Michael Dumelle

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EDUCATION

Oregon State University, Corvallis, Oregon

- Ph.D. in Statistics, 2020
  - Dissertation Title: A Linear Mixed Model Framework to Spatio-Temporal Random Processes using the Separable and Product-Sum Covariance Structures
  - Advisors: Claudio Fuentes & Alix Gitelman
  - Committee Members: Alec Kowalewski, Lisa Madsen, Jay Ver Hoef, Charlotte Wickham, & Harry Yeh
- Graduate Minor in Risk and Uncertainty Quantification in Marine Science, 2019
- M.S. in Statistics, 2016

California Polytechnic State University, San Luis Obispo, California

- B.A. in Political Science, 2014

EMPLOYMENT

United States Environmental Protection Agency (USEPA) 2020 - Present

- Mathematical Statistician for the Freshwater Ecology Branch of USEPA's Office of Research and Development in Corvallis, Oregon

RESEARCH

Journal Publications

- **Dumelle, Michael.**, Ver Hoef, Jay., Fuentes, Claudio., & Gitelman, Alix. 2020. A Linear Mixed Model Formulation for Spatio-Temporal Random Processes with Computational Advances for the Separable and Product-Sum Covariances. *In Review.* Download Preprint PDF Visit GitHub Repository
- Mattox, Clint., **Dumelle, Michael**., Kowalewski, Alec., McDonald, Brian., & Gould, Micah. 2020. Reducing Anthracnose on an Annual Bluegrass Putting Green with Frequent Applications of a Soil Surfactant and Hollow-tine Aerification. *Agronomy Journal.* Download PDF Visit GitHub Repository
- Mattox, Clint., **Dumelle, Michael**., McDonald, Brian., Gound, Micah., Olsen, Connor., Schmid, Chas, & Kowalewski, Alec. 2020. Comparing Rates of Minearal Oil, Sulfur, and Phosphorous Acid on Microdochium Patch Suppression, Green-Cover Percentage, and Turfgrass Quality. *Accepted to Agronomy Journal.* Visit GitHub Repository
- Mattox, Clint., **Dumelle, Michael**., McDonald, Brian., Gound, Micah., Olsen, Connor., Braithwaite, Emily., & Kowalewski, Alec. 2020. Suppression of Microdochium Patch Using Rotations of Mineral Oil, Sulfur, and Phosphorous Acid. *Accepted to Agronomy Journal.* Visit GitHub Repository
- **Dumelle, Michael.**, Lamb, Jesse F., Jacobson, Kym., Hunsicker, Mary., Morgan, Cheryl., Burke, Brian., & Peterson, William. 2020. Captuing Copepod Dynamics in the Northern California Current Using Sentinel Stations. *In Review.* Visit GitHub Repository

Proceedings and Technical Reports Publications

- Walsh, Kenneth C., **Dumelle, Michael.**, & Williams, Katy. 2020. Tracking Student Engagement with OER Resources and Homework. *Physics Educational Research Conference 2019 Proceedings.* Download PDF Visit GitHub Repository
- Ko, Harrison., Mayfield, Will., **Dumelle, Michael.**, Yeh, Harry., Fuentes, Claudio., & Restrepo, Juan. Efficient Estimates of Uncertainties in Tsunami Inundation Forecasts. *Eleventh U.S. National Conference on Earthquake Engineering.* Download PDF Visit GitHub Repository

Presentations

- **Dumelle, Michael**., Mattox, Clint., & Kowalewski, Alec. 2019. Adjusting Standard ANOVA Methods to Account for Heterogeneous Variances with an Application to Turfgrass Management. OSU Fall 2020 Seminar Series. Invited Presentation.
- Mattox, Clint., **Dumelle, Michael.**, Manning, Viola., Weidman, Clara., Trippe, Kristin., & Kowalewski, Alec. 2020. The Importance of Quantifying Media pH at Ambient Temperatures. ASA, CSSA and SSSA International Annual Meetings. Contributed Presentation.
- **Dumelle, Michael.**, Ver Hoef, Jay., Fuentes, Claudio., & Gitelman, Alix. 2020. A Linear Mixed Model Formulation for Spatio-Temporal Random Processes with Computational Advances for the Separable and Product-Sum Covariances. ASA Oregon Chapter Winter 2020 Meeting. Contributed Presentