Jonathan Beaumont: Curriculum Vitae

Address: 56 Adelaide Avenue, London, SE4 1YR
Mobile: 07871959048 E-mail: jonathan.r.beaumont@gmail.com

Education

2014 – Present, PhD Computer Engineering, Newcastle University

Research interests:

- Asynchronous circuit design methods
- Development of software tools for hardware design automation
- Event log mining and concurrency extraction

Skills developed and Projects:

My main research project is the development of a domain-specific language for formal specification of asynchronous circuits.

- Knowledge of asynchronous systems, design methods, verification properties and synthesis.
- An understanding of several forms of graphical modelling methods, such as Finite State Machines, Petri Nets, Signal Transition Graphs and Conditional Partial Order Graphs.
- I work as part of a software development team on several software tools. We work together and aim to integrate them to streamline their usage (github.com/jrbeaumont).
- One such tool I have developed is *concepts*. This is written in Haskell and implements features of my research project (github.com/tuura/concepts).
- Another tool I have aided the development of is *pgminer*, a Haskell library for process mining, which features automated concurrency extraction (github.com/tuura/process-mining).
- The main tool our team develops is *Workcraft*, Java software to aid in graph design for asynchronous systems, featuring many of the tools the team develops integrated as plug-ins. I act as the main macOS developer for Workcraft (workcraft.org).

2010 – 2014, First class honours, Electronic and Computer Engineering MEng, Newcastle University

Relevant modules:

- Design and Test of Digital Systems
- Real-time and Embedded Systems
- Signals and Communication
- Industrial Automation and Robotics

Skills developed and Projects:

- Worked as part of a team to design and build a robot which successfully navigated a maze. I oversaw the control system, dealing with input from sensors to determine possible directions, and using this information to map the maze, and control the motors to move the robot.
- Designed and built an Electronic Drum Kit Recording device consisting of programmed PICs and a microprocessor to record the output from multiple rubber pads from the electronic drum kit, and wrote a PC application to play back what was recorded. This project achieved the award for Best Final Year Project in Microelectronic System Design.

2008 – 2010, Greenhead College, Huddersfield

A-Levels: Computing A, Mathematics B, Physics B
AS level: Chemistry B

1995 – 2008, Huddersfield Grammar School

10 GCSEs at A* - C grades.

Work Experience

2017 September – Present, AEG Guest Relations Assistant, The O2, London

- Work as part of a team to provide guests of The O2 with the best possible service, helping them find their seats for shows, escorting guests with accessibility issues to their seats, and dealing with customer queries and complaints.
- Required knowledge health and safety procedures, to ensure guests will enjoy their night with as little risk to their safety as possible.
- Used radio procedures in order to effectively communicate with other members of the guest relations team across the large venue area, to ensure that important information was passed to the relevant area, or to find out information for guests.

2014 September – 2017 June, Postgraduate Demonstrator, Newcastle University

- Worked in a group of demonstrators in a microprocessor system practical, helping students to learn the processes of designing, building and programming of a microprocessor system.
- Lead a team of demonstrators in a C-programming practical, helping the students with the basics of programming. Reports and code for assignments were marked by myself and other demonstrators, organised by myself.
- On my own, I prepared and demonstrated for an experiment to teach students Finite State Machine theory using FPGAs.

2012 August – October, Report Binder/Helper, Alps – Alkemygold, Huddersfield

- Worked in a team to print and bind reports and burn CD-ROMs with digital reports for schools around the country.

2011 May - October, Decontamination Operative, Church Street Dental Practice, Littleborough

- Managed the Local Disinfection Unit, carrying out manual cleaning and sterilization of instruments, rotating these to and from surgeries and the recording of the process.
- Coordinated with a team of Dentists, Hygienists, Dental Assistants and Reception staff who work to ensure patients are treated correctly and safely.

Additional Skills

- Proficient in Java, C and C++, familiar with Haskell and Assembly language.
- Communication skills gained through teaching, and presentations of my research at national and international conferences.
- Through the authoring and co-authoring of multiple papers and articles, as well as a blog (jrbeaumont.github.io/concepts-blog/), I can communicate in a scientific manner, and a more colloquial manner.
- I have time-management skills gained through self-regulation of my work load throughout my PhD, where I have had to balance software development, demonstrating duties, regular reading of articles for research and the writing of research documents.
- Full and clean UK driving license.

Interests

I am interested in theatre, and I try to see plays whenever possible. During my time at Newcastle University, I was a member of the theatre society. I helped rig many plays, design and build sets, and was a technical director on several musicals, as a sound engineer. This involved the preparation and control of the microphones for a live band, and multiple actors.

Another hobby is music. I enjoy the use of electronics and software in music production, as well as the capabilities the Web provides for the production and sharing of music on an international scale. I have played drums for over 10 years, and try learning other instruments. I have experience in recording music.