Wayne Allen Manselle

[wayne.manselle@gmail.com](mailto:wayne.manselle@gmail.com) | 541.870.3510

EDUCATION

University of Oregon, Eugene, OR

M.S. in Computer and Information Science 2007

Project Work: Haptic Campus Map for the Visually-Impaired

University of Minnesota, Morris, MN

B.A. Computer Science, B.A. Philosophy 2005

Minor: Statistics

Thesis: “Fuzzy Logic Semiotic Systems”

Thesis: “Could a Machine Ever Understand?”

Technical EXPERIENCE

Woollacott Motor Control and Cognition Lab, University of Oregon, Eugene, OR

Research Assistant 06/2007- 02/2015

* Provide custom software and hardware adaptations for research problems
* Provide direct technical support for hardware and software
* Maintain lab website
* Responsible for equipment acquisition
* Manage and secure technical and information resources
* Responsible for some administrative tasks

Paul’s Bicycling Way of Life, Eugene, OR

Technology Transfer Intern Summer 2006

* Transition company from Windows to Unix customer service systems
* Develop system to run in house database software in transitioned environment
* Produce comprehensive technical documentation
* Instruct staff in use of new systems

Southern California Earthquake Center

Software Engineering Intern**Summer 2004**

* Participated in the redesign of LA3D into SCEC-VDO using Java and Java3D
* Assisted in the design and implementation of the system’s plugin architecture using Java.
* Implemented a project critical memory saving fix using Java3D.
* Designed and implemented the system’s capacity to save and load both state data and catalogs of seismic events using XML.

Computer Science Teaching and Development Lab, UMM, Morris, MN

Lead Lab Administration Intern 08/2003 – 05/2005

* Head technical administrator
* Developed and maintained technical documentation
* Advised department on technical acquisitions and equipment maintenance

Research Project Experience

Woollacott Motor Control and Cognition Lab, University of Oregon

Jennifer Rachwani: Longitudinal Study of Acquisition of Reaching Ability in Typically Developing Infants 09/2011 – **12/2014**

Victor Santamaria-Gonzalez: Cross-Sectional Study of Reaching Ability in Subjects with Cerebral Palsy- concurrent with –

* Designed and programmed interactive visual data analysis tools using MATLAB.
* Improved already existing data analysis tools using MATLAB.
* Improved and ported video coding data analysis tools using Ruby.
* Improved existing magnetic tracking control system software with C/C++.
* Collaborated closely with Drs. Rachwani and Santamaria-Gonzalez on every stage and aspect of their study.

Verrel and Woollacott: Biomechanical Study of Approaches to Cello Bowing with Experts and Novices**2011** – **2013**

* Adapted Dr. Verrel’s experimental design to the equipment available to Dr. Woollacott.
* Participated in human subjects research
* Processed and analyzed data jointly with our collaborators in Berlin.

Porter, Wood, Xthona: Honors Theses Examining Development of Reaching Skills in Infants **20**09 – **2012**

* Designed and implemented usable prototype interactive visual data analysis tools using MATLAB.
* Designed and implemented automated data analysis tools using MATLAB.
* Adapted existing video coding data analysis tools written in Ruby to our paradigms.
* Improved existing magnetic tracking control system software with C/C++
* Instructed various study participants in the proper operation of data acquisition hardware.
* Acquired and integrated new data acquisition hardware into data acquisition system.

Carrie E. Little: Visual-Postural Dual Task Study **2008** – **2012**

* Ported Ed Vogel’s Change Detection Task paradigm from Presentation to E-Prime integrating NetStation EEG collection into the paradigm.
* Designed and built customized hardware extensions to allow manipulation of E-Prime and Cortex by subject input and programmatically controlled electrical signals.
* Designed and implemented control program for Dr. Little’s experimental apparatus using E-Prime.
* Assisted Dr. Little’s in creating her experimental apparatus through the integration of multiple disparate data collection systems, including: EMG, EEG, motion capture, visual data collection task, and force plates.
* Designed and implemented data analysis software using MATLAB and Microsoft Excel.
* Instructed and aided Dr. Little in the design and use of EEG ERP analysis and processing tools using NetStation.
* Assisted Dr. Little in subject instrumentation and human subjects data collection.

Teresa Hawkes: Effects of Various Exercise Modalities on P3b ERPs and other Physiological Measures **2008** – **2012**

* Implemented versions of the Smallwood Go/No-Go and Mayr Task Switch paradigms integrating NetStation EEG collection into each paradigm.
* Assisted in the acquisition and assembly of Dr. Hawkes’ experimental apparatus.
* Assisted Dr. Hawkes in converting an existing space into a sound attenuated, electrically shielded space suitable for EEG collection.
* Instructed and aided Dr. Hawkes in the design and use of EEG ERP analysis and processing tools using NetStation.
* Assisted Dr. Hawkes in the validation of the Tai Chi skill evaluation tools.
* Created various multi-media experimental aids for Dr. Hawkes.

