



## **EDUCATION**

- Oct 1978-Mar 1979 Full-time postdoctoral research in the field of Signal Processing, Imperial College, London University.
- Oct 1971-Aug 1974 Full-time Academic Visitor, Imperial College, London University. The research during this period led to the award of the **PhD** degree in Signal Processing.
- Oct 1966-Oct 1967 Full-time **MSc** in Digital Communications, Loughborough University.
- Oct 1963-Aug 1966 Full-time **BSc (Eng)** course in Communication, London University.

## **QUALIFICATIONS**

- October 1974 **DIC**, Diploma of Membership of Imperial College in Digital Systems.
- August 1974 **PhD**, London University, in Digital Systems.
- October 1967 **MSc**, Loughborough University, in Digital Communications.
- August 1966 **BSc (Eng)**, London University, in Communications.

## **MEMBERSHIPS**

- April, 1976 **C Eng**, Registered Chartered Engineer, Council of Engineering Institutions, London.
- April, 1976 **FIEE**, Member of the Institution of Electrical Engineers, London. Fellowship offered in 1991.
- May, 2001 **FBCS**, Fellow of the British Computer Society.
- September, 1998 **FRSA**, Fellow of the Royal Society for the encouragement of Arts, manufactures and commerce.

## **EMPLOYMENT**

June 1997 –Present

Head of School of Computing, Information Systems and Mathematics. South Bank University.

**Duties: Manage, administrate and maintain the day-to-day activities of the School. The School offers an extensive range of courses in computing accredited by the BCS and a comprehensive range of management information sciences such as business information technology, E-commerce, information system management and decision support systems at both undergraduate and postgraduate levels, and undertakes research in a variety of areas. The School has 70 FTE academic staff. There are more than 1,950 students currently registered on the School's programmes including more than 150 taught postgraduate and 25 research scholars. In 2001 RAE the School achieved grade four in computing with 11 staff and grad 3B in library and information management with 22 staff.**

Nov 1988-May 1997

Professor of Information Technology (Holder of the International Fund for Ireland Development Chair in Information Technology). Served as Head of Department and Director of Interactive Systems Centre, University of Ulster, Magee College, Northern Ireland  
**Duties: IT inward investment in Londonderry, academic department management courses and research development, teaching and research.**

Sept 1986-Oct 1988

Managing Director of Micro-Computers Aided Technology Company Limited, London, UK.

**Duties: Company management, Consultancy, Research & Development in business computing and communications.**

Mar 1979-Sept 1986

I was also a visiting research fellow at Imperial College, London.

Reader at Leicester Polytechnic, Leicester, UK

**Duties: Research management, course development and teaching.**

Sept 1976-Oct 1978

Head of the Department of Communications, The Higher Institute of Technology, Malta.

**Duties: Academic department management, course development, teaching and research.**

Oct 1975-Aug 1976

Senior Lecturer in the Polytechnic of North London, London, UK.

**Duties: Teaching and research.**

Oct 1971-Aug 1974

Academic Visitor at Imperial College, London. On leave of absence from the University of Technology, Baghdad.

**Duties: Research and part-time teaching.**

Nov 1967-Oct 1975

Lecturer/Senior Lecturer at the University of Technology, Baghdad.

**Duties: Teaching and research.**

## **RESEARCH INTERESTS**

### **Information Technology**

The field of Information Sciences encompasses a broad spectrum of research areas and applications. The rapid evolution of microprocessor technology and broadband communication is opening the gates of success to fresh applications in this field, applications, which were formerly declared impractical for reasons of high cost and complexity. The rapid growth in computer networks through LAN and WAN and the continued development of the Internet and World Wide Web have change significantly the nature of global communications. Broadband multi-service networks with bandwidth-on-demand characteristics are becoming available, which will enable substantial files to be accessed rapidly and will be able to support audio, image, video and multimedia communications. This rapid change in communications technology and globalisation forces educational, industrial and commercial organisations to rethink their business plans and strategies.

