
DANIEL MORRISON (PHD, MCOMP)

CURRICULUM VITAE

CONTACT:
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PERSONAL STATEMENT:

I always had an interest in the natural sciences; more specifically Mathematics and Computer Science. These interests have led me down the career path detailed below. My education involved lots of software programming, but more importantly, a strong theoretical understanding of computation, limitations of algorithms, and programming languages in general. This has enabled me to quickly understand new programming paradigms and languages whenever my work has needed.

FORMAL EDUCATION:

University of Leicester,

Oct 2012 – Mar 2017

PhD Computer Science

- My thesis was titled “Modelling, Realisations and Limitations of Concurrent Delay-Insensitive Networks” and involves the development of a formal framework for modeling abstract delay-insensitive systems. This model is then used to infer limitations of DI networks, and to decompose complex specifications into networks of simpler components. Java-based simulators demonstrating these concepts have been developed.
- Research topics involved process calculi, reversibility, asynchronous networks and event-based models and concurrent models of computation.

University of Leicester,

Oct 2008 – Jun 2012

MComp (master's) Computer Science: 1st class degree with honours

1st Year Grade: 80.08%	2nd Year Grade: 83.75%
3rd Year Grade: 82.30%	4th Year Grade: 85.98%

- Languages involved HTML, PHP, Java (desktop applications using Java Swing, Java Servlets, Java RMI, Java2D and Java3D), C/C++, SQL, Prolog, Haskell, Matlab, XML.
- Theoretical studies involved computational theory, process calculi, automata theory, cellular automata, asynchrony, bioinformatics, compression, multimedia manipulation, distributed systems, communication and concurrency, software engineering and large-scale project management.

EMPLOYMENT:

Matrix Technology Solutions Limited,

Halifax, May 2017 - Present

- Title: Senior Software Engineer (April 2019 – Present)
(Formerly) Software Engineer (Feb 2018 – April 2019),
(Formerly) Junior Software Engineer (May 2017 – Feb 2018)
- Duties: Responsible for the development of version 8 onwards of flagship product Flowcode
Became lead developer and architect of Flowcode from Feb 2018
Creator of Matrix SCADA
Helped develop marketing, training and outreach materials
Delivered customer training
Responsible for conformity to licensing restrictions
Main work performed using C/C++, MFC and Win32 programming
Some work performed using Python
Lots of difficult programming using the C preprocessor for recursive code generation, and working with homegrown XML-based rendering routines
Exposure to embedded systems, USB debugging
Version control management using Mercurial (hg)
- Salary: £38,000 + yearly bonus dependent on performance
- Benefits: Remote-working privileges

University of Leicester, Department of Computer Science,

Leicester, Oct 2012 - Dec 2015

- Title: Part-Time Teaching Assistant
- Duties: Assisting with computer labs, problem classes and surgeries
Assisting with invigilating during tests
Proof reading of, and producing model answers for, coursework assignments
Marking coursework submissions

ITP Engines UK Ltd.,

Leicester, Jun 2011 - Sept 2011

- Title: Software Engineer (3-month contract)
- Duties: Worked on ESATAN-TMS thermal modeling software
Code maintenance, bug fixing with C and Java programming
Development of a proof-of-concept replacement rendering engine from scratch using OpenGL 2.0 and JOGL (Java bindings for OpenGL)

UCAS Open Days, University of Leicester, Department Of Computer Science,

Leicester, Feb 2010 - Mar 2010

- Title: Assistant Demonstrator
- Duties:: Demonstration of departmental equipment
Handling of general queries and public relations

OTHER:

Award for Best 2nd Year Student, Department of Computer Science
University Of Leicester, Sept 2010

Award for Best 3rd Year Student, Department of Computer Science
University Of Leicester, Sept 2011

Award for Best 3rd Year Project, Department of Computer Science
University Of Leicester, Sept 2011

President of Computing Society
University Of Leicester, Jun 2010- Jun 2011

Chair of Undergraduate Student-Staff Committee, Department of Computer Science
University Of Leicester, Jun 2010 – Jun 2011

Undergraduate Course Representative, Computer Science
University Of Leicester, Sept 2009 – Jun 2011

PUBLICATIONS:

- **Reversible delay-insensitive distributed memory modules.**
Proceedings, Reversible Computation 2013, LNCS volume 7948, pp. 11-24. Springer. 2013
 - **Arbitration and reversibility of parallel Delay-Insensitive modules.**
Proceedings, Reversible Computation 2014, LNCS volume 8507, pp. 67-81. Springer. 2014
 - **Direction-reversible self-timed cellular automata for Delay-Insensitive circuits.**
Proceedings, ACRI 2014, LNCS volume 8751, pp. 367-377. Springer. 2014
 - **Direction-reversible self-timed cellular automata for Delay-Insensitive circuits.**
Journal of Cellular Automata 12(1-2):101-120. 2016
 - **Modelling, Realisations and Limitations of Concurrent Delay-Insensitive Networks.**
Doctoral thesis. University of Leicester. 2017
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INTERESTS:

To relax I play videogames and watch movies on my projector in my home theater setup. I'm fond of all animals and spend as much time as possible with my two dogs.

REFERENCES AVAILABLE ON REQUEST