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EXECUTIVE SUMMARY

RESEARCH ASSOCIATE ♦ SENIOR ANTENNA ENGINEER ♦ MANAGER ♦ ADMINISTRATOR

- My current research lies in the field of antennas and electromagnetics with specific expertise in finite-difference time-domain (FDTD) modelling, electromagnetic materials, wearable antennas, specific absorption rate (SAR), wideband antennas, vehicle antennas, VHF antennas and Pulsed Power. I have published **more than 60 peer reviewed papers** in collaboration with authors from ten different nations. I have contributed to ~ **£1M in income** from grants and contracts. I also have substantial experience of technical commercial work, international collaboration, logistics and management. Through my research and by organising the Loughborough Antennas & Propagation Conference (LAPC), I have developed an extensive network of international academic and commercial contacts. I am experienced at writing Fellowships, EPSRC grants, TSB and Knowledge Transfer Account applications in collaboration with industry. I am eager to accelerate my research career and develop further research partnerships.

CURRENT POSITION

RESEARCH ASSOCIATE, LOUGHBOROUGH UNIVERSITY, UK DECEMBER 2011 – PRESENT

- Developing novel antennas using nanomaterials: EPSRC EP/I01490X/1
- Theoretical, simulations and measurements of heterogeneous structures
- Liaise with Physics Department and international multi-disciplinary academic and industrial partners
- Co-supervise a Ph.D student
- Provide technical and commercial advice in IEMRC project about conducting textiles
- Review journals for IEEE TAP, Phys. in Med. & Biol and other high quality journals. Serve as part of LAPC Steering Committee as well as LAPC and EUCAP technical programme committees

PUBLICATIONS

- 9 Journals (1st author of 5). **7 since Jan 2007**. Plus 2 submitted and 3 in preparation
- 57 Peer reviewed conference papers. More than 30 oral and poster conference presentations
- For more details: http://www.lboro.ac.uk/departments/el/people/Whittow-William-Dr.html

FUNDED GRANTS

- EPSRC EP/I01490X/1. **Awarded, £600k FEC as Researcher Co-Investigator**. "Synthetic Antenna Structures Using Metallic and Non-Metallic Nanoparticles at Microwave Frequencies". PI: Prof. Vardaxoglou, 2011
- Knowledge Transfer Account. **Awarded, £43k as Co-Investigator.** "Indoor TV Antenna with Integrated Digital Tuner". PI: Prof. Vardaxoglou, 2011
- EPSRC EP/I032231/1. **Awarded, £125k FEC**. Not formally a Co-Investigator, but will act as an adviser. "Studying the effects of real human hands on energy absorbed inside a phantom head when using mobile phones". PI: Dr. Panagamuwa, 2011
- Royal Society Fellowship. £521k FEC. "Enhancing Antenna Performance Using Optimised Heterogeneous Substrates". **Submitted as Principal Investigator in Sept 2011**
- EPSRC EP/C517490/1. **Awarded, £200k FEC**. Not formally named but assisted with the proposal. "A Study Of RF SAR Rates In The Human Head Due To Cellular Enabled Personal Data Assistants, Spectacles and Jewellery". PI: Dr Rob. Edwards, 2005
- University of Malaysia Perlis. £1500 funding for travel, Nov 2011

CAREER TRACK

RESEARCH ASSOCIATE, LOUGHBOROUGH UNIVERSITY, UK NOVEMBER 2010 – NOVEMBER 2011

- Knowledge Transfer Account to exchange knowledge between industry and academia
- Designed, fabricated and measured wearable VHF circularly polarised antenna
- We are applying for a patent and are in discussions with potential commercial collaborators

COORDINATING CHAIR, LOUGHBOROUGH ANTENNAS & PROPAGATION CONFERENCE, UK
DECEMBER 2007 – NOVEMBER 2011

- Responsible for all day to day logistics of LAPC 2008 & 2009 and advised on LAPC 2010 & 2011
- In this time, the **team** grew the conference grew from 80 to 250 delegates from > 50 countries
- It has established Loughborough's reputation as one of the world's leading antennas Groups
- It has enhanced my research reputation and I have developed a large network of international academic and industrial contacts

ANTENNA CONSULTANT, LUEL (part time) MARCH 2010 – NOVEMBER 2011

- Commercial antenna projects for Antrum Ltd., MBDA, BSKYB and the European Space Agency

RESEARCH ASSOCIATE, LOUGHBOROUGH UNIVERSITY, UK MARCH 2008 – NOVEMBER 2010

- Investigated novel integrated microwave antennas using nanomaterials
- Theoretical, simulation and measurement analysis of heterogeneous substrates
- Instrumental in assembling international world class team of physicists, nano-fabrication experts and industrial partners and writing EPSRC grant
- This work led to an **Invited paper** at IEEE APWC 2011, Torino, Italy
- Assessed video streaming performance in presence of electromagnetic performance

RESEARCH ASSOCIATE, LOUGHBOROUGH UNIVERSITY, UK JULY 2007 – MARCH 2008

- Worked on M.o.D projects for DSTL and HMGCC in Communications and Pulsed Power Groups
- Sponsored for SC level security clearance

RESEARCH ASSOCIATE, LOUGHBOROUGH UNIVERSITY, UK JULY 2005 – JULY 2007

- EPSRC proposal EP/C517490/1 that assessed SAR in the head in the presence of metallic jewellery – part of the technical content for this grant was written by myself as a PhD student
- This work has been discussed at SAR Standards Meetings: IEC 62209 MT1 and ICES TC34 SC2
- Due to this project and subsequent research, I was asked to present an **Invited 4 Day Workshop** on this topic at the University of Malaysia Perlis in November 2011

EDUCATION

Ph.D, SHEFFIELD UNIVERSITY, UK OCTOBER 2000 – OCTOBER 2004

- Computational Electromagnetics in Electrical and Engineering Department
- Dissertation topic: "*Specific absorption rate perturbations in the eyes and head by metallic spectacles at personal radio communication frequencies*"
- Wrote 3D FDTD code in FORTRAN with perfectly matched layer (PML) absorbing boundaries
- Wrote Genetic Algorithm code to optimise results
- Measurements with the DASY4 system and commercial FDTD code validated these results
- Attended graduate course dealing with teamwork, leadership and personal skills

Bachelor of Physics 2(i), SHEFFIELD UNIVERSITY, UK OCTOBER 1996 – MAY 2000

- Electromagnetics, quantum mechanics, relativity, cosmology and particle physics
- Problem solving, essay writing, individual and group projects, HTML programming

A-Levels, DR. CHALLONER'S GRAMMAR SCHOOL, AMERSHAM, UK SEPTEMBER 1995 – MAY 1996

- Mathematics (A), Economics (A), Physics (A)

ADDITIONAL SKILLS

- Active participant in series of workshops about commercialising research and securing funding
- Led team and was CEO of company in Engineering YES competition: **Winner** of Best Business Plan and Presentation (Peer review)
- Interests: travel, wgwphotography.co.uk, Chess (captained County & University teams) & ultimate frisbee, football and running