

## EDUCATION

### IMPERIAL COLLEGE LONDON

MASTER OF RESEARCH IN BIOENGINEERING

Advisors: Prof. Etienne Burdet, Dr. Ildar Farkhatdinov

London, UK  
2015–2016, anticipated

### NORTHEASTERN UNIVERSITY

BS IN BEHAVIORAL NEUROSCIENCE

MINOR IN COMPUTER SCIENCE

GPA: 3.98 / 4.0, summa cum laude

Honors Thesis • Honors Program • Dean's List

Boston, MA  
2010–2015

## SCHOLARSHIPS, GRANTS, AND AWARDS

### NATIONAL

2016 Department of Energy Computational Science  
Graduate Fellowship (DOE CSGF)

2016 Hertz Fellowship Finalist

2016 NSF Graduate Research Fellowship Program (GRFP)  
Honorable Mention

2015 Marshall Scholar

2014 Rhodes, Fulbright, and Mitchell Scholarship Finalist

2013 Barry Goldwater Scholarship

2013 DAAD Undergraduate Scholarship

### UNIVERSITY

2015 Alex Skavenski Award for Behavioral Neuroscience

2015 Sears B. Condit Award for academic achievement

2014 Provost Undergraduate Advanced Research Award

2013 Provost Undergraduate Research Award

2013 Presidential Global Scholarship

2010 National Merit Scholarship

## RESEARCH EXPERIENCE

### IMPERIAL COLLEGE HUMAN ROBOTICS GROUP

RESEARCH STUDENT

Advisors: Prof. Etienne Burdet, Dr. Ildar Farkhatdinov

- Develop cooperative human-computer control for balance recovery in a lower limb robotic exoskeleton
- Create Simulink model for designing and evaluating controllers

London, UK  
October 2015 – present

### NORTHEASTERN UNIVERSITY ACTION LAB

RESEARCH ASSISTANT

RESEARCH CO-OP

Advisor: Prof. Dagmar Sternad

- Collected data from human participants in motor control experiments, including electroencephalogram (EEG)
- Designed and programmed data collection protocols and analysis tools in C++ (on the HapticMaster robotic manipulandum), Matlab, and Psychtoolbox
- Participated in and presented at lab meetings on movement neuroscience

Projects

- Prediction and stability in control of objects with complex dynamics
- Learning and long-term retention of an asymmetric bimanual task (Honors thesis; manuscript in preparation)
- Effects of central fatigue on cognitive and motor performance

Boston, MA  
September 2011 – August 2015  
July – December 2012

### NORTHEASTERN UNIVERSITY MARINE SCIENCE CENTER

RESEARCH ASSISTANT

Advisor: Prof. Joseph Ayers

Nahant, MA  
May – August 2015

- Programmed network of electronic neurons in LabView to control rheotaxis in a biomimetic robotic lobster
- Designed and built bend-sensing antennae for RoboLobster
- Created circuits and Arduino programming for bend sensation and antennae control

## MAX PLANCK INSTITUTE FOR INTELLIGENT SYSTEMS RESEARCH CO-OP

Tübingen, Germany  
July – December 2013

Advisor: Prof. Stefan Schaal, Director of Max Planck Institute

- Designed and developed experiments for the CyberGlove data glove
- Collaborated with a post-doctoral researcher to develop reinforcement learning models of a novel motor skill task
- Collected pilot behavioral data from human subjects
- Attended seminars and lab meetings on robotics and machine learning

## CONFERENCES AND PRESENTATIONS

Ebert J, Park S, & Sternad D. *Asymmetric Learning in an Asymmetric Bimanual Task*. Poster presented at: Society for the Neural Control of Movement 25th Annual Meeting; 2015 April 20–24; Charleston, SC.

Ebert J, Mukovskiy A, Dijkstra T, & Sternad D. *Why You Don't Spill Your Coffee*. Poster presented at: Northeastern University Research, Innovation, and Scholarship Expo (RISE); 2015 April 9; Boston, MA.

Ebert J, Kim S, Sternad D, & Schaal S. *Learning and exploration in a novel dimensionality-reduction task*. Poster presented at: Society for the Neural Control of Movement 24th Annual Meeting; 2014 April 20–25; Amsterdam, NL.

Ebert J, Park S, & Sternad D. *Asymmetric Learning in an Asymmetric Bimanual Task*. Poster presented at: Northeastern University Research, Innovation, and Scholarship Expo (RISE); 2014 April 10; Boston, MA.

