Cauer best paper Award of the IEEE Transactions on Circuits and Systems (1990), Laureate of the Belgian Royal Academy of Sciences (1992), bi-annual Siemens Award (1994), best paper award of Automatica (IFAC, 1996), IEEE Signal Processing Society Best Paper Award (1999). In November 2010, he received the 5-annual FWO Excellence Award out of the hands of King Albert II of Belgium. Since 2004, he is a fellow of the IEEE (www.ieee.org). Since 2000 he is member of the Royal Academy of Belgium for Science and Arts.



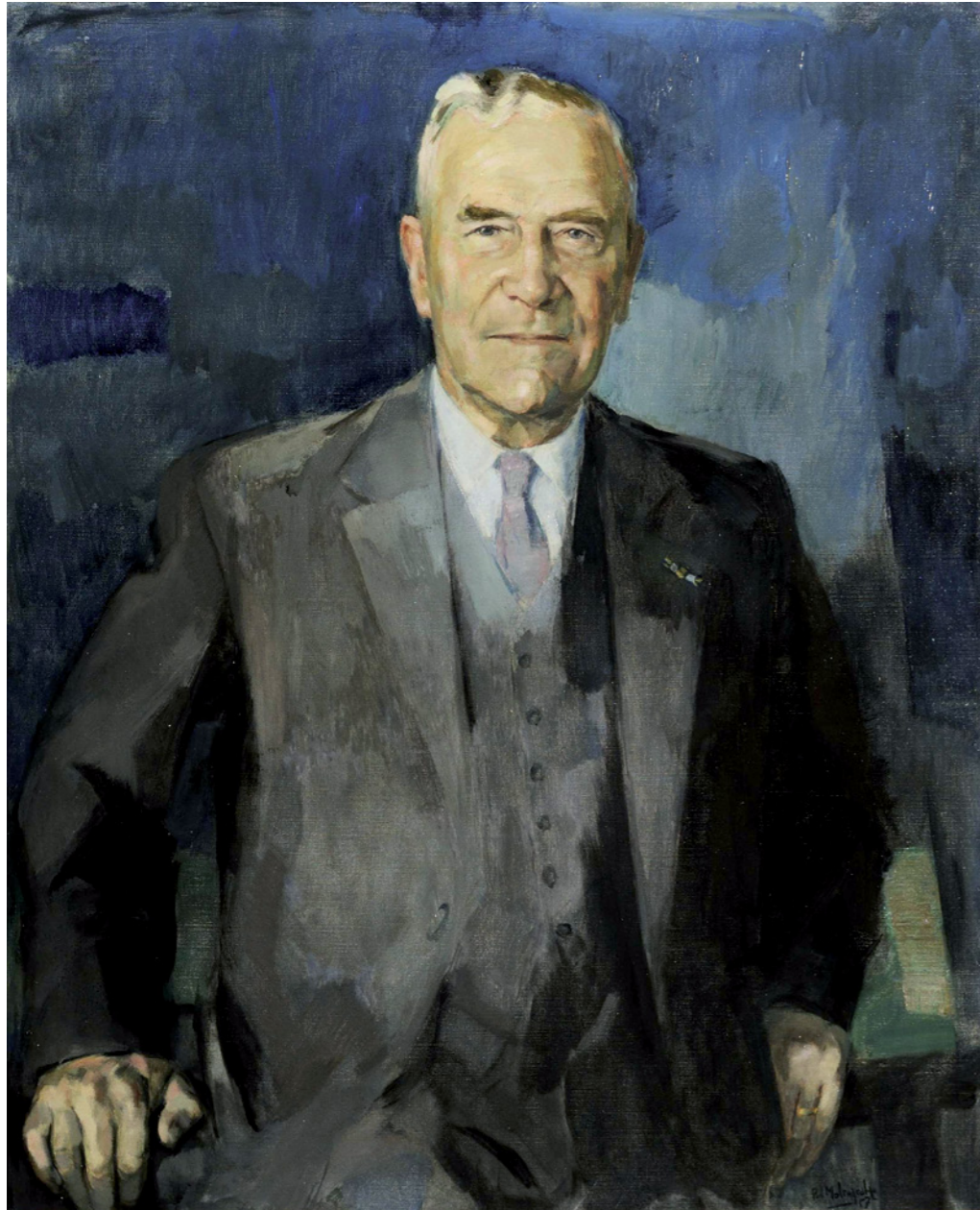
14.30 hrs:
**Leading Digital
Transformation**

