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Julia Ebert

(715) 527-0394

Education

Northeastern University

Bachelor of Science in Behavioral Neuroscience

Minor in Computer Science

Boston, MA

GPA: 3.98/4.0, summa cum laude

2010–2015

Honors: National Merit Scholar, Honors Program, Dean's List

Research Experience

Northeastern University Action Lab

Volunteer Research Assistant; Research Co-op; Honors Project

Advisor: Prof. Dagmar Sternad

Project: Learning and long-term retention of a novel bimanual task
Project: Effects of central fatigue on cognitive and motor performance

- Collect data from human participants in motor control experiments, including electoencephalogram (EEG)
- Program data collection protocols and analysis tools with Matlab and Psychtoolbox
- Perform data analysis
- Participate in and present at lab meetings on movement neuroscience

Boston, MA

2011 September–present

Co-op:
2012 July–December, 2014 September–December

Max Planck Institute for Intelligent Systems, Autonomous Motion Department

Undergraduate Research Co-op

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

Project: Learning mapping of high-dimensional movements to Euclidean space

- 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

Tübingen, Germany

2013 July–December

Research Experience

Proactive Recruitment in Science and Mathematics (PRISM)

Participant in Stem Education Programs:

Boston, MA

Spring Course: Bouncing Balls: From Biology and Psychology to Physics and Mathematics

2011 January–May

Summer Discovery Experience: 4-week long summer school
- Performed research on postural control and upper body stability during learning of a ball bouncing task
- Collected and analyzed data from human subjects with 3D motion capture, Matlab, and Qualysis

Teaching Experience

Northeastern University Department of Computer Science

Boston, MA

Computer Science Fundamentals Teaching Assistant

2014 September– 2015 April

- Teach two weekly lab courses of 30–40 students each
- Grade student exams and quizzes
- Hold twice-weekly office hours to assist students with course material

Computer Science Fundamentals Tutor

2012 September– 2014 April

- 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

2011 July–2013 April

- 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

Interactive Motion Technologies

Watertown, MA

Software development co-op

2014 July– September

- 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

Scholarships, Grants, and Awards

Marshall Scholarship

2015–2016

Marshall Aid Commemoration Commission

Alex Skavenski Award for Excellence in Behavioral Neuroscience

Northeastern University

2015

Departmental award for the top senior in the Behavioral Neuroscience program

Sears B. Condit Award for outstanding academic achievement

Northeastern University

2015

For a GPA in the top 100 of the graduating class

Provost Undergraduate Adanced Research Award

Northeastern University

2014

Competitive university grant to support upperclass undergraduate research

Fulbright Scholarship Finalist

U.S. Department of State (IIE)

2015

Rhodes Scholarship Finalist

Rhodes Trust

2014

Mitchell Scholarship Finalist

US-Ireland Alliance

2014

Goldwater Scholarship

Barry Goldwater Scholarship and Excellence in Education Foundation

2013–2015

National scholarship for undergraduate science students intending to pursue a career in research

DAAD Undergraduate Scholarship

German Academic Exchange Service (DAAD)

2013

Funding for study abroad in Germany

Scholarships, Grants, and Awards

Provost Undergraduate Research Award

Northeastern University   **2013**

  Competitive university grant to support undergraduate research projects

Presidential Global Scholarship

Northeastern University   **2013**

  Competitive university scholarship to fund international co-op

National Merit Scholarship

                                                                              2010–2015

Northeastern University

Conferences and Presentations

Society for the Neural Control of Movement 24th Annual Meeting

Amsterdam, NL

Poster Presenter

2014 April 20–25

Ebert J, Kim S, Sternad D, & Schaal S.*Learning and exploration in a novel dimensionality-reduction task.*

Northeastern University Research, Innovation and Scholarship Expo (RISE)

Boston, MA

Poster presenter

2014 April 10

Ebert J, Park S, & Sternad D.*Asymmetric Learning in an Asymmetric Bimanual Task.*

Northeast Undergraduate Research and Development Symposium

Biddeford, ME

Poster Presenter

2013 March 2–3

Ebert J, Park S, & Sternad D.*Asymmetric Learning in an Asymmetric Bimanual Task.*

Society for Neuroscience 42nd Annual Meeting

New Orleans, LA

Participant

2012 October 13–17

Northeastern University PRISM: Charting your Path to Undergraduate Research

Boston, MA

2012 September 28

Presenter

Conferences and Presentations

Lab Advance 2012

Cambridge, MA

Presenter

2012 September 15

Joint Workshop of the Newman Lab (MIT, Prof. Neville Hogan) and the Action Lab (Northeastern, Prof. Dagmar Sternad), Massachusetts Institute of Technology

Northeastern University Research, Innovation and Scholarship Expo (RISE)

Boston, MA

Poster presenter

2012 March 29

Ebert J, Park S, Griffin L, O'Neil-Pirozzi T, Sternad D.*Central Fatigue in Cognitive and Motor Performance.*

Community Service

Northeastern University

Civic Engagement Program

Boston, MA

- Commit to at least 100 hours of community service annually
- Participate in service events such as Relay for Life and food sorting at the Greater Boston Food Bank
- Volunteer at community events and rides with the Boston Bikes
- Led summer volunteer team tutoring at TechBoston Academy

2010 September–present

Brigham and Women's Hospital

Boston, MA

Medical Career Exploration Program Volunteer

2011 September–2013 April

- Transported patients, lab specimens, and blood
- Escorted patients and visitors to various hospital locations
- Assisted staff and visitors at the Information Desk

Massachusetts General Hospital

Boston, MA

Youth Program Volunteer Mentor

2010 September–2011 April

- Facilitated weekly programs in science-related fields for 16–20 high school sophomores
- Informed students about college and science- and medical-related fields

Skills

Software

Windows, Linux/UNIX, Microsoft Office, LibreOffice, Inkscape, GIMP

Basic signal processing (filtering, frequency domain analysis)

Skills

Programming

Matlab, Racket/Scheme, Python, Java, JavaScript, HTML/CSS, LaTeX, database design

Laboratory

3D motion capture

Kinematic and EEG data collection in human subjects

Basic skills in biology, pipetting, PCR, gel electrophoresis, microscale organic techniques

Languages

Fluent in English and German

Relevant Coursework

Biology

Comparative Neurobiology, Functional Human Neuroanatomy, Genetics and Molecular Biology, Biochemistry

Computer Science

Robotic Science and Systems, Artificial Intelligence, Object-Oriented Design

Psychology

Psychobiology, Cognition, Developmental Psychology

Mathematics

Calculus 1–3, Statistics in Psychological Research, Ordinary Differential Equations, Linear Algebra

Chemistry

Organic Chemistry 1 & 2

Professional Memberships

Society for Neuroscience (SfN)
Society for the Neural Control of Movement
(NCM)

Hobbies and Interests

Hobbies and Interests

Music

Clarinet and percussion

Member of Northeastern University Pep Band (clarinet section leader), Drumline (co-section leader), and Wind Ensemble (manager, treasurer)

Other

Curling, web development, graphic and web design, novel writing, Math Club (secretary)