Maureen C. Kennedy
Assistant Professor, Sciences and Mathematics; University of Washington, Tacoma

Education

Ph.D University of Washington, Seattle
Quantitative Ecology and Resource Management March 2008
Multi-objective Optimization for Ecological Model Assessment and Theory Development
E. David Ford (chair), Tom Hinckley, Mark Kot, Charles Laird

M.S. University of Washington, Seattle
Quantitative Ecology and Resource Management August 2002
A geometric simulation model of foliage regeneration in *Abies grandis* and *Pseudotsuga menziesii.*
E. David Ford (chair)

B.S. University of San Francisco
Biology. Summa Cum Laude May 1999

Awards

Outstanding Paper in Landscape Ecology. US Regional Association of the International Association for Landscape Ecology. 2013. For: McKenzieD, Kennedy MC. (2012). Power-law behavior reveals phase transitions in landscape controls of fire regimes. Nature Communications. Authors contributed equally to the research and writing.

Outstanding Research Assistant. University of Washington College of Forest Resources Recognition Event. 2006. For research published as: Kennedy MC, Ford ED, Singleton P, Finney M, Agee JK. (2008). Informed mulit-objective decision-making in environmental management using Pareto optimality. Journal of Applied Ecology. 45(1): 181.

NCAA Outstanding Sportsperson of the Year National Nominee. 1999

Charles Harney Award. University of San Francisco. 1999. Awarded to the graduating female athlete with the highest cumulative GPA.

Achievement Rewards for College Scientists Recipient. University of San Francisco. 1998.

Professional History

Assistant Professor, Science and Mathematics. University of Washington, Tacoma 2015-present
Research Scientist/Engineer 4. University of Washington, Seattle 2008-2015
Course Instructor, University of Washington, Seattle 2002-2005, 2011, 2014-2015

Grants Awarded, active

National Science Foundation. Hazards SEES: Land Management Strategies for Confronting Risks and Consequences of Wildfire. Award Number:1520847; Principal Investigator: Christina Tague; Co-Principal Investigator:Sarah Anderson, Andrew Plantinga, **Maureen C. Kennedy**; Start Date:09/01/2015; Total Award Amount:$1,724,821.00

Joint Fire Science Program. Mapping Fuels for Regional Smoke Management and Emissions Inventories. Project ID: 15-1-01-1; Principal Investigator: Nancy H. French; Co-Principal Investigator: Michael G. Billmire, **Maureen C. Kennedy**, Narasimhan K. Larkin, Donald McKenzie, Susan J. Prichard. Start Date:10/01/2015; Total Award Amount $435,480

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Grants Awarded, active (cont.)

US Forest Service (USDA) Joint Venture Agreement (PNW Station). Quantitative methods for spatially explicit analysis of fuel treatment efficacy and for model uncertainty analysis. Start Date: July 16, 2016 Total Amount: $137,005. Disburses JFSP funds to UWT, with additional funds for ongoing research collaborations with the USFS Fire and Environmental Research Applications Team (Seattle, WA).

Grants Submitted

University of Washington Royalty Research Fund. Discovering thresholds for landscape fire: understanding wildfire dynamics at the scales that matter most. Sep 2018. $19,723.40

Research activities

My primary research interest is to develop and then utilize innovative quantitative tools to explore dynamics of forest management and fire ecology. I collaborate with federal scientists to improve their research with statistically sound and creative data analyses that explicitly incorporate spatial and temporal dependencies in data.

Using empirical fuel loading distributions to perform sensitivity and uncertainty analysis for wildfire emissions estimates.

Evaluating impact of spatial autocorrelation structure on estimation and inference of spatially explicit regression models.

Performing a simulation study of two methods with conflicting results used to reconstruct historical forest structure in the Western US.

Developed exogenously constrained dynamic percolation, a stochastic fire spread model able to identify in fire history data a phase transition between exogenous and endogenous controls on fire spread, mediated by underlying topography. Research earned "Outstanding Landscape Ecology Paper of the Year."

