

# CURRICULUM VITAE

## **Professor Ahmed Al-Shamma'a**

### **Personal Details**

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### **Membership of Professional Bodies**

- Associate Member of IEEE
- Senior Fellow of Member of IET (previously IEE)
- Fellow Member of Institute of Physics
- Senior Member of the international Plasma Chemistry Society
- Board member of the International Microwave Power Institute
- Member of the American Society for Engineering Education

### **Teaching**

Various subjects I have been involved in teaching the MSc, BEng/MEng and BSc students in the Faculty of Engineering. Previous subjects taught including communications, wireless communications, mobile communications, microwaves system for industrial applications, applied electromagnetism, antenna, electrical and electronic circuits, mathematics, automation and control, Neural Network, communication skills, computer programming and computer and human interaction.

### **Research**

My current research area covers a wide range of applied industrial science including microwave plasma for industrial applications, RFID and wireless communication, environmental and sustainable technologies, health care, underwater communications and Free Electron Laser for Tera Hertz imaging. I have obtained various research grants from the *Department of Environment*, Food and Rural affairs for reduction of bacteria in food and increasing the foods shelf life as well as the use of microwave plasma as a source for water purifications and recycling from *United Utilities*, *Technology Strategy Board* using microwave as a source for material processing for gasification and recycling, Microwave assisted chemistry, *Engineering and Physical Research Council* (EPSRC) for developing an on line real time microwave sensor for monitoring oil/gas/water in pipe line also spot welding for on line real time monitoring in automotive and aerospace industries, GIS for environmental pollution monitoring, underwater submarine communications and RFID/Wireless Sensors Network for Asset tracking funded by *the MoD/DSTL/direct fund from industry*, other funds from the *EU with FP6 and FP7* including the Microwave assisted chemistry

for pharmaceutical industries, Marie Curie in food technologies and the production of biofuel from waste supported by the *TSB*. Recently have been awarded funds related to health care application of using non invasive sensors for alcohol/drugs and diabetes real time detection. Further funds obtained from the *Carbon Trust* for environmental recycling of waste into multi biofuel.

The success of the above projects has lead into **three spin out companies** “Hotwaves Showers Ltd”, “Microwaste Ltd” and “Microsense Ltd”. Venture capitalist and the Merseyside Special Investment Fund support these companies.

**Total R&D fund generated over the past 10 years is about £9M**

### **Awards**

- Liverpool City Council Teacher of the Year, 1998/1999.
- The University of Liverpool, Sir Alastair Pilkington award, in the category of Sustained Excellence in Teaching, September 2000.
- Best UK Researcher in UK research Excellence, House of Commons, 2001.

### **Track record**

- **Teaching Programmes External Examiner**
  - University of Limerick-Ireland (BSc-Computer and Electronic Systems)
  - University of Nottingham (BEng courses)
  - Open University (ICT and Communications)
  - University of Manchester (BEng course)
  - City University-SAAD foundation programme
- **PhD supervision**
  - 15 PhD completed
  - 13 PhD currently supervising
  - Over 25 externally examined PhD from Manchester, Lancaster, Nottingham, City London, Imperial College, Open University, Liverpool, Edinburgh, Hong Kong Poly technique, Nanyang Technological Univ. in Singapore, University of Kent and Limerick University (Ireland)
- **Research Assistants and Technical Staff supervision**
  - Currently supervising 11 research assistants supported by the research grants
  - Currently 2 mechanical and 1 electrical technicians.
- **Refereeing**  
EPSRC, TSB and EU research proposals
- **Reviewer**  
Journal papers for IEEE plasma science, Measurements, Optics Communications, Vacuum, Review of Scientific Instruments, Measurements Science and Technology
- **Publications**
  - Over 250 refereed journal and conference papers
  - Over 50 technical papers and reports
  - 13 patents
  - 2 books (sole author)
  - 3 book Chapters
  - Over 20 Keynote speeches in national and international conferences
  - Over 40 conference presentations
  - Over 30 conference chair sessions
  - Organised two international conferences in 2002 and 2007
  - Guest Editorial for two conferences