MEGAN J. OLSON HUNT, PhD

Tenured Associate Professor, Statistics
Mathematics and Statistics Unit
University of Wisconsin-Green Bay

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EMPLOYMENT

Tenured Associate Professor, Statistics — June 2019-present
University of Wisconsin-Green Bay
Mathematics and Statistics Faculty
Environmental Science & Policy Faculty

Assistant Professor, Statistics — August 2014-June 2019
University of Wisconsin-Green Bay
Mathematics and Statistics Faculty
Environmental Science & Policy Faculty

Secondary Mathematics and Statistics Teacher
Lynfield College; Auckland, New Zealand — 2008
Onehunga High School; Auckland, New Zealand — 2007

EDUCATION

Doctor of Philosophy (PhD): Biostatistics — April 2014
University of Pittsburgh, Graduate School of Public Health
Dissertation: A permutation-based correction for Pearson's chi square test on data with an imputed complex outcome/ A modified EM algorithm for contingency table analysis with missing data
Fully funded with a stipend through research, teaching assistantships

Bachelor of Science, Teaching (BST): Mathematics/ Secondary Mathematics Education — May 2007
Winona State University, Minnesota
Summa cum laude
Mathematics Departmental Honors (Senior Thesis)

Bachelor of Arts (BA): Psychology (major), Statistics (minor) — May 2007
Winona State University, Minnesota
Summa cum laude

TEACHING: UW-GREEN BAY

(*21 credits per academic year*)

Mathematics and Statistics Unit
Introductory Statistics (MATH 260, 4 credits); 40-45 students, R-based
Mathematical Statistics (MATH 361, 3 credits), 10-15 students
Design of Experiments (MATH 430, 4 credits); 10-15 students, SAS-based
Independent Study: Teaching Assistant, MATH 260 (MATH 498, 3 credits)

Environmental Science Unit
Environmental Statistics (ENV SCI 336, 3 credits); 15-25 students, R-based

Environmental Science and Policy Master's Program
Environmental Data Analysis (ES&P 755, 4 credits); 15-25 students, R-based

SCHOLARSHIP PEER-REVIEWED MANUSCRIPTS: PUBLISHED

1. Reilly, J.E., Zhu, L., **Olson Hunt, M.J.**, Hovarter, R., Flood, M.B. (2019). Comparison of rural childhood BMI percentiles: prevalence and trends in a midwest county, 2008–2016. *The Journal of School Nursing*. DOI: 10.1177/1059840519868766.
2. Terry, P.A., **Olson Hunt, M.J.**, Henning, R. (2017). Removal of phosphates and sulphates in a multi-ion system with nitrates. Applications of Adsorption and Ion Exchange Chromatography in Wastewater Treatment. *Materials Research Foundations* 15, 171-192.
3. Dalke, K., **Olson Hunt, M.J.** (2017). Mustangs and domestic horses: examining what we think we know about differences. *Humanimalia* 8:2, 46-62.
4. Karas, S., **Olson Hunt, M.J.**, Temes, B., Thiel, M., Swoverland, T., Windsor, B. (2016). The effect of direction specific thoracic spine manipulation on the cervical spine: a randomized controlled trial. *Journal of Manual and Manipulative Therapy* 1-8.
5. Luczaj, J.A., McIntire, M.J., **Olson Hunt, M.J.** (2016). Geochemical characterization of trace MVT mineralization in Paleozoic sedimentary rocks of northeastern Wisconsin, USA. *Geosciences* 6:2, 1-29.
6. Michanowicz, D.R., Shmool, J.L.C., Cambal, L., Tunno, B., Gillooly, S., **Olson Hunt, M.J.,** Tripathy, S., Naumoff Shields, K., Clougherty, J.E. (2015). A hybrid land use regression/line-source dispersion modeling for predicting intra-urban NO_2. *Transportation Research Part D: Transport and the Environment* 43, 181-191.
7. Rosso, A.L., **Olson Hunt, M.J.**, Weissfeld, L., Yang, M., Brach, J., Harris, T., Newman, A.B., Satterfield, S., Studenski, S., Yaffe, K., Aizenstein, H., Rosano, C. (2014). Higher step length variability indicates lower grey matter integrity of selected regions in older adults. *Gait and Posture* 40:1, 225-230.
8. Karas, S., **Olson Hunt, M.J.** (2014). A randomized control trial to compare the immediate effects of seated thoracic manipulation and targeted supine thoracic manipulation on cervical spine flexion range of motion and pain. *Journal of Manual & Manipulative Therapy* 22:2, 108-114.
9. **Olson Hunt, M.J.**, Weissfeld, L., Boudreau, R.M., Aizenstein, H., Newman, A.B., Simonsick, E.M., Van Domelen, D.R., Thomas, F., Yaffe, K., Rosano, C. (2014). A variant of sparse partial least squares for variable selection and data exploration. *Frontiers in Neuroinformatics* 8:18, 1-9.
10. Maries, A., Mays, N., **Olson Hunt, M.J.**, Wong, K., Layton, W., Rosano, C., Boudreau, R., Marai, G.E. (2013). GRACE: a visual comparison framework for integrated spatial and non-spatial geriatric data. *IEEE Transactions on Visualization and Computer Graphics (Proceedings Scientific Visualization 2013)* 19:12, 1-10.
11. Naumoff Shields, K., Cavallari, J.M., **Olson Hunt, M.J.**, Lazo, M., Molina, M., Molina, L., Holguin, F. (2013). Traffic-related air pollution exposures and changes in heart rate variability in Mexico City: a panel study. *Environmental Health* 12:7, 1-14.