Integrating fire spread model with hydrological model developed at the University of California, Santa Barbara as part of the Western Mountain Initiative. To be used for projection of watershed processes under a changing climate, with fire as a dynamic disturbance also affected by climate.

Designing spatially explicit statistical analyses to compare the efficacy of various fuel reduction treatments in reducing fire severity during wildfires, including non-linear models of fire severity, continuation ratio model for tree mortality, and simultaneous auto-regression on field and remotely sensed data for fuel treatment efficacy.

Conducted statistical and multi-criteria analysis uncertainty analysis on studies using the vegetation model FFE-FVS. Results illuminated a potential deficiency in the way in which FFE-FVS handles fuels, which can be used to guide future use of the model for management and decision-making.

Developed BRANCHPRO, a simulation model of old-growth branch morphogenesis, and FuelSolve, a multi-criteria optimization tool for fuel and fire management (University of Washington PhD research). Multi-criteria optimization distinguished constraints on development in old-growth trees.

Undergraduate research

Marion LaRoque (Tibyan). (Spring 2016-Summer 2017) Maximum likelihood fitting of empirical fuels distributions for emissions uncertainty estimation.

Duncan McPherson. (Summer 2017) Maximum likelihood fitting of empirical fuels distributions for emissions uncertainty estimation.

Carina Tapia. (Spring 2017) GIS analysis of landscape-level burn severity and fuel treatment efficacy.

Sathoun Sok. (Summer 2017) Evaluation of fuel treatment efficacy during the Bald Fire.

Zhihao (Richard) Yang. (Spring-Summer 2017) Evaluating alternative forest reconstruction techniques

Qi Xue. (Winter 2018) Coupled population modeling of endangered panda and human population in China.

Yang Tang. (Winter, Autumn 2018) Directed Reading on Time Series for Math Capstone

Arashk Ashfar. (Spring, Autumn 2018) Directed Reading on Time Series for Math Capstone

Genmu Miller (Summer 2018) Evaluation of sabermetrics for prediction of post-season MLB baseball performance

Katalina Biondi (Summer 2018). Sensitivity analysis of fuel loading data inputs and empirical wildfire emissions models

Heather St. John (Summer and Autumn 2018). Health effects of wildland fire smoke exposure and impacts on health care demand

Yahye Mohamed (Winter 2019). Analysis of spatial data.

Graduate student committees

Alina Cansler. UW School of Environmental and Forest Sciences. PhD Completed Dec 2015

Matthew Aghai. UW School of Environmental and Forest Sciences. PhD

Publications in preparation

Kennedy MC, et al. (in preparation). Sensitivity analysis of FVS-FFE in modeling fuel succession and predicting fire behavior after salvage logging

Johnson MC, **Kennedy MC**, et al. (in preparation). Effects of postfire management on dead woody fuel dynamics and stand structure in a severely burned mixed-conifer forest, in eastern Washington state, USA

Bart R, **Kennedy MC**, Tague N, McKenzie D. (in preparation). Modeling fire effects in a distributed ecohydrological model

Kennedy MC, et al. (in preparation). Sensitivity of estimated emissions to fuel load uncertainty in major vegetation types of the United States.

Prichard SJ, Povack NA, **Kennedy MC**, et al.(in preparation). Fuel treatment effectiveness in the context of landform and weather – lessons from the 2014 Carlton Complex fire

Publications submitted, in review, or in revision

Shugar DH, Burr A, Haritashya UK, Kargel JS, Watson CS, **Kennedy MC**, Bevington AR, Betts RA, Harrison S, Strattman K. A near doubling of global glacial lake volume over a quarter century. submitted to **Nature Climate Change**

Publications submitted, in review, or in revision (continued)

Newman EA, **Kennedy MC**, Falk DA, McKenzie D. (in review). Scaling and complexity in landscape ecology. submitted to **Frontiers Ecology and Evolution**.