During the last 25 years I have been successful in applying the basic communications theory to specific industrial problems resulting in the fulfilment of requirements and needs of the new market forces. The following is a short list of my current and past special responsibilities and other professional activities:

- A.** Participate as evaluator and rapporteur for Framework Esprit Programme.
- B.** Participate as evaluator for DTI and SEPRC projects.
- C.** Chairman of Software Industry Catalyst Organisation (SICO) Working Party and member of the Board of Directors.
- D.** Chairman of the Londonderry Science and Technology Park Working Party.
- E.** Founder of the Medical Informatics Catalyst Organisation (MICO).
- F.** Chairman of the North West Working Party on the EC Initiatives, STRIDE and INTERREG.
- G.** Member of the Board of Directors and Steering Committee of the Northern Ireland Fashion and Design Centre.
- H.** Member of the Board of Management of the European Regions Network for the Application of Communications Technology.
- I.** Member of the Derry City Council/University of Ulster Liaison Committee.
- J.** Supervised a large number of research students who were successfully awarded MPhil/DPhil degrees in the field of ICT.
- K.** Acted as a Consultant for the following Companies: British Telecom. Kearney & Trecker Marwin Ltd, Brighton, UK. Corah plc, Leicester, UK. Thompson's Toys Ltd, Leicester, UK. Norris Marketing Graphics Ltd, Leicester, UK. ECICO Electronics, Hong Kong. Eastern Health & Social Services Board. ERNACT Technical Group. Northland Computer Services.
- L.** Holder of four patents, registered in the UK and USA.
- M.** Reviewed many papers for IEE, IEEE, IERE, and Mathematical Reviews of the American Mathematical Society publications.
- N.** External examiner to a number of British and overseas Universities.
- O.** Member of the International Advisory Committee of the IEEE International Symposium in Information Theory.

## Recent Research Grants and Consultancy

During the last 15 years I had in excess of 30-research grant and Consultancy contracts total cost in the range of 4.5 million pounds. A comprehensive detailed list can be provided. The following is a short list of the major contracts awarded to my self and my team.

### Director of Research for the following grants:

1. TALENT - Training and Learning Environment with Networked Tutoring - Grant No. 22151 - EC Framework Four Esprit Programme, Multimedia Initiative.  
An RTD project concerned with the effective application of distributed multimedia training material and its combination with networked tutoring. The consortium's mission is to enable the European training industry to exploit the potential convergence of multimedia technology and CSCW and hence respond to the current trends in the global market for training over the network. (The ISC is the co-ordinating partner for the consortium)  
June 1996-April 1999 My team Share: 700K ECU
2. PrOMInent - Promotion of OMI by a User Support Network Centre - Grant No. 23009 - EC Framework Four Esprit Programme, Open Microprocessor Initiative. The focus in PrOMInent is on building a network of geographically distributed nodes where ease of access to the distributed database of relevant information is facilitated, that is, is actively enabled and assisted by PrOMInent consortium members. The database consists of potential users of the OMI technology in a wide sense as well as technology and service providers.  
October 1996 - September 1997 ISC Share: 100K ECU
3. Interactive Systems Centre (ISC) - International Fund for Ireland and Digital Grant.  
The establishment of a pre-competitive, industry led RTD centre in interactive systems in order to increase the research and technological capacity of Northern Ireland in Information Technology and interactive multimedia communications.  
June 1994 - December 1996 ISC Share: £1.1m
4. Ulysses International - Grant No. 4922 - EC Framework Three Programme, Impact Initiative.  
An EC project to develop a highly intelligent interface terminal for multinode tourist information systems as part of a multinational consortium involving: The Federation International de l'Automobile, France, the French, Irish and Portuguese tourism authorities, the Automobile Club of Portugal and the University of Ulster.  
May 1990 - June 1992 ISC Share: 448K ECU

## List of Recent Publications of:

Professor A Hashim, BSc (Eng), MSc, PhD, DIC, CEng, FIEE, FBCS, FRSA  
***(Publications since 1996 RAE. Publications accepted but have not yet appeared are not included.)***