PEER-REVIEWED MANUSCRIPTS: IN PREPARATION

1. **Olson Hunt, M.J.**, Tang, G. *(In preparation*). The effect of imputing a complex outcome on the rejection rate of Pearson's chi-square test for independence and a permutation-based correction factor.
2. Tang, G., **Olson Hunt, M.J.**, Zhang, Y. (*In preparation*). A modified EM algorithm for contingency table analysis with missing data. (*Author order tentative.*)

3. Zhu, L., Early, K., **Olson Hunt, M.J.** (*In preparation*). Promoting healthy food donations at large public food drives.
4. Gaul, W., Howe, R., **Olson Hunt, M.J.**, Forsythe, P., Gnass Giese, E.E. (*In preparation*). Inferential measures for a quantitative ecological indicator of ecosystem health. (*Author order tentative.*)
5. Sprovach, M., Draney, M., **Olson Hunt, M.J.** (*In preparation*). Spider diversity response to garlic mustard (*Alliaria petiolata*) invasion in a Wisconsin forest understory. (*Author list tentative.*)

OTHER MANUSCRIPTS

1. **Olson Hunt, M.** (2014). A permutation-based correction for Pearson's chi-square test on data with an imputed complex outcome/A modified EM algorithm for contingency table analysis with missing data. *Doctoral Dissertation, University of Pittsburgh.* http://d-scholarship.pitt.edu/21457/

ABSTRACTS AND PRESENTATIONS

1. Dalke, K. (*presenter*), **Olson Hunt, M.J.** (2016). Becoming the other: a case study of mustang acculturation. *Equine Cultures in Transition Conference*, Södertörn University, Stockholm, Sweden.
2. **Olson Hunt, M.J.** (*presenter*) (2016). Statistics Done Wrong. *Natural and Applied Sciences Seminar Series, University of Wisconsin-Green Bay*, Green Bay, WI.
3. Tang, G. (*presenter*), **Olson Hunt, M.J.**, Zhang, Y. (2015). A modified Expectation-Maximization Algorithm for analysis of data with missing values. *National Institute of Statistical Sciences: Affiliates Workshop: Non-ignorable nonresponse*, Washington, D.C.
4. Dalke, K. (*presenter*), **Olson Hunt, M.J.** (2015). Mustangs and domestic horses: examining what we think we know about differences. *International Society for Anthrozoology (ISAZ) Conference*, Saratoga Springs, NY.
5. **Olson Hunt, M.J.** (*presenter*), Tang, G. (2014). The effect of imputing a complex outcome on the rejection rate of Pearson's chi-square test for independence and a resampling-based correction factor. *International Biometric Society (Eastern North American Region (ENAR)) Annual* Meeting, Baltimore, MD.
6. Rosso, A.L. (*presenter*), **Olson Hunt, M.J.**, Weissfeld, L., Yang, M., Brach, J., Harris, T., Newman, A.B., Satterfield, S., Studenski, S., Yaffe, K., Aizenstein, H., Rosano, C. (2013). Higher step length variability indicates lower grey matter integrity of selected regions in older adults. *The Gerontological Society of America 66th Annual Scientific Meeting*, New Orleans, LA.
7. Karas, S. (*presenter*), **Olson-Hunt, M.** (2012). A comparison of general seated and targeted supine thoracic spine thrusts and their effect on cervical pain and range of motion. *Presented at The International Federation of Orthopedic Manual Physical Therapy & The World Conference of Manual/Musculoskeletal Physiotherapy*, Quebec City, Quebec, Canada. *Printed in Journal of Orthopaedic & Sports Physical Therapy* 42, A1-A83.