Prichard SJ, **Kennedy MC**, Andreu A, Eagle P, French N. (in review). Next-generation mapping for regional smoke management and emissions inventories: incorporating underlying uncertainty in wildland fuel characterization. submitted to **Journal of Geographical Research. Biogeosciences**

Johnson MJ, **Kennedy MC**. (in review). Wildlife thinning treatment prescription effects on forest structure and wildfire behavior on the 2014 San Juan fire, White Mountains, Arizona **Canadian Journal of Forest Management**

Peer-reviewed publications (including book chapters)

Johnson MC, **Kennedy MC**. (2019). Vegetation structure of fuel treatments alters fire severity in the wildland-urban interface, 2011 Wallow Fire, Arizona, USA. **International Journal of Wildland Fire**. 28(3): 216-229

Kennedy MC, Johnson MC, Fallon K, Mayer D. (2019). How big is enough? Vegetation structure impacts effective fuel treatment width and forest resiliency. **Ecosphere**. 10(2). DOI: 10.1002/ecs2.2573

Kennedy MC. (2019). Applying basic statistical principles to determine the number of Monte Carlo replicates for stochastic ecological models. **Ecological Modeling.** 394: 11-17

Anderson S, Bart R, **Kennedy MC**, MacDonald AJ, Moritz MS, Plantinga AJ, Tague CL, Wibbenmeyer M. (2018). The dangers of disaster-driven responses to climate change. **Nature Climate Change.** doi: 10.1038/s41558-018-0208-8

Prichard SJ, **Kennedy MC**, Wright CS, Cronan JB, and Ottmar RD. (2017). Predicting forest floor and woody fuel consumption from prescribed burns in southern and western pine ecosystems of the United States. **Forest Ecology and Management**. 405: 328-338

Kennedy MC, McKenzie DM, Tague CL, Duggar A. (2017). Balancing uncertainty and complexity to incorporate fire in an eco-hydrological model. **International Journal of Wildland Fire**. 26: 706-718

Kennedy MC, Prichard SJ. (2017). Choose your neighborhood wisely: implications of subsampling and autocorrelation structure in simultaneous autoregression models for landscape ecology. **Landscape Ecology.** 32(5): 945-952

Kennedy MC, McKenzie DM. (2017). Model evaluation identifies uncertainties and tradeoffs in complexity when fire is integrated with hydro-ecological projections. **Natural Hazard Uncertainty Assessment: Modeling and Decision Support**. AGU Monograph Series.

Ottmar RD, Hudak AT, Prichard SJ, Wright CS, Restaino JC, **Kennedy MC**, Vihnanek RE. (2016). Pre-fire and post-fire surface fuel and cover measurements collected in the south-eastern United States for model evaluation and development—RxCADRE 2008, 2011 and 2012. **International Journal of Wildland Fire**. 25: 10-24.

Prichard SJ, Karau EC, Ottmar RD, **Kennedy MC**, Cronan JB, Wright CS, Keane RE. (2014). Evaluation of the CONSUME and FOFEM fuel consumption models in pine and mixed hardwood forests of the Eastern United States. **Canadian Journal of Forest Research**. 44: 784-795

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Peer-reviewed publications (continued)

Prichard SJ, **Kennedy MC**. (2014). Fuel treatments and landform modify landscape patterns of burn severity in an extreme fire event. **Ecological Applications**. 24(3): 571-590

Kennedy MC, Johnson MC. (2014). Fuel treatment prescriptions alter spatial patterns of fire severity around the wildland–urban interface during the Wallow Fire, Arizona, USA. **Forest Ecology and Management**. 318: 122-132.

Steel EA, **Kennedy MC**, Cunningham PG, Stanovick JS. (2013). Applied statistics in ecology: common pitfalls and simple solutions. **Ecosphere**. 4(9):115.

