

Adam Trefonides

Goal: To find a position that leverages my expertise in computing, creative engineering, 3D design, 3D printing and computing. I am especially interested in applying my skills within the fields of neuroscience/biomedical engineering. My wife, Jessica Slater, will be joining the Psychology department at McGill in the Fall of 2019 as an HBHL Post Doctoral Fellow.

3D Printing

Computational design and novel manufacturing methods like 3D printing are set to revolutionize myriad aspects of our society and culture. I have been involved in this space for years, have a good understanding where the frontier lies, and would like to push those boundaries.

I have experience with a variety of computer aided manufacturing methods, from 3D printers to small CNC mills and laser cutters, their associated technologies, materials and applications. I've built and rebuilt my own 3D printer and produced a wide variety of prints, from a playable ukulele with embedded sound reactive LEDs to models for blocks to slice brain samples as well as a large series of sculptural objects. These projects have required a range of skills in programming, engineering, electronics and art.

UNIX Systems Administration

As Senior Systems Administrator I have been responsible for the UNIX infrastructure for a number of scientific teams at Argonne National Laboratory in Chicago, Illinois for thirteen years. This has required broad knowledge of computing hardware, UNIX OS's, Linux distributions, networking and compute infrastructure, as well as close interaction with broadly different personality types. This has all been demanding, and has all been productive, which has made working at Argonne an extraordinary experience. Prior to Argonne, for about a decade I filled a various similar roles at the University of Chicago in a number of different departments, from Biosciences and Medicine to Physics, and led the institutional UNIX enterprise services group. My ability to meet the varied demands in these positions stems from the joy I have in understanding the real-world technical challenges that people face, and engineering creative solutions so my clients can get back to concentrating on their science. Ideally, I would find similar groups at McGill whom I could help achieve their science goals.

I'm also very interested in finding connections between the computing infrastructure work that I've done at Argonne, and the work done in the CBRAIN project at McGill. I can see opportunities in cluster management, CBRAIN development, and possibly future interaction with computing resources at Argonne National Laboratory, my current employer.

Embedded systems

I have worked with a variety of microcontroller and SoC devices like Arduino, Raspberry Pi, and Tinkerboard on a variety of personal projects, including controllers for my custom built 3D printer, and for audioresponsive LEDs embedded in the ukelele that I 3Dprinted. The explosion of open source software and open hardware projects has democratized the processes in innovation and engineering. This has facilitated an expansion of "citizen science". This has in turn expanded access to these microcontrollers in unexpected and broad applications. These are exciting times to be an engineer.

I am confident that there are places at McGill University that would benefit from my unique set of talents and interests and within which I would likewise grow.

Thank you for your kind consideration,

Adam Trefonides