POSTERS

1. Michanowicz, D.R. (*presenter*), Carr, J.L., Cambal, L., Tunno, B., Gillooly, S., **Olson Hunt, M.J.**, Clougherty, J.E. (2013). A hybrid land use regression/AERMOD Model for Predicting $PM_{2.5}$. *Environment and Health – Bridging South, North, East and West: Conference of ISEE, ISES and ISIAQ*, Basel, Switzerland.
2. Michanowicz, D.R. (*presenter*), Carr, J.L., Cambal, L., Tunno, B., Gillooly, S., Howell, J., **Olson Hunt, M.J.**, Shields, K., Clougherty, J.E. (2013). A hybrid land use regression/CALINE3 model for predicting NO_2: a seasonal comparison. *Environment and Health – Bridging South, North, East and West: Conference of ISEE, ISES and ISIAQ*, Basel, Switzerland.
3. **Olson Hunt, M.J.** (*presenter*), Tang, G. (2013). The effect of imputing a complex outcome on the rejection rate of Pearson's chi-square test for independence and a resampling-based correction factor. *Dean's Day Research Poster Competition, University of Pittsburgh, Graduate School of Public Health*, Pittsburgh, PA.
4. Rosano, C. (*presenter*), **Olson Hunt, M.J.**, Brach, J., Newman, A.B., Studenski, S., Verghese, J., Aizenstein, H., Weissfeld, L. (2012). Brain anatomical correlates of gait variability in high functioning older adults: repeatability across two independent studies. *The Gerontological Society of America 65th Annual Scientific Meeting*, San Diego, CA.
5. Michanowicz, D.R. (*presenter*), Carr, J.L., Cambal, L., Tunno, B., Gillooly, S., Howell, J., **Olson Hunt, M.J.**, Shields, K., Clougherty, J.E. (2012). Efficacy of line source dispersion modeling within an area of complex terrain (Pittsburgh, PA) for improving spatial concentration estimates for nitrogen dioxide (NO_2) land use regression modeling. *International Society of Exposure Science 22nd Annual Meeting*, Seattle, WA. **Awarded 2nd place**.
6. **Olson Hunt, M.J.** (*presenter*), Rosano, C., Weissfeld, L. (2012). Variable selection in a multicollinear, high-dimensional setting: a variation of sparse partial least squares. *Dean's Day Research Poster Competition, University of Pittsburgh, Graduate School of Public Health*, Pittsburgh, PA. **Awarded 1st place: Biostatistics Department, PhD category**.

MASTER'S THESIS ADVISING: ENVIRONMENTAL SCIENCE AND POLICY MASTER'S PROGRAM

1. Magee, L. (committee member, 2018-2019; graduated): Recruitment dynamics of woody species in a North American temperate forest
2. Gaul, W. (committee member, 2016-2017; graduated): Inferential measures for a quantitative ecological indicator of ecosystem health
3. Nelson, J. (committee member, 2015): Multivariate analysis of correlated data; split-split plot design and analysis

STATISTICAL CONSULTATION

Karas, S., Chatham University; Pittsburgh, Pennsylvania 2018
Sample size calculations for comparing three physical therapy outcomes over time, across two treatment groups

Dramm Corporation; Manitowoc, Wisconsin 2017-present
Fish-based fertilizer composition analysis

pro bono consulting for faculty, graduate and undergraduate students, and community members 2014-present
Approximately 200 hours spanning 30 unique projects/clients

DATA MANAGEMENT

Behavioral Medicine Research Group, University of Pittsburgh 2013

SERVICE: UW-GREEN BAY

Graduate Academic Affairs Council (2019-present)
Evaluation of Teaching Effectiveness Working Group (2019-present)
Faculty Senate (2018-present)
Statistics Faculty Search Committee member (2014, 2015, 2018)
Mathematics Faculty Search Committee member (2016, 2017)
Sustainability Committee member (2017-present)
Public Spaces Subcommittee member (2017-present)
Actuarial Science Program Development Subcommittee chair (2016-2017)
Advisor to Statistics majors and minors (2016-present)
Majors Fair: Mathematics and Statistics Unit representative (2016)
Transfer Student Open House volunteer (2016)
Accreditation and Program Assessment Subcommittee member (2015-present)
Natural & Applied Sciences Scholarship Committee member (2015-present)
Wellness Committee member (2015-2017)
Sager Scholarship judge (2015)
Science Open House Resource Fair: Mathematics and Statistics Unit representative (2015)