Hummel S, **Kennedy MC**, Steel EA. (2013). Assessing forest vegetation and fire simulation model performance after the Cold Springs wildfire, Washington USA. **Forest Ecology and Management**. 287: 40-52

Prichard SJ, **Kennedy MC** (2012). Fuel treatment effects on tree mortality following wildfire in dry mixed conifer forests, Washington State, USA. **International Journal of Wildland Fire**. 21: 1004-1013

McKenzie D, **Kennedy MC** (2012). Power-law behavior reveals phase transitions in landscape controls of fire regimes. **Nature Communications**. doi: 10.1038/ncomms1731

Kennedy MC, Ford ED. (2011). Using multi-criteria analysis of simulation models to understand complex biological systems. **BioScience**. 61(12): 994-1004.

Ford ED, **Kennedy MC**. (2011). Assessment of uncertainty in functional-structural plant models. **Annals of Botany**. 108(6): 1043-1053.

Johnson MC, **Kennedy MC**, Peterson DL. (2011). Simulating fuel treatment effects in dry forests of the western United States: testing the principles of a fire-safe forest. **Canadian Journal of Forest Research**. 41: 1018-1030.

Kennedy MC, McKenzie D. (2010). Using a stochastic model and cross-scale analysis to evaluate controls on historical low-severity fire regimes. **Landscape Ecology**. 25:1561-1573

McKenzie D, **Kennedy MC**. (2010) Scaling laws and complexity in fire regimes. Chapter 2 in McKenzie D, Miller C, Falk DA eds. **The Landscape Ecology of Fire**. Dordrecht, The Netherlands, Springer.

Kennedy MC. (2010). Functional-structural models optimize the placement of foliage units for multiple whole-canopy functions. **Ecological Research**. 25(4):723-732

Kennedy MC, Ford ED, Hinckley TM. (2010) Defining how aging *Pseudotsuga* and *Abies* compensate for multiple stresses through multi-criteria assessment of a functional-structural model. **Tree Physiology**. 30: 3-22.

Kennedy MC, Ford ED. (2009). Two-criteria model assessment shows that foliage maintenance in old-growth *Pseudotsuga menziesii* requires both delayed and sequential reiteration. **Trees-Structure and Function**. 23(6): 1173-1187

Kennedy MC, Ford ED, Singleton P, Finney M, Agee JK. (2008) Informed multi-objective decision-making in environmental management using Pareto optimality. **Journal of Applied Ecology**. 45(1):181.

Lehmkuhl J, **Kennedy M**, Ford ED, Singleton PH, Gaines WL, Lind RL. (2007). Seeing the forest for the fuel: Integrating ecological values and fuels management. **Forest Ecology and Management**. 246: 73-80

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Peer-reviewed publications (continued)

Ishii HT, Ford ED, **Kennedy MC**. (2007). Physiological and ecological implications of adaptive reiteration as a mechanism for crown maintenance and longevity. **Tree Physiology**. 27:455–462

Kennedy MC, Ford ED, Ishii H. (2004). Model analysis of the importance of reiteration for branch longevity in *Pseudotsuga menziesii* compared with *Abies grandis*. **Canadian Journal of Botany**. 82: 892-909

Presentations (first author only)

Kennedy MC. (2019). Understanding forest management decision-making. Where do we implement fuel reduction treatments, and do those treatments work to reduce wildfire severity? Invited: UW Tacoma Seminars in IAS

Kennedy MC, Prichard SJ. (2019). Incorporating Spatial Autocorrelation into Burn Severity Modeling: Implications for Wildland Fire Management. US Regional Chapter of the International Association of Landscape Ecologists Annual Symposium. Ft. Collins, CO

Kennedy MC. (2018) Statistical methods to expand understanding of the effectiveness of fuel reduction treatments at modifying wildfire severity. Invited: Seattle University Mathematics Colloquium.

Kennedy MC. (2018) Wildfires and humans in the Western United States: A brief history leading to our current (mal)adaptive state. Washington State History Museum Scholarly Selections.