Ebert J, Park S, & Sternad D. *Asymmetric Learning in an Asymmetric Bimanual Task*. Poster presented at: Northeast Undergraduate Research and Development Symposium; 2013 March 2–3; Biddeford, ME.

Participant. Society for Neuroscience 42nd Annual Meeting; 2012 October 13–17; New Orleans, LA.

Ebert J, Park S, Griffin L, O'Neil-Pirozzi T, & Sternad D. *Central Fatigue in Cognitive and Motor Performance*. Poster presented at: Northeastern University Research, Innovation, and Scholarship Expo (RISE); 2012 March 29; Boston, MA.

## TEACHING EXPERIENCE

### NORTHEASTERN DEPARTMENT OF COMPUTER SCIENCE

#### TEACHING ASSISTANT

Boston, MA  
September 2014 – April 2015

- Taught two weekly lab courses of 30–40 students each
- Graded student exams and quizzes
- Held twice-weekly office hours to assist students with course material

#### TUTOR

September 2012 – April 2014

- Assisted college students in weekly introductory computer science labs
- Graded weekly student programming assignments
- Tutored students in course material at office hours

### PROACTIVE RECRUITMENT IN SCIENCE AND MATHEMATICS (PRISM)

#### UNDERGRADUATE MENTOR

Boston, MA  
July 2011 – April 2013

- Planned and organized programming throughout the academic year for first and second year college students interested in mathematics and science
- Facilitated collaboration and discussion among participants in problem solving activities and problem sets
- Guided students in designing and implementing independent research projects

## OTHER EXPERIENCE

### FIELD LINES: SCIENCE NEWS PROJECT

#### FOUNDER

London, UK  
September 2015 – present

- Lead team of 20 postgraduate students to create a news website serving the scientifically literate public by generating accessible interdisciplinary articles with a rigorous dedication to accuracy and integrity
- Design and program website and backend to support content

## **SUTURE SCORE**

### **CHIEF EXECUTIVE OFFICER**

London, UK  
November 2015 – present

- Develop application for immediate, objective assessment of surgical trainees' suturing technique
- Collaborate with University Hospital of South Manchester NHS Foundation Trust to test and validate application
- Winner of TELHack, National Health Service hackathon

## **ASSOCIATION OF MARSHALL SCHOLARS**

### **CHIEF TECHNOLOGY OFFICER**

London, UK  
December 2015 – present

- Design and implement new website with social media integration
- Manage \$9,000 budget for web presence management

## **INTERACTIVE MOTION TECHNOLOGIES**

### **SOFTWARE DEVELOPMENT CO-OP**

Watertown, MA  
July – September 2014

- Designed specifications for stroke evaluation software with input from clinicians, researchers, and software developers
- Developed software to store and automate clinician stroke evaluations with an HTML5 and JavaScript front end and a Django and SQL back end

## COMMUNITY SERVICE

### **NORTHEASTERN UNIVERSITY**

#### **CIVIC ENGAGEMENT PROGRAM**

Boston, MA  
September 2010 – May 2015

- Committed to at least 100 hours of community service annually
- Participated in service events such as Relay for Life and food sorting at the Greater Boston Food Bank

## **VOLUNTEER ACTIVITIES**

Boston Bikes: Volunteer

Tutor team leader at TechBoston Academy

Brigham and Women's Hospital: Medical Career Exploration Program Volunteer

Massachusetts General Hospital: Youth Program Mentor

April 2014 – August 2015  
May – July 2014  
September 2011 – April 2013  
September 2010 – April 2011

## SKILLS

### **PROGRAMMING & SOFTWARE**

Python (incl. Django, NumPy, SciPy, Matplotlib) • MATLAB • Java • Arduino • LabView • JavaScript • HTML/CSS •  $\LaTeX$  • C++ • Database design • Linux

### **LABORATORY**

3D motion capture • Kinematic and EEG data collection in human subjects • Basic signal processing (filtering, frequency domain analysis)

### **LANGUAGES**

Fluent in English and German

## ACTIVITIES AND INTERESTS

### **MUSIC**

Northeastern Pep Band (clarinet section leader) • Drumline (co-section leader) • Wind Ensemble (manager, treasurer)

### **OTHER**

Fencing • Curling • Cycling • Web design and development • Novel writing