

MEGAN O'BRIEN

EDUCATION

Massachusetts Institute of Technology (MIT) – Cambridge, MA, USA

Master of Science in Mechanical Engineering

June 2016 (Expected)

- Cumulative GPA: 4.7/5.0
- Relevant Coursework: Medical Device Design, Precision Machine Design, Technology, Design, & Entrepreneurship, General Thermodynamics, Global Engineering, Sustainable Energy

University of British Columbia – Vancouver, BC, Canada

Bachelor of Applied Science in Mechanical Engineering

May 2014

- Degree with Distinction
- Biomedical Specialization
- 300 & 400-Level Average: 90.6%
- Relevant Coursework: Biomaterials, Orthopaedic Biomechanics, Injury Biomechanics, Biomechanics Research, Anatomy & Physiology, Clinical & Industrial Biomedical Engineering, New Venture Design

EXPERIENCE

Massachusetts Institute of Technology – Cambridge, MA, USA

Abdun-Nur Presidential Fellow

August 2014 – Present

Tata Center for Design Fellow

- Precision Engineering Research Group
- Designing a mobile system for upgrading waste biomass to solid fuel for electricity generation through gasification or co-firing with coal

MIT & Dana Farber Cancer Institute – Boston, MA, USA

September 2015 - Present

Design Engineer

- Designing and testing a bioreactor system for high-throughput perfused 3D tissue culture (patent and publications pending)

University of British Columbia – Vancouver, BC, Canada

NSERC Undergraduate Student Research Award

May – August 2014

- Collaborative Advanced Robotics and Intelligent Systems Laboratory
- Developed a virtual prototyping tool for simulating the interaction between a human musculoskeletal model and a robotic assistive device

Swiss Federal Institute of Technology (ETH) – Zürich, Switzerland

Research Engineer

January – August 2013

- Institute for Biomechanics, Laboratory for Orthopaedic Biomechanics
- Designed and tested a small-scale bioreactor for in-vitro studies of tendon fascicle conditioning

TRIUMF Particle and Nuclear Physics Lab – Vancouver, BC, Canada

Research Engineer

May – August 2012

- Vacuum and Cryogenics Group
- Used FEA to study the behavior of mechanical components in a cryogenic environment in order to predict high-risk locations for loss of vacuum
- Aided with the assembly and testing of a 4K to 2K helium conversion unit prototype

University of British Columbia

Research Volunteer

January – May 2012

- Center for Interactive Research on Sustainability
- Developed a data analysis program to draw conclusions from experimental data on the effects of ventilation systems on disease transmission in hospitals

SKILLS

Computer: Solidworks, ANSYS, Matlab, LabVIEW, Pro/Engineer, AutoCAD, Comsol Multiphysics

Fabrication: Mill, lathe, drill, water-jet cutter, laser-cutter, 3D printer, bandsaw, grinder, hand tools

FELLOWSHIPS AND AWARDS

Tata Center for Design Master's Fellowship, MIT, 2015-2016 | Lydia I. Pickup Memorial Scholarship, Society of Women Engineers 2015 | Abdun-Nur Presidential Fellowship, MIT, 2014-2015 | Undergraduate Student Research Award, NSERC, 2014 | Trek Excellence Scholarship, UBC, 2013 | Frank Vernon Memorial Scholarship, UBC, 2013 | Yates Memorial Scholarship, UBC, 2013 | Charles and Jane Banks Scholarship, UBC, 2012