Kennedy MC, Johnson MJ. (2017). Methods to expand understanding of fuel treatment effectiveness and inform treatment design. Association for Fire Ecology 7th International Fire Ecology and Management Congress. Orlando, FL

Kennedy MC, Newman EA, McKenzie D. (2017). Why is predicting the future so hard? Limitations of projections from complex models, with a focus on fire and climate change. Association for Fire Ecology 7th International Fire Ecology and Management Congress. Orlando, FL

Kennedy MC. (2017). Taking fuels from the fire: Understanding whether fuels management can restore forests, protect homes, and conserve wildlife. UW Tacoma SIAS Brown Bag Series

Kennedy MC, McKenzie D, Tague CL, Bart R. (2016). Ecohydrological projections of fire regimes: Balancing uncertainty and complexity to integrate cross-disciplinary simulation systems. American Geophysical Union Annual Fall Meeting. San Francisco, CA.

Kennedy MC. (2016). A "good enough" approach to forest management. UW Tacoma Office of Research Lightning Talk.

Kennedy MC, Turnblom E, Cross J. (2016). $(SMC)^2$: Silviculture manipulation consequences in stand management cooperative installations. Presented at the Stand Management Cooperative Spring Meeting, Portland, OR

Kennedy MC. (2015). RHESSys-WMFire: Integrating eco-hydrological projections with fire. University of Washington Water Seminar. Seattle, WA

Kennedy MC. (2015). Salience and Wildfire: a coupled human-natural system perspective, Fire-spread model. SESYNC (National Socio-Environmental Synthesis Center) sponsored project titled Salience and Wildfire, Annapolis Maryland

Presentations (continued)

Kennedy MC, Turnblom E. (2015). $(SMC)^2$: Silvicultural Manipulation consequences in stand management cooperative installations. Presented at the Stand Management Cooperative Spring Meeting, Seattle, WA

Kennedy MC, McKenzie D**.** (2014). RHESSys-WMFire: coupling wildfire to hydrology and vegetation to project the effects of climate change on mountain watersheds. American Geophysical Union Annual Fall Meeting. San Francisco, CA.

Kennedy MC. (2014). Using uncertainty assessment to improve empirical models of growth, fire effects and fuel consumption. Presented at the Stand Management Cooperative Fall Meeting, Corvallis, OR. Sept. 10, 2014

Kennedy MC, Johnson MC. (2014). Spatial patterns of fire severity and vegetation structure in multiple wildland fuel treatments surrounding the WUI in the 2011 Wallow Fire. Ecological Society of America Fall Meeting. Sacramento, CA.

Kennedy MC, McKenzie D. (2013). Integrating fire with hydrological projections Model evaluation to identify uncertainties and tradeoffs in model complexity. American Geophysical Union Fall Meeting. San Francisco, CA

Kennedy MC, McKenzie D. (2012). Integrating a stochastic fire spread model with the Regional Hydro-Ecological Simulation System. American Geophysical Union Fall Meeting. San Francisco, CA

Kennedy MC, McKenzie D. (2012). Exogenously constrained dynamic percolation shows a phase transition in landscape controls of low-severity fire regimes. Ecological Society of America Annual Meeting. Portland, OR

Kennedy MC, Prichard SJ. (2012). Simultaneous autoregressive (SAR) models for remotely sensed data. ForestSAT 2012. Corvallis, OR

Kennedy MC, McKenzie DM. (2011). Landscape fire models: how complex is enough? US Regional Chapter of the International Association of Landscape Ecologists Annual Symposium. Portland, OR

Kennedy MC, McKenzie D. (2010). Scaling laws and dominant controls of low-severity fire regimes. American Geophysical Union Fall Meeting. San Francisco, CA

Kennedy MC, McKenzie D. (2010). Using a simple model to replicate spatial patterns in low-severity fire regimes. Annual Meeting of the Pacific Northwest Section of the Mathematical Association of America. Seattle, WA