Jeroen Tas, Msc

CEO Healthcare Informatics
Solutions and Services,
Royal Philips Electronics

Jeroen Tas has over 30 years of global experience as an entrepreneur and senior executive in the healthcare, information technology and financial services industries. Currently he is the CEO of Healthcare Informatics, Solutions and Services at Philips. In his current role, Jeroen is committed to creating new models of people-centric healthcare, based on the power of technology. Previously he was the Group Chief Information Officer (CIO) of Royal Philips, leading IT worldwide. Jeroen and his team have evolved IT to become a fundamental enabler of growth for Philips as a real-time, connected company. He co-founded and served as President, COO and vice-chairman of the Board for MphasiS, an IT and Business Processing Outsourcing company with revenues of \$1+ billion, which was acquired by EDS (an HP company) in 2006. From 2007 to 2008 he was Vice President and General Manager at EDS, responsible for the global competency centers. Prior to MphasiS, Jeroen was the head of Transaction Technology, Inc., Citigroup's tech lab, responsible for the innovation and development of the bank's customer-facing systems. Earlier in his career, he held international marketing and project management roles with Digital Equipment and Philips in the USA, Europe and Asia.

Jeroen is the 2004 winner of the E&Y Entrepreneur of the Year Award in the Information technology category for the New York region. He also won the Dutch CIO of the year 2013 Award, NASSCOM Global CIO Award 2014, the World Innovation Congress 2014 CIO Leadership Award, CIO Net European CIO of 2014 Award and the IT Executive 2014 Award. He is a native of the Netherlands and holds a Master's Degree in computer science and business administration from the VU University, Amsterdam.



Dr. Gilles Holst (1886-1968)

History of the Holst Memorial Lecture

The first Holst Memorial Lecture was held in 1977 to commemorate the 21st anniversary of the Technische Universiteit Eindhoven (TU/e). With support from Philips Research, the Holst Lecture became an annual tradition. An eminent scientist is invited to deliver the lecture to an audience consisting of university staff, students, representatives from industry and other guests with a general interest in science and technology. The general theme chosen for these lectures reflects the important contribution of Dr. Gilles Holst to research and technology in the Netherlands: 'the development of applied sciences, particularly mathematics and the natural sciences, for the benefit of industry on the one side and their implications for society on the other.'

Gilles Holst

In his own academic career Dr. Gilles Holst (1886-1968) played an important part in the discovery of superconductivity by Nobel laureate H. Kamerlingh Onnes, whilst working at the University of Leiden. However, Gilles Holst will be first and foremost remembered as the founding director of the famous 'Nat Lab', the Philips Physics Laboratory in Eindhoven, where he worked between 1914 and 1946. Dr. Holst also was chairman of two committees that were instrumental in establishing the second Dutch university of technology in Eindhoven in 1956.

Holst Memorial Lecture Award

After delivering the Holst Lecture, the speaker will receive the Holst Memorial Lecture Award, a medal designed by Dutch sculptor Jos Reniers. Candidates for the Award are selected each year by a committee under the joint chairmanship of the Rector Magnificus of the TU/e, Frank Baaijens and Henk van Houten, General Manager Philips Research. The 2015 scientific committee consists of Franklin Schuling (Philips), Jörg Habetha (Philips), Jan Bergmans (TU/e), and Joep Huiskamp (TU/e), Secretary.

