John Sarris Burke

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Education

Boston University College of Engineering, Boston, MA

Master of Engineering in Computer Engineering, September 2017

GPA - 3.26/4.0

Bachelor of Science in Electrical Engineering, September 2011

GPA - 3.05/4.0

Relevant Coursework

Computer Architecture High Performance Programming

Embedded Systems Machine Learning

Digital Design with Verilog and FPGAs Analog VLSI Circuit Design

Work and Research Experience

Boston University, Boston, MA, May 2017 to present

Research with BU ICSG

♦ Working to implement the RISC-V Berkely Out of Order Machine on FPGA

Meditech, Framingham, MA, November 2011 to January 2017

System Analyst and Tool Development

♦ Developed TruCode Interface, in-house portion of the Site Information Retrieval Tool, other tools

♦ Fixed and updated Meditech Software in C++, x86 Assembly, and Proprietary Languages

Boston University, Boston, MA, September 2009 to May 2011

Undergraduate Teaching Assistant

♦ Assisted Professor teaching MATLAB to Engineering students

♦ Graded exams and quizzes, managed labs, recitations, and office hours

Relevant Projects

Boston UniversityComputer Architecture Multicore Tiny RISC-V Processor

- ♦ Made a Quadcore CPU in Verilog using a restricted RISC-V ISA, private L1i caches, shared L1d
- ♦ Verified with PyMTL by cross-compiling a parallel hybrid Merge-Quick sort written in C

MEDITECH Site Information Retrieval Tool (SIRT) and TruCode Interface

- ♦ SIRT Designed tools to decrypt and trend data for early issue detection on servers at hospitals
- TruCode DLL to let Meditech operate with TruCode's coding and billing software

Boston University Capstone, Magnetic Environment Sensor for the Naval Undersea Warfare Center

- ♦ Team project to create a device to sample and process magnetic fields and return frequency content
- ♦ Project started with initial design phases until a functional prototype

Technical Skills

Languages	C/C++, Verilog, CUDA, Python, Perl, MATLAB, ATS,
	Assembly (x86, ARM, RISC-V)
Software	Xilinx ISE, PyMTL, Visual Studio, Windbg, I₄TEX, SPIM, Valgrind,
And Tools	Cadence, gdb, gtkwave
Other	Strong Experience with Linux and Windows, Synthesis targeting FPGAs

Other Information

Served several times in Mississippi for Hurricane Katrina Relief, impoverished areas of West Virginia. Often assist at Saint Francis House in Boston.