Kennedy MC, Ford ED. (2009). Pareto optimality is a novel tool for understanding the role of morphology in the persistence of old trees. Ecological Society of America Annual Meeting. Albuquerque, NM

Kennedy MC, McKenzie D. (2009). A neutral model replicates correlated spatial patterns in fire history records. US Regional Chapter of the International Association of Landscape Ecologists Annual Symposium. Snowbird, UT

Kennedy MC. (2001). An architectural model of SCU development in Douglas-fir. Wind River Canopy Crane Research Facility 7th Annual Science Conference. Carson, WA

Teaching (University of Washington, Tacoma Campus)

My primary teaching interest is to improve the quality of scientific research and education and quantitative literacy across majors and for underrepresented groups in STEM education.

TCORE 102/112: Introduction to Science: Forest Science and Management in the Pacific Northwest. (2 quarters) Designed to prepare first-year students for success at the upper division level and to provide general education for the Natural World subject area. Designed lectures, field trips, laboratory experiments, Excel projects, and a final group presentation in order to provide an introduction to the practice and application of science.

TMATH 110: Introductory Statistics with Applications. (6 quarters) Provide lectures, class activities and worksheets to give the student an understanding of statistical concepts and analysis in modern society. Serves a variety of majors and diverse student body on the UW Tacoma campus.

TMATH 390: Probability and Statistics in Engineering and Science. (3 quarters) Give lectures and design class activities, worksheets, and computer labs for a calculus-based statistics class. Serves a variety of majors on the UW Tacoma campus.

TMATH 410: Regression Modeling with Applications. (2 quarters) Developed new course for UW Tacoma (Autumn 2017). Lectures and computer labs introduce linear regression techniques including simple linear regression, multiple linear regression, diagnostics, interpretation, and prediction. Utilizes the R statistical software environment.

TESC 410: Environmental Science Senior Seminar. (1 quarter) Give activities to synthesize environmental research methodologies, and to develop oral, and written skills. Includes workshops and activities for career preparation.

TESC 430: Environmental Modelling. (2 quarters) Give lectures and design computer labs to instruct multi-disciplinary students in the basics of environmental modeling. Emphasizes model development and uncertainty analysis over mathematical theory. Utilizes the R statistical software environment.

TIAS 499/TESC499/TMATH498: Undergraduate Research or Directed Reading. Supervise independent undergraduate research for capstone project, or directed reading. Topics include statistical estimation of empirical fuel loading, statistical analysis of fuel treatment effectiveness, dynamic population modeling, time series analysis, spatial data analysis.

Past Teaching (University of Washington, Seattle Campus)

QSCI 110: Introduction to Environmental Modeling (Center for Quantitative Science and Program on the Environment). Over three quarters developed course curriculum that introduces basic principles and practices of environmental modeling to undergraduate students. Three lectures weekly, to present the underlying concepts, and two computer lab sessions, to apply concepts to actual modeling problems.

QSCI 482: Statistical Inference in Applied Research, a course recommended for first-year graduate students in Fisheries and Forestry and advanced undergraduate students. Prepared three lectures and one problem session per week introducing data analysis techniques. Problem sessions allowed for the application of the concepts to empirical data.

QERM 598 offered jointly with SFR 521C: Graduate Seminar in Optimization and Ecological Model Evaluation. Model assessment seminar included discussion of techniques for model assessment and the philosophy of science with respect to model assessment. Computer labs gave students an opportunity to apply the techniques with real modeling data.

Past Teaching (University of Washington, Seattle Campus, continued)

Served as graduate teaching assistant for Statistical Inference in Applied Research (**QSCI 482**), Analysis of Ecological Data (**QERM 514**), Ecological Modeling and Spatial Analysis (**QERM 550**), and Introduction to Probability and Statistics (**QSCI 381**). All of these courses involve the application of quantitative methodologies to answer scientific research questions. Conducted problem sessions, computer labs, and office hours for one-on-one interactions with undergraduate and graduate students.