- 2000 "Class of Nested Linear Block Codes and their Decoding Algorithm"  
IEE Proceedings in Communications, Vol. 147, No. 4, August 2000.  
(with S. Jennings)
- 1999 "The TALENT Network Tutoring System"  
TET99: Telecommunication for Education and Training 1999 Gjøvik, Norway [8-11 June 1999] (with McDaid, EW; Row, GH; O'Brien, EG)
- 1998 "Controlling the presentation of web-based training materials using templates"  
XV IFIP World Computer Congress: Teleteaching 98  
Vienna/Austria and Budapest/Hungary [31 August-4 September 1998]  
(with McDaid, EW; Row, GH; O'Brien, EG)
- 1997 "Authoring tools for network-based training"  
IFIP Joint working Conference: The Virtual Campus  
Madrid, Spain [27-29 November 1997]  
(with McDaid, EW; Row, GH; O'Brien, EG)
- 1998 "A Genetic Algorithm Environment for Star Pattern recognition"  
The Special Issues of IIZUK96 on Evolutionary Computations  
Journal of Intelligent and Fuzzy Systems.  
(co-authors Lunney T; McClintock, S)
- 1997 "Using Fuzzy Logic to Optimise Genetic Algorithms Performance"  
IEEE International Conference on Systems Man and Cybernetics(SM&C97)  
[October 1997]  
(co-authors Lunney T; McClintock, S)
- 1997 "Fuzzy Logic Controlled Genetic Algorithm Environment"  
IEEE International Conference on Intelligent Engineering Systems (INES97)  
[May 1997]  
(co-authors Lunney T; McClintock, S)
- 1997 "Converting Existing training material to Multimedia"  
Proceeding of MIPRO-97 (Multimedia and Hypermedia Systems). pp69-72  
Opatjia, Croatia  
[September 1997]  
(co-authors McDaid, EW; Row, G; McCool, M; O'Brien, W)
- 1997 "Authoring Tools for network-based training"  
Proceeding of the IFIP TC3 / WG3.3 & 3.6 Joint working Conference The  
Virtual Campus: Trends for Higher Education and Training, Madrid, Spain.  
Pp 259 -174.  
[November 1997]  
(co-authors McDaid, EW; Row, G; McCool, M; O'Brien, W)

## List of Recent Publications Continue

- 1996 "The Implementation Of Fuzzy Reasoning Using FPGAs"  
Proceedings of the 4th International Conference on Soft Computing  
 IIZUKA'96, Japan - Vol 1, pp.243-246 (October 1996)  
 (co-authors Gunn, DJ; Maguire, LP; McGinnity, TM)
- 1996 "The Application of Genetic Algorithms to Star Pattern Recognition"  
Proceedings of the 4th International Conference on Soft Computing  
 IIZUKA'96, Japan - Vol 2, pp.541-544 (October 1996)  
 (co-authors McClintock, S.M., Lunney, T.F.)
- 1996 "Novel Synapse Design for VLSI Implementation of Neural Networks"  
Proceedings of the 4th International Conference on Soft Computing  
 IIZUKA'96, Japan - Vol 2, pp.718-721 (October 1996)  
 (co-authors Roche, B; McGinnity, TM; McDaid, L)
- 1996 "A Pseudo-Parallel Architecture for Hardware Implementations of  
 Neural Networks"  
Proceedings of the 4th International Conference on Soft Computing  
 IIZUKA '96, Japan - Vol 2, pp.722-725 (October 1996)  
 (co-authors McGinnity, TM; Maguire, LP; McDaid, JL)
- 1996 "A MVL interpretation of the MOS implementation of a fuzzy flip-flop."  
Proceedings of the 4th International Conference on Soft Computing  
 IIZUKA'96, Japan - Vol 2, pp.841-844 (October 1996)  
 (co-authors Lavery, NP; Mc Ginnity, TM; Maguire, LP)
- 1996 "On-Line Identification in Control Systems Using a Fuzzy Neural  
 Network"  
Proceedings of the 4th European Congress on Intelligent Techniques and  
 Soft Computing  
 EUFIT'96, Germany - Vol 2, pp.742-746 (September 1996)  
 (co-authors Maguire, LP; Mc Ginnity, TM; Campbell, JG)
- 1996 "Star Pattern Recognition Using Genetic Algorithms"  
Proceedings of the 6th Irish Digital Signal Processing and Control  
 Colloquium, Dublin Ireland (June 1996)  
 (co-authors McClintock, S.M; Lunney, T.F).
- 1996 "Texture based flaw detection in woven textiles"  
CVIPA'96 Forum, Queen's University of Belfast (26 March 1996)  
 (co-authors Campbell, JG; McGinnity, TM; Maguire LP; McDaid, LJ)  
 Editor: Ahmed Bouridane.

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