Sandy Saavedra: Postural Control in Typically Developing Infants and Subjects with CP Study **2007** – **2011**

* Designed and assisted Dr. Saavedra in the implementation of data analysis tool using MATLAB.
* Co-designed novel tool for the removal EKG from EMG in MATLAB with Dr. Saavedra
* Made improvements to Dr. Saavedra magnetic tracking system’s control software using C/C++.
* Instructed Dr. Saavedra elementary algorithm design and software engineering using MATLAB.

Aditi Joshi: Examination of the Effects of Meditation Training on Attentional Networks using EEG **2007** – **2010**

* Reviewed and improved design of ERP analysis tools in Net Station.
* Reviewed and improved design of tools assisting in ERP analysis using MATLAB.
* Assisted Dr. Joshi in data processing at all stages.
* Reviewed Dr. Joshi’s data analysis, and corrected discovered discrepancies before publications were submitted.

Sujitra Boonyong: Cerebral Palsy Training Study Pilot for Grant Application **2007** – **2010**

* Designed and implemented a prototype visually interactive subject vocal response analysis tool.
* Assisted Dr. Boonyong in human subjects data collections.
* Assisted Dr. Boonyong in the preparation of data for grant submission.

McPhee Lab, University of Minnesota, Morris Campus

Niching in Evolutionary Computation**2005**

* Assisted Dr. McPhee in the implementation and assessment of an O(n) method to ensure the full exploration of multi-objective genetic algorithm optimization problem spaces based on Hamming Distances using Java.

Teaching EXPERIENCE

Woollacott Motor Control and Cognition Lab, University of Oregon, Eugene, OR

Seminar: Introduction to MATLAB Programming for Scientists 2010

* Developed Syllabus and Course Materials in conjunction with Dr. Sandy Saavedra
* Jointly led lectures with Dr. Saavedra
* Reviewed all participant coursework and provided feedback and guidance

Department of Computer and Information Science, University of Oregon, Eugene, OR

CIS 210 2006

* Conducted weekly lab sessions
* Administered student lab project grading
* Was available to all students in course for one-on-one tutoring

Department of Mathematics, University of Oregon, Eugene, OR

Business Calculus 2006

* Conducted weekly lab sessions
* Developed electronic course work
* Administered grading

PUBLICATIONS AND PAPERS

Hawkes, T.D., **Manselle, W**. & Woollacott, M.H.

Tai Chi and meditation-plus-exercise benefit neural substrates of executive function: a cross-sectional, controlled study.

Published in the Journal of Complementary and Integrative Medicine **2014**

Hawkes, T.D., **Manselle, W**. & Woollacott, M.H.

Cross-sectional Comparison of Executive Attention Function in Normally-aging Long-term Tai Chi, Meditation, and Aerobic Fitness Practitioners vs. Sedentary Adults

Published in the Journal of Alternative and Complementary Medicine**2013**

Verrel J, Pologe S, **Manselle W**, Lindenberger U and Woollacott M

Exploiting biomechanical degrees of freedom for fast and accurate changes in movement direction: coordination underlying quick bow reversals during continuous cello bowing

Published in Frontiers of Human Neuroscience**2013**

Presentations

**Wayne Manselle**, Matt Carlson, Chris Heuer

Niching in Evolutionary Computation

Presentation at 2005 UMM Undergraduate Research Symposium**2005**

Posters

Hawkes, **Manselle**, Blackburn, Chou, Woollacott

Effect of Long-Term Health Activities on Adult Human Attention

Poster at UO Graduate Research Forum**2011**

Marjorie Woollacott, Aditi Joshi, **Wayne Manselle**, Niki Mirghafori, Michaela Kyrna

Impact of Concentrative Meditation practice on the Ability to Override Attentional Capture

Poster at Mind and Life Summer Research Institute**2010**

**Wayne Manselle**

State Vector

Poster at the 2004 Southern California Earthquake Center Annual Meeting**2004**

Service

AAUP, Oregon State Chapter

Interim Secretary 2013

* Facilitated Meetings and kept minutes

UOUA, University of Oregon

Organizing Committee Member 2010-2013

* Facilitated Meetings
* Participated in talks to guide formation of UOUA

GTFF, University of Oregon

CIS Department Steward 2006

* Sat on Union Executive Council
* Advised departmental graduate students on Union matters

ACM, University of Oregon

President 2006

* Facilitated re-establishment of the chapter
* Organized and led meetings.

ACM, University of Minnesota

Secretary 2004

* Kept minutes at official meetings.

Cosmik Inc., New London, MN

Vice President 2000

* Co-founded nonprofit dedicated to enabling low-income families to obtain computer technology and internet access.
* Led public computer literacy classes

Technical LANGUAGES

Exercised: MATLAB, Java, Javascript, HTML+CSS, BASH

Utilized: Python, C/C++, E-Basic, VBA, Ruby

Exposure: PHP, C#, Tcl/Tk, Lua, Scheme

Interests

Martial Arts: Systema, Aikido, Fencing, Tae Kwon Do, Karate  
Composition and Review of Electronic Music