

DAVID C. BLEAKLEY

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Date of Birth:

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Education

University of Edinburgh

2002 – 2007

MEng - Electronic and Electrical Engineering

(1st Class Honours)

- *MEng Thesis and Placement at STMicroelectronics*: Firmware and FPGA development (see *Work Experience*).
- *MEMS accelerometer design*: As co-ordinator of this 4th year project I defined, assigned and followed up on tasks. I presented the finished system to the class. My group received top marks.
- *Dissertation*: An individual project involving the research and comparison of mobile phone operating systems and software with six weekly PowerPoint presentations demonstrating the research accomplished, summarised in a concise dissertation.
- *Other projects*: Satellite TV displayed on an oscilloscope, firmware controlling a turntable motor, display and keypad, Verilog design of a matrix multiplier, a digital voice recorder, an-A-Law voice decoder and analogue and digital burglar alarms. I was team leader for an exercise designing a power network for Sri Lanka, which won an award.

This period of study displays the application of theory and the ability to lead winning teams, producing and presenting exceptional work, demonstrated by the 1st class grades that all of my project work received.

Pershore Business College

1999 – 2000

NEBS Certificate in Management (During the Year In Industry)

Campbell College, Belfast

1993 – 1999

A-Levels: Physics (A), Technology (A), Maths (C)

Received the A-Level Technology Prize after achieving full marks for my final project.

GCSEs: 1A*, 5As, 2Bs, C

My GCSE Art was included in CCEA 'true colours' exhibition

Relevant Employment

OmniTek, Basingstoke

Design Engineer (VHDL FPGA development, PCB design)

Oct 2007 – Present

ST Microelectronics, Edinburgh

MEng Project Placement and Part Time Work (VHDL FPGA development)

Jun 2006 – Sep 2007

This project (extended from my summer placement) aimed to increase the frame rate of VGA images through a USB camera demonstration system by at least 100%. A more efficient FPGA memory controller was developed using VHDL and the system was finished three months early, allowing useful extensions to be implemented. I wrote an FPGA decoding block to allow legacy boards, which originally required a proprietary PCI card to be connected to the USB system. I also modified the memory controller to allow the RAM it controlled to store still pictures taken at different times. The improvements exceeded expectations as VGA frame rates through memory increased by over 430%. The system is used by STMicroelectronics and customers. I developed skills in project management, documentation, communication and FPGA coding and debugging, with this work receiving 85% at the top of the class. I am currently integrating further enhancements whilst providing technical support.

MEng Project Summer Placement (C Firmware development)

Jun 2005 – Sep 2005

This project aimed to use a USB Microcontroller to reprogram an FPGA by modifying its firmware and writing a PC application. Programming and verification times were reduced from minutes to 8 seconds. The system is currently used in internal and commercial camera demonstration systems. I learned how to code fast embedded firmware, how to write PC Microsoft Foundation Class (MFC) applications and produced high-quality documentation, with the report documenting this work receiving 90%. Due to the efficiency of my work, this project which was intended to last 10 months was completed in only 3 months.

Food Refrigeration & PERC (University of Bristol)

Aug 1999 – Aug 2000

Research Technician (Year in Industry)

Due to a delay in my assigned project, I offered to produce some 3D and 2D technical drawings for a research project: the 'first' Air-Cycle air-conditioning system for buildings. I also wrote the control system and designed and fabricated a circuit to convert computer outputs to voltages capable of controlling valves and a compressor. I manufactured, calibrated, positioned and monitored 40 thermocouples around the system. I directed and managed other students whilst building and testing the system (including the plumbing, lagging and sound proofing) and overseeing the project during the manager's absence. I demonstrated the finished system, worth £7 million, to sponsors and customers. I also completed the delayed project, producing a GUI for a computer simulator of industrial freezers.

I was awarded the Engineering Integrity Society (EIS) Innovation Prize, was commended for the Smallpeice Prize and was runner up for the Engineering Employers' Federation (EEF) Prize for my work.

Other Employment and Experience

Church, Edinburgh

Youth Group Leader

2005-Present, 2002 & 1999-00

I organise youth events for 50-300 young people, including annual camps trips, sports days and discos where I DJ.

Hann Property Maintenance, Edinburgh

Jun 2003 – Sep 2004

Stairwell Cleaner and Gardener

Learned the value of thoroughness, as well as time and mileage management.

Church Mission, Central London to Norfolk

Sep 2000 – Sep 2002

Missionary

Mission computer support, database and Visual Basic programming. I provided leadership, encouragement and skills training for up to 40 of my peers. I was also involved in pastoral care, counselling some members of the team who were struggling to cope with personal difficulties. Time was spent teaching and performing community work, which I feel made significant contributed to the people involved.

McDonalds, Bangor

May 1998 – Aug 1999

Crew Member, Part time 5*

Cooked, cleaned and served customers as part of a team; was deemed proficient in all areas.

Computer Skills

- Programming:
 - C Firmware, C++ MFCs & VHDL (2 years at STMicroelectronics)
 - MatLab (4 months at university)
 - Java (6 months at university)
 - Visual Basic 6.0 & VB Script (Since 1997 & 1 year industrial placement)
 - Access databases (2 years office programming experience)
- MS Windows & Office & Unix
- Office technical support
 - 2 years during church mission
- Drawing packages:
 - Corel Draw, Paint Shop Pro, PhotoShop, Gimp, Corel Dream, Blender
- Hardware & Networking:
 - Built PCs for friends and family, and installed a small office network

Interests

I enjoy outdoor pursuits such as climbing, caving and water sports and have gained RYA Level 3 dinghy sailing and RYA Level 2 windsurfing. I also enjoy spending time with my wife and two children.

Referees

Les Haworth

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