Served as Senior TA Facilitator for the **TA Conference on Teaching and Learning** for Teaching One-to-one in Office Hours and Study Centers Senior, Teaching Math, Science and Engineering Sections, and Using Student Feedback to Improve Your Teaching.

Media Appearances

Phone interview for factcheck.org: Trump Repeatedly Errs on California Wildfires.
https://www.factcheck.org/2018/11/trump-repeatedly-errs-on-california-wildfires/

Live Skype interview with Sky news discussing CA wildfires (Nov 14, 2018)

Interview on KNKX (National Public Radio Tacoma, WA), on history of forest management in Washington State (Aired Sep 4, 2018)
http://www.knkx.org/post/competing-interests-complicate-forest-management-washington-state

Phone interview for sciencealert.com: We Asked an Expert About Trump's Baffling Wildfire Tweets. Here's What They Had to Say.
https://www.sciencealert.com/science-expert-trump-california-wildfire-tweets

Interview with Oregon Public Broadcasting giving expert advice and context regarding the landscape-level study of wildfire severity and management. Quoted in on-air segment and in online article.
https://www.earthfix.info/news/article/wildfire-severity-private-public-forests/

Academic Service

UW Tacoma School of Interdisciplinary Arts and Sciences Committees
- Assessment committee (2017)
- MA Interdisciplinary Studies Admissions Committee (Spring 2016)

UW Tacoma Science and Mathematics Majors Groups:
- Environmental Science (2015-present); MS in Environmental Science (2015-present)
- Mathematics (2015-present)

UW Tacoma Science and Mathematics Statistics Coordinator (2016-2018)

UW Tacoma Science and Mathematics Workgroups
- Quantitative Literacy Workgroup (2015-2016)
- Environmental Science Quantitative Assessment Workgroup (Chair: 2016-present)
- Sciences and Mathematics Scholarship Committee (Chair: 2017-2018)
- Mathematics Pre-calculus success workgroup (2017-2018)

UW Tacoma Interview Committees
- Geometer/Mathematical Historian (Feb 2016); Neurobiology (March 2016)

UW Tacoma Search Committees
- Applied Ecology (2016-2017)
- Statistics (Chair: 2018-2019)

Academic Service (continued)

UW Tacoma Promotion Committees
Senior Lecturer (2017)
UW Tacoma Lecturer Reappointment Committees
Math lecturers (2017)

Academic Membership

American Geophysical Union
American Statistical Association
Association for Fire Ecology
Ecological Society of America
International Association For Landscape Ecology

Professional Development

Quantitative Reasoning Supporting STEM success workshop (Nov 2015). American Association of Colleges and Universities: Crossing Boundaries: Transforming STEM Education,
UW faculty fellows workshops before the Fall Quarter 2015.
Safer Zone Training, UW Tacoma (Feb 2017)
Strengthening Educational Excellence Through Diversity (SEED) Teaching Institute, UW Tacoma (June 12-16 2017, Sep 13, 2017)

Professional Service

Active as a peer-reviewer past and present for the following journals:

- Algorithms
- Annals of Botany
- Annals of Operations Research
- Conservation Biology
- Diversity and Distributions
- Ecological Applications
- Ecological Modeling
- Ecosphere
- Environmental Modelling and Software
- Forest Ecology and Management
- Forests
- Geomatica
- Global Environmental Research
- International Journal of Forestry Research
- International Journal of Geo-information
- International Journal of Wildland Fire
- Journal of Applied Ecology
- Journal of Environmental Management
- Journal of Geophysical Research-Biogeosciences
- Land Degradation and Development
- Landscape Ecology
- PLOS One
- Tree Physiology
- Trees-Structure and Function
- USDA Forest Service General Technical Report

Public Service

Participate in ecological restoration, trail maintenance and planting events with the Mountains to Sound Greenway and Seattle Parks in Washington State.