

Phillip A. Soucy

CONTACT INFORMATION

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EDUCATION

Northeastern University, Boston, MA

Master of Science in Mechanical Engineering, Mechanics of Materials

Select Courses: Mechatronic Systems, Control Systems,

Elasticity and Plasticity, Material Processing and Manufacturing

December 2017
(GPA 3.87 / 4.0)

Bachelor of Science in Mechanical Engineering

Select Courses: Probability and Statistics, Microeconomics

Awards: 2014 Janet P. Mackie Good Fellowship Award

Honors: Member Pi Tau Sigma, Mechanical Engineering Honor Society

May 2016
(GPA 3.76 / 4.0)

RESEARCH EXPERIENCE

Dept. of Mechanical and Industrial Engineering, Boston, MA

Handgrip Force and Stylus Strain Relationship for Parkinson's Disease Assessment

Graduate Researcher under Dr. A. Gouldstone

- Reduced simplified loading geometry to represent a subject gripping a pen
- Derived analytical equations to represent force-strain relationship for simplified geometry
- Modified equation using results from series of Abaqus/CAE finite element simulations
- Verified equations against analytical and experimental results, to within 10% of solution

PROFESSIONAL EXPERIENCE

N12 Technologies, Inc., Somerville, MA

Lead Mechanical Engineer, Ohio Operations

January 2018 – Present

- Technical lead and liaison for CVD reactor retrofit projects, internal and external; including design and installation of high-temp. conveyor with robotics
- Designed, built, and supported custom QC equipment to reduce need for SEM imaging of production material; Used daily by technicians and eliminated need for SEM

Production Engineer

May 2017 – January 2018

- Spearheaded CVD reactor improvement program, resulting in 40-point improvement in production OEE performance over 5 months
- Introduced “customer-focused” internal engineering model; solicited direct feedback from operators on projects, resulting in significant improvement in operator quality-of-work
- Developed, implement, and maintained CVD reactor maintenance log, reducing downtime during planned maintenance and problem-solving efforts

Massachusetts Materials Technologies LLC, Cambridge, MA

Co-Founder, Research Engineer, Safety Officer

March 2015 – April 2017

- Determined proof-of-concept method for non-destructive evaluation of fracture toughness
- Developed and maintained on-site safety program, including Chemical Hygiene Plan
- Drafted portions of, created illustrations for, and coordinated submission of 4 US utility patent applications (1 grant), as well as several provisional applications

Materials and Engineering Group LLC, Cambridge, MA

Engineering Consultant

October 2013 – April 2017

- Consulted as expert witness support for litigation cases up to \$1 billion in losses
- Developed and implemented evidence teardowns and inspections
- Drafted memos and reports for clients on analytical and experimental findings

SKILLS

Technical: SolidWorks, NX, Abaqus/CAE, machining

Programming: MATLAB, VBA; Fundamental: Arduino, C/C++, Python

Practical: Project management, system integration, technical writing