PROFESSIONAL DEVELOPMENT

UW System Faculty College (UW-Platteville | Richland, 2019)
Faculty Development Institute (UW-Green Bay; 2015, 2017, 2018)
Mathematical Association of America's Section NeXT Conference (UW-Platteville | Baraboo/Sauk County, 2017)
Educause Learning Initiative Annual Meeting: "Crafting our Future: Toward New Digital Learning Environments" (San Antonio, TX; 2016)
Bayesian Spatial Statistics short-courses (Medical College of South Carolina, 2016)
SAS Day: Data and text mining (UW-Green Bay, 2016)
Joint Mathematics Meeting (focus on teaching statistics; San Antonio, TX; 2015)
Mathematical Association of America Annual Meeting (Ripon College, WI; 2015)
"Reflections on switching to a simulation-based curriculum" webinar (2015)
UW System Women and Science Program Opening Workshop for New STEM Educators (2016, 2014)

While obtaining PhD at the University of Pittsburgh, Graduate School of Public Health
Certification in Teaching Fundamentals (2014)
Teaching workshops (various; 2013, 2010)
SAS Graphics Workshop (2013)
Short-course in Applied Mixed-Models (SAS focus) (2012)
Shale Gas Extraction Conference (2013, 2012, 2011, 2010)
Rachel Carson Legacy Conference (2009)

GRANTS

UW-Green Bay Grants in Aid of Research: $270 (2014)
UW-Green Bay Teaching Enhancement Grant (2014: $1000, 2017: $500, 2018: $350)

GRANT APPLICATIONS (*not funded*)

NSF's "Science of Learning: Collaborative Networks" Grant: Interdisciplinary learning network for social and cognitive development (PI: Sawa Senzaki, Psychology and Human Development Unit, UW-Green Bay; 2016)

AWARDS

University of Wisconsin-Green Bay (faculty)

- Student-nominated Teaching Award: Early Career Category (2017)

University of Pittsburgh, Graduate School of Public Health (PhD student)

- Dean's Service Award: Excellence as a Teaching Assistant (2014)
- Best Student Research Presentation: Department of Biostatistics (2014)
- Teaching Assistant: Applied Regression Analysis (2014)
- Graduate Student Researcher (Dr. Gong Tang, 2013)
- Graduate Student Researcher (Dr. Tom Kamarck, 2013)
- Teaching Assistant: Applied Mixed Models Analysis (2013)
- Teaching Assistant: Introduction to Statistical Theory II (2013)
- Teaching Assistant: Analysis of Cohort Studies (2012)
- First Place, Dean's Day Research Poster Competition: Biostatistics Department, PhD category (2012)
- Graduate Student Researcher (Drs. Caterina Rosano, Lisa Weissfeld; 2010-2012)
- Teaching Assistant: NHLBI's Summer Institute for Training in Biostatistics (SIBS) (2009-2010)

Winona State University (undergraduate)

- Distinguished Student Award: Mathematics and Statistics Dept. (2007)
- Honors in Mathematics (Senior Thesis) (2007)
- Lorena Jacobson Scholarship: Excellence in Mathematics Education (three-time recipient, 2005-2007)
- Presidential Scholarship (five-time recipient, 2002-2007)
- Dean's List (all semesters, 2002-2007)

Other

- International Society of Exposure Science 22nd Annual Meeting poster session: Second place overall (co-author; Seattle, WA; 2012)
- NSF's Research Experience for Undergraduates in Mathematics (Rutgers University, New Jersey; Charles University, Prague, Czech Republic; 2006)
- Mayo Clinic: Internship (Rochester, MN; 2005)

STATISTICAL PACKAGES, PROGRAMMING & COMPUTING

Data analysis in R, SAS, Stata, SPSS
Designing and programming simulation studies in R, SAS
LaTeX
Mac, Windows, Android operating systems
Excel, Word, PowerPoint
Canvas, Desire2Learn (D2L)/Blackboard learning management systems
Clickers (physical and cloud-/web-based)
Tablets, smartphones
Cloud storage and collaborative file sharing

HONORARY SOCITIES & PROFESSIONAL AFFILIATIONS

Mu Sigma Rho Statistics Honorary Society (Charter Member for Winona State University, MN; 2006-present)
Pi Mu Epsilon Mathematics Honorary Society (2004-present)
American Mathematical Society (2015-2016)
International Biometric Society (2013-2014)
American Statistical Association (2006-present)

VOLUNTEER & PERSONAL INTERESTS

Co-founder, The Local Food Experiment (local, organic prepared food; Green Bay, WI; 2017-present)
Secretary, New Leaf Market Board of Directors (start-up food co-op; Green Bay, WI; 2015-2018)
Bay Beach Wildlife Sanctuary animal care volunteer (Green Bay, WI; 2015-2016)
Explorer's Club of Pittsburgh member (rock climbing, camping; 2011-2014)
Steel City Greyhounds volunteer (placing retired racing greyhounds into homes, fundraising, organizing events to raise awareness; Pittsburgh, PA; 2009-2014)