List of Holst Memorial Lecture Award Recipients

- 1977 Dr. Alexander King, Director OECD, Paris, *'The role of the engineer and the engineering sciences in future society'*.
- 1978 Prof.dr. Cristopher Freeman, University of Sussex, Brighton, UK, *'Technology and employment: long waves in technical change and economic development'*.
- 1979 Prof.dr. Carl Friedrich Von Weizsäcker, Max Planck Institute, Starnberg, Germany, *'Langfristige Energiepolitik als Beispiel technischer Zukunftplanung'*.
- 1980 Prof. Kevin Lynch, MIT, Cambridge, USA, *'What is a good city? General theory of good city form; a new try at an old subject'*.
- 1981 Prof.dr. Hendrik B. Casimir, Philips N.V., Eindhoven, the Netherlands, *'Gilles Holst, pionier van het industrieel onderzoek in Nederland'*.
- 1982 Dr. Michiyuki Uenohara, Nippon Electric Co, Kawasaki, Japan, *'The Japanese social system for technological development; its merits and demerits'*.
- 1983 Prof.dr. Joseph Weizenbaum, MIT, Cambridge, USA, *'The place of the computer in our world'*.
- 1984 Prof. John M. Ziman, F.R.S., Imperial College London, UK, *'Doing my own work: the individual in collectivized science'*.
- 1985 Prof. Ilya Prigogine, Nobel Laureate, The Solvay Institute, Brussels, Belgium, *'Exploring complexity from the intemporal world of dynamics to the temporal world of entropy'*.
- 1986 Prof. Sir Hermann Bondi, F.R.S., Churchill College, Cambridge UK, *'The application of satellites in connection with the environment'*.
- 1987 Prof.dr. Dick Swaab, Dutch Institute for Brain Research, Amsterdam, the Netherlands, *'De klok in onze hersens'*.
- 1988 Prof.dr. Abraham Pais, Rockefeller University, New York, USA, *'Einstein's invloed (the impact of Einstein's relativity theory)'*.
- 1989 Sir John Maddox, Nature Magazine, London, UK, *'How true is the promise of science?'*.
- 1990 Prof.dr. Cornelis M. Braams, FOM-Institute Plasma Physics, Nieuwegein, the Netherlands, *'Kernfusie in historisch perspectief'*.
- 1991 Prof.dr. Philippe G. de Gennes, Nobel Laureate, ESPCI, Paris, France, *'Bubbles, foams and other fragile objects'*.
- 1992 Dr. Arno A. Penzias, Nobel Laureate, AT&T Bell Laboratories, Holmdel, USA, *'The future of knowledge intensive industries'*.
- 1993 Prof.dr. Henk C. van de Hulst, University of Leiden, the Netherlands, *'Het astronomisch spectrum'*.
- 1994 Prof.dr. Donald P. Greenberg, Cornell University, Ithaca, New York, USA, *'Imaging and the electronic age'*.
- 1995 Prof.dr. Hubert Curien, Université Pierre et Marie Curie, Paris, France, *'Big instruments and big programmes for research; where is the limit?'*.
- 1996 Prof.dr. Serguei P. Kapitza, Russian Academy of Sciences, Moscow, Russia, *'World population growth and technology'*.
- 1997 Prof.dr. Nicholas Negroponte, MIT, Cambridge, USA, *'Why Europe is so unwired'*.
- 1998 Prof.dr. Alan J. Heeger, Nobel Laureate, University of California, Santa Barbara, USA, *'20 years of research into conducting and semiconducting polymers; is it worth the effort?'*.
- 1999 Prof.dr. H. Koenraad Hemker, University of Maastricht, the Netherlands, *'Een bloedstollende geschiedenis'*.
- 2000 Dr. Rod C. Alferness, Lucent Technologies, Holmdel, USA, *'Optical networks, enabler of the communication revolution'*.
- 2001 Dr. John L. Hennessy, Stanford University, Stanford, USA, *'Directions and challenges in microprocessor architecture'*.
- 2002 Dr. Harold G. Craighead, Cornell University, Ithaca, USA, *'Nanostructures for mechanical and biological applications'*.
- 2003 Dr. Sanjiv Sam Gambhir, Stanford University, Stanford USA, *'Imaging diseases with molecular detectives'*.

- 2004 Sir Richard Friend, FRS, University of Cambridge, UK,
*'Plastic Electronics-new science, new technology,
new products and new markets'*.
- 2005 Dr. J. Craig Venter, the Venter Institute, Rockville MD USA,
'From the Human Genome to Environmental Metagenomics'.
- 2006 Prof.dr. Peter Carmeliet, KU Leuven en VIB, Belgium,
'The neurovascular link of A. Vesalius revisited'.
- 2007 Prof.dr. Henk van der Vorst, RU Utrecht, the Netherlands,
'Men and Computers: an Upward Spiral'.
- 2008 Prof.dr. Shuji Nakamura, Nobel Laureate, University of California Santa Barbara USA,
'Current and Future Status of Solid State Lighting'.
- 2009 Prof.dr. Rutger A. van Santen, Royal Academy of Arts and Sciences professor
at TU/e, *'Energy, Catalysis and Society'*.
- 2010 Dr. Denis le Bihan, Neurospin, Gif-Sur-Yvette, France
'Water: from Brownian Motion to the Mind'.
- 2011 Prof.Donald E. Ingber MD, PhD, The Wyss Institute, Harvard University, USA.
'From Cellular Mechanotransduction to Biologically Inspired Engineering'.
- 2012 Russell Foster, Bsc, PhD, FRS, The Nuffield Laboratory of Ophthalmology,
Oxford University, UK, *'Light and the Rhythm of Life'*.
- 2013 Cherry A. Murray, PhD, Dean Harvard School of Engineering and
Applied Sciences,
'Engineering for All'.
- 2014 Dr.ir. Robert Cailliau, Former Staff Member CERN,
'The Web Adventure'.

