Dr D W ROBINSON: CV AND TRAINING RECORD

Forenames : David Whitehead

Surname: Robinson

Current role:

Managing Director
Psi-tran Ltd, UK

Key Facts

Date of Birth 10/12/54 : Age 56
Marital status: Married, 1 daughter

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07770 647470 mobile:

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Qualifications

- Fellow of the Institute of Physics, 2001
- PhD, Physics, Queen Elizabeth College, London University, 1984
- BSc 1st Class Hons, Photographic Science, University of Westminster, 1976
- A-Level Physics - B, Maths- B, Art – A, Liverpool College, 1973

Key Skills

- Strategic Leadership of people (100+ teams) and small and medium size organisations
- IP Exploitation
- Business development, Marketing, Account Management
- Financial Management – to P/L targets
- Project & Programme Management – in a UK and EU context
- Multi-disciplinary scientific understanding – including Nanotechnology & Space metrology
- Bid writing and reviewing - including EU and ESA Tenders
- ISO9001 and ISO17025 Quality standards implementation expertise
- Broad understanding of most physical measurement systems and standards
- Specialist knowledge of thermal and dimensional measurement standards

Employment Summary

- 2004 – present: Managing Director, Psi-tran Ltd
- 1996 – 2003; Head of Science Business Centre. NPL Management Ltd, Serco Group
- 1993 – 1995 : Branch Head, National Physical Laboratory
- 1990 – 1992 : Technical Assistant to Chief Scientist, Department of Trade & Industry
- 1979 :Research Scientist, National Physical Laboratory

Pen picture /Role Summary

David manages his own scientific consultancy business, Psi-tran Ltd, providing services to government and industry in the UK and Europe, though its network of business associates and partners.

Psi-tran specialises in the Space and Nanotechnology industry, it supports small business development and spin-off creation (with market research and business planning services). It provides advice to government and industry on science programme formulation, technology strategy and research prioritisation.

Psi-tran's client base includes the BIS/DTI and BNSC, NPL, ESA, NERC, BTS holdings plc, Sagentia Ltd, Quotec Ltd, A-Metrics LLC, Theta Technology and various University Business Units, including Barcelona, Bath, Aston, Brunel and Leeds.

Psi-tran has specialist knowledge of the implementation of ISO17025 quality measurement standards and works with partners in pre-assessment and consultancy for clients wishing to develop their quality measurement and test systems.

Psi-tran has led and managed more than a dozen ESA projects, including recently a mission concept study for an innovative formation flying radio telescope (FIRST Explorer). He then went on to Chair the management team for production of the ESA Cosmic Vision 2010 proposal "SURO – a very low frequency distributed aperture space observatory" building from the FIRST study and involving a large international team of space engineers and scientists.

While at NPL he was Head of an NPL Scientific Business Centre, a business unit with 100 technical staff and an £8m p.a. turnover. He reported to the Serco appointed Managing Director against agreed P/L business targets. His Centre was responsible for management of DTI's Thermal and Length Metrology Programmes, maintaining the UK National Measurement Standards in these areas, and his Quantum Metrology group conducted research into the realisation of fundamental physical constants and the future technologies needed to underpin the SI units.

He developed the role of Space business co-ordinator while at NPL, and led the sales growth of NPL measurement services to ESA and Space industry primes. In addition he managed NPLs commercialisation strategy for its metrology for Micro and Nanotechnology skills. This gives him an extensive range of business and government contacts in the Space Industry and the emerging micro-Nanotechnology business.

In these roles he has developed an extensive knowledge and experience in the management of commercial activities, scientific research programmes and the exploitation of IPR. He has grown a successful business within a UK government and European policy framework, serving industrial needs for measurement technology and standards. He is a people manager with wide experience of motivating scientists within a "small business" environment. He is goal driven and output focussed with a strong belief in the inspirational team leadership approach.

Career Profile

National Physical Laboratory 1979 - 1995

- David joined NPL in 1979 and has conducted research on electron optics, light optics (holographic interferometry), computer image formation simulation, digital fringe pattern analysis and a range of optical non-destructive testing systems. He is co-editor and contributing author of the IOPP book on "Interferogram Analysis".

