

Mark L. Sorić

RECENT AMATH GRADUATE · TEAM-ORIENTED · PROBLEM SOLVER

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Education

University of Waterloo

Waterloo, Ontario, Canada

B.MATH. IN APPLIED MATHEMATICS

Sep. 2011 - Dec. 2016

- Elective courses focused primarily on applications of Mathematical Modeling, specifically as they relate to biological and biochemical systems. Graduate-level courses taken:
 - AMATH 881 - Introduction to Mathematical Oncology
 - AMATH 882 - Mathematical Cell Biology
 - AMATH 732 - Asymptotic Analysis and Perturbation Theory

Dalhousie University

Halifax, Nova Scotia, Canada

B.SC. IN BIOLOGY

Sep. 2002 - Jun. 2007

Skills

Programming	C (low-level, embedded), R, Matlab, Maple, LaTeX
Modeling	Simulink (Control Systems Toolbox), Gmsh
CAD	Rhinoceros 3D, Fusion 360, Solidworks
Design	Adobe Illustrator, Photoshop, InDesign, Premiere Pro, After Effects, Audition, Inkscape
Languages	English (fluent), French (fluent), Croatian (fluent), Spanish (conversational)

Experience

University of Waterloo - Faculty of Mathematics

Waterloo, Ontario

TECHNICAL VOLUNTEER

Present

- Responsible for the design and actualization of a custom, 12 sample turbidostat with 3 gene expression controlling hot-swappable LEDs per sample.
- Currently the project aims to control 12 individual peristaltic pumps, 12 stirring pumps, 12 solenoids, 48 LEDs and 12 photodiodes. The project requires the design and production of a custom control shield for the Arduino Mega 2560 as well as the design and 3D printing of custom peristaltic pumps based on a standard NEMA-17 stepper.

University of Waterloo iGEM Team

Waterloo, Ontario

MATH MODELING TEAM TUTORIAL PRESENTER

2014

- Conceived and presented a set of weekly team tutorials as an introduction to mathematical modeling in the context of biology.
- Models presented included standard chemical reaction models, neuronal and intramuscular models, and biochemical reaction network models.

Home Depot Canada

Toronto, Ontario

PROJECT COORDINATOR, CANADIAN IT PMO

Nov. 2010 - Apr. 2011

- Developed new contractor databases and billing systems for the Canadian IT and Canadian Business Project Management Offices.
- Created new project tracking and reporting tools and their associated documentation for weekly and monthly Canadian VP meetings.

Fisher Environmental

Toronto, Ontario

PROJECT COORDINATOR

Sep. 2009 - Oct. 2010

- Assisted with field-based research compilation of Phase I Environmental Site Assessments (ESA)
- Responsible for Phase II ESA field investigations including:
 - sample well locating and drilling
 - collecting and organizing retrieved samples
- Oversaw the remediation of contaminated soil during several large-scale Phase III ESA projects as well as follow-up groundwater monitoring for residual contaminants.

IBM Canada

RFS COORDINATOR

Toronto, Ontario

Sep. 2007 - May 2008

- Acted as primary on-site client contact with regular reporting to Business Unit Executives.
- Managed Project Change Requests pertaining to long-term IT services contract.
- Manage project-related hardware expenses and ordering.
- Designated projects to high-level HR resources and was responsible for tracking project hours.

Dalhousie University (Biology and Neuropharmacology Departments)

RESEARCH ASSISTANT

Halifax, Nova Scotia

Jan. 2006 - May 2007

- Conducted research into a hypothesized whole-genome duplication event using a variety of modern lab techniques including:
 - RT-PCR
 - Gel electrophoresis
 - *in situ* hybridization
 - Autoradiography
 - Fluorescence microscopy
- Assisted in the setup of labs for BIOL2030 (Genetics).

BOSS Steel

SALES ASSOCIATE/FABRICATION ASSISTANT

Aurora, Ontario

Jun. 2001 - Aug. 2002

- Acted as client point-of-contact for commercial and consumer orders and design change requests.
- Assisted fabrication shop with material ordering and prep.

Extracurricular Activities and Interests

I'M AN AVID TINKERER AND MY INTERESTS SPAN A WIDE RANGE OF TOPICS. I ENJOY CHALLENGING MYSELF WITH AMBITIOUS PROJECTS THAT REQUIRE A FAIR AMOUNT OF LEARNING AND DEDICATION BUT THAT ALSO CALL ON MY EDUCATION AND ALLOW ME TO DEVELOP MY UNDERSTANDING AND INTUITION FURTHER.

Electromechanical

C FOR AVR MICROCONTROLLERS, PCB DESIGN/PROTOTYPING/ASSEMBLY. PROJECTS INCLUDE:

3 years

- Short term:
 - 2x50W Bluetooth boom box with a rotary encoder based digital volume control
 - Intervalometer for nighttime star-trail photography
 - 30,000m high altitude balloon with temperature, pressure, and GPS logging and live radio tracking
- Long Term:
 - Scratch-built tilt-rotor GPS-guided drone
 - 3-axis CNC mill with scratch-built servo drivers and g-code interpretation

Metalworking/Fabrication

MILD AND STAINLESS STEEL, STRUCTURAL, MACHINERY REPAIR, SMAW (ARC/STICK), GMAW (MIG). PROJECTS:

5 years

- Repair welding on sample well auger bits
- Custom structural marine dock trusses (CAD and fabrication)
- Custom snowmobile trailer

Woodworking, Carpentry, Renovations

STRUCTURAL AND FINISH WORK, CUSTOM FURNITURE, LANDSCAPE CONSTRUCTION. PROFESSIONAL PROJECTS HAVE

15 years

INCLUDED:

- Custom kitchens
- Multilevel decks with integrated lighting
- Custom outdoor wood oven (stone/cedar)

Automotive

VW, SUBARU, TUNING. EXPERIENCE WITH:

15 years

- Forced air/naturally aspirated configurations
- Extensive teardown and rebuilds of VR6 and EJ20/EJ25 motors