- In 1989 he managed the first UK Governments collaborative research programme on Nanotechnology

Department of Trade & Industry 1990 - 92

- In 1990 he worked for the DTI Chief Engineer and Scientist as his personal technical and policy assistant, before returning to NPL as a Head of Branch in the Centre for Quantum Metrology in 1992. In 1995, he took the NPL measurement awards scheme into the new Metrology for World Class Manufacturing Awards, jointly developed and managed by NPL

NPL Management Ltd / Serco plc 1996 - 2003

- In 1996/7 he assisted with the transfer of NPL to GOCO status under Serco and he took on the new role of Head of Centre for Basic and Thermal Metrology with full executive responsibility for delivering the programmes and business targets. A Centre of 48 scientists. In 1999, David took over the Management of the Centre for Length Metrology and combined it with CBTM into a new Centre (CBTLM) with executive responsibility for 100 staff and £16 million of government R&D programmes.

- In 2001 David led the development of a new measurement product for the retail clothing Industry, setting up a business plan for a spin off company and selling the Patent and business plan to an existing SME for exploitation.

- He has managed a large number of international collaborative projects for the DTI, EC and ESA customers. He played a key role in the strategic marketing of NPL's cross disciplinary capability in addition to running a cost centre. For example, he created the role of Space business co-ordinator responsible for developing NPL's business with the European Space Agency and its prime contractors. Recently he has added to this role by leading NPL's Nanotechnology Commercialisation Strategy, and liasing with the DTIs MNT programme managers and Network Director.

Psi-tran Ltd 2004 - present

- At the beginning of 2004, David set up a new consultancy business to offer his experience in managing multi-disciplinary technologies in a commercial and government environment.

- Psi-tran's first contract was formulating a programme in Metrology for Emerging Technologies for the DTI. Since then David has grown the business with contract work supporting SME and business start-ups with advice on technology validation, market research and sound business planning; and with ESA contract research.

Representational Roles & Membership of Professional Bodies:

- Elected Institute of Physics Fellow – Jan 2001
- Member of the DTI Measurement Advisory Committee (MAC) on Length Metrology
- Member of the DTI MAC on Biotechnology metrology
- UK Space Industry Committee, Member representing NPL/Serco (to 2004)
- A past UK Member of ECTP – European Conference on Thermophysical Properties organising committee
- Past member of the Editorial Board - High Temperature High Pressure (HTHP)
- Past member of Member NPL Health and Safety Committee
- IOP small business Partner network - 2004

Training Courses attended (including on the job training):

Training Courses completed (SMDP from 1987)

- 1983 - Middle Management - CSC 5 days
- 1985 - Project Appraisal - RTP 5 days
- 1986 - Intellectual Property Rights - Hawkesmere 2 days
- Report Writing - NPL 1 day
- Annual Confidential Report writing Course - NPL 2 days
- 1988 - R&D Management - CSC/CE&S 5 days
- Action Centred Leadership - Industrial Society 2 days
- 1989 - The High Achieving Manager - Hawkesmere 2 days
- 1990 - Newsletter writing & editing - 1 day
- 1991 - Understanding Company Accounts - CSC 2.5 days
- 1991 - Government Finance & Accounts - CSC 2.5 days
- 1992 - Quality requirements of NAMAS accreditation M10 - NPL 1 days
- 1992 - Basic Safety and New requirements of H&SE act - NPL 2 days
- 1992 - May, Marketing for Managers - Hawkesmere 3 days

- 1993 - on the job training
- 1993 - Project management - PA consulting 2 days

- 1996 - Key account Manager seminar/(Rehma) ½ days
- 1998 - Managing Health and Safety at work ½ days - internal K Small
- 1998 – PDP course for HoCs 1 day - internal (consultants)
- 1999 - Jan: Successful Negotiating Techniques - 2 days Hawkesmere
- 1999 - Apr: Fire safety training - 0.5 days NPL
- 2001 – Leadership for organisational Improvement – Glowinkowski 3 days
- 2004 – Technology innovation strategy& customer awareness seminar 1 day (Generics Ltd)
- 2004 – IOD seminar on key marketing strategies

Scientific Competencies and Skill

- ISO17025 measurement accreditation and ISO9001 skills.

Computer skills –

- Fortran, Basic, Assembler code,
- WP -word, lotus and excel, PowerPoint

Scientific research skills – metrology using:-

- electron microscopes,
- Scanned probe microscopes
- Laser systems
- holographic interferometers,
- computer image processing systems
- nanotechnology and sensors
- Thermal, dimensional and quantum metrology – technical understanding

Publications:

19 scientific papers
7+ contract reports
5 special reports
1 Scientific Text Book - editor and contributing author
15+ Conferences presentations
20+ technical referee reports for JOSA/Applied optics/OLE/JEM
5+ book reviews

See below for details

PUBLICATIONS AND EDITORIAL WORK

D.W.ROBINSON 1979 - 2003

UNDERGRADUATE PUBLICATIONS

[1] "Use of a real time holographic interferometer....."
M.Austin, D.W.Robinson, J.Photog.Sci., 27, (1979), 81.

POSTGRADUATE PUBLICATIONS

[2] "Image recording and analysis in scanning transmission E.M."
R.E.Burge, M.T.Browne, J.C.Dainty, S.Lackovic, D.W.Robinson, J.Ward, Inst.Phys.Conf.Ser, No.44 (1979) 107.

[3] "A 2-D computer simulation of partially coherent image formation in a multiple centro-symmetric detector STEM of heavy atom model compounds"
D.W.Robinson, Inst.Phys.Conf.Ser., No.52, (1980), 253.

[4] "Computer simulation of partially coherent image formation in two dimensions.."
P.Van Toorn, D.W.Robinson, Optik, 56 (1980), 323.

NPL PUBLICATIONS

[5] "High resolution moiré contouring by a hybrid technique combining light and electron optics."
D.W.Robinson, Optics and Laser Technology, 13 (1981), 145.

[6] "Automatic fringe analysis with a computer image processing system"
D.W.Robinson, Applied Optics, 22 (1983), 2169.

[7] "A role for automatic fringe analysis in optical metrology"
D.W.Robinson, SPIE 376 (1983), 20.

[8] "Automatic fringe analysis in holographic interferometry"
A.E.Ennos, D.W.Robinson, D.C.Williams, Optica Acta, 32 (1985), 135.

[9] "Automatic fringe analysis in double exposure and live fringe holographic interferometry"
D.W.Robinson, D.C.Williams, SPIE 599 (1985), 134.

[10] "Digital Phase Stepping Speckle Pattern Interferometry (DiPSSI)"
D.W.Robinson, D.C.Williams, Optics Communications, 57 (1986), 26.

[11] "Holography Edges Close to the Shop Floor" (Review article)
D.W.Robinson, Chartered Mechanical Engineer, October (1986), 36-40.

[12] "Investigation of the Fourier Transform method of fringe pattern analysis"
R.J Green, J G Walker, D.W.Robinson, Proc. FASIG, Loughborough, Nov(1986).

[13]"Multichannel Phase Stepped Holographic Interferometry"
M.Kujawinska, D.W.Robinson, Applied Optics, 27 (1988), 312.

[14]"Holographic and Speckle Interferometry in the UK, A Review of recent developments"
D.W.Robinson, Proc SPIE 814, San Diego August (1987), 330.

[15]"Automatic fringe pattern analysis for holographic measurement of transient events"
M.Kujawinska, D.W.Robinson, SPIE, Hamburg (Sept 1988).

[16]"Comments on the error analysis of MCPS holographic interferometers"
M.Kujawinska, D.W.Robinson, Applied Optics Letters, 28 (1989), 828.

[17]"Investigation of the Cellular Automata Method of Phase Unwrapping and its Implementation on an Array Processor".
A.Spik, D.W.Robinson, Optics and Lasers in Engineering, 14, (1991), 25.

[18]"Nanotechnology - What's Happening in the UK"
D.W.Robinson, Proceedings of IOP Nanotechnology Conference, May (1990).

RESEARCH CONTRACT REPORTS

[19]"A feasibility study into the application of automatic fringe analysis techniques to turbine blade holographic interferograms"
D.W.Robinson MOM report for Rolls Royce Derby, (1984).

[20]"Feasibility study into the measurement of cylinder bores by holographic interferometry"
A.E.Ennos, D.W.Robinson, D.C.Williams, MOM C/16 report for caterpillar tractor, (May 1985).

[21]"Measurement of 3-Dimensional deformation and strain of turbine blade roots by holographic interferometry"
A.E.Ennos, D.W.Robinson, D.C.Williams, MOM C/17 for Rolls Royce, (September 1985).

[22]"A feasibility study into the automatic interpretation of the annular image produced by an optical surface finish comparator"
D.W.Robinson, A B Penfold, MOM C/20 for Ford UK (January 1986)

[23]"Mask Making in the UK"
D.W.Robinson Report for LA Division April (1986)

[24]"Holographic Strain Measurement"
D.W.Robinson, MOM C/29 October (1987) for British Gas.

[25]"A Phase Measurement Method for PE Stress Analysis"
D.W.Robinson, D.W.Williams, M Kujawinska, MOM C/32 Jan (1988) for Rolls Royce Derby.

EDITORIAL WORK

Joined Editorial Board of Optics and Lasers in Engineering - 1987.

Joined editorial Board of High Temperature High Pressure - 1994

[26]"Special Issue on Progress in Holographic Interferometry"
Edited by D.W.Robinson, P.Hariharan, Optics and Lasers in Engineering, 9 (1988).

[27]"NANOTECHNOLOGY FORUM NEWS (Progress of the UK National Initiative and LINK Programme on Nanotechnology)"
Edited by D.W.Robinson, Issue No.2, Summer 1989.

[28]"NANOTECHNOLOGY FORUM NEWS (Progress of the UK National Initiative and LINK Programme on Nanotechnology)"
Edited by D.W.Robinson, Issue No.3, Winter 1989/90.

[29]"NANOTECHNOLOGY FORUM NEWS (Progress of the UK National Initiative and LINK Programme on Nanotechnology)"
Edited by D.W.Robinson, Issue No.4, Summer 1990.

[30]"MEDICAL DIAGNOSTICS IN JAPAN"
Written & Edited by D.W.Robinson, Report of the High Level Mission to Japan led by Dr Ron Coleman, April 1991.

[31] Referee for Applied Optics and JOSA - 1992 to 2004

[32] Referee panel for I.Mech.E, Journal of Engineering Manufacture – 2007 – to date

BOOKS

[33]"AUTOMATIC FRINGE PATTERN MEASUREMENT (Digital techniques of interferogram analysis)"
Edited and contributed to by D.W.Robinson & G.T.Reid, published by Adam Hilger (Institute of Physics Publishing) 1993.

RESEACH PUBLICATIONS WHILE AT PSI-TRAN LTD

[34]" FIRST EXPLORER – AN INNOVATIVE LOW-COST PASSIVE FORMATION-FLYING SYSTEM, Prepared for CEAS 2009 – European Air & Space Conference, 26–29 October, 2009, Manchester, U.K.; Jan E. S. Bergman, Richard J. Blott, Alistair B. Forbes, David A. Humphreys, **David W. Robinson,** and Constantinos Stavrinidis

[Currently being refereed by the RAeS for journal publication]

CONFERENCES & CLUBS

Founder Member of UK Fringe Analysis Special Interest Group (FASIG) 1984; meetings organised, Proceedings editorial board member;-

[1] FASIG Inaugural meeting, CEGB, 1985.

[2] 1st FASIG Annual Conference, Loughborough University, 1986.

[3] 2nd FASIG Conference - video presentations, CEGB Head quarters, 1987.

[4] 3rd FASIG Annual Conference, Loughborough University, 1988.

[5] 4th FASIG Annual Conference, Loughborough University, April 1989.

[6] 5th FASIG Annual Conference, Nottingham University, Sept 1990 (Jointly with Institute of Physics Applied Optics Division (AOD) Conference; DWR representing FASIG on AOD committee chaired by J.C.Dainty)

Nanotechnology Forum Conferences;

[7] 1989 Heathrow Hotel "Nanotechnology current & future prospects"

[8] 1990 Joint NANOTECHNOLOGY FORUM/ERATO Conference "Guest Speakers - Sir Eric Ash and Sir Robin Nicholson.

Other events/meetings organised;

[9] 1993 - 97 NPL/IOP - Frontier of Science and Measurement club chairman

[10] 1993 - to date Thermophysical properties Awareness Club Chairman

[11] 1993-1995 Secretary NPL measurement awards/MWCMA

1996 - estabilised Metrology for World Class Manufacturing Awards for NPL with Nexus media

[12] 1995 - to date - Set up Frontiers of Science and Measurement Club

[13] 1999- to date Chairman Dimensional Metrology Awarness Club

[14] 1999 – joint organiser – NPL frontiers of Science International conference

[15] 2009 - Chair of CEAS Education workshop – CEAS 2009 Manchester: Paper on Academic Space Engineering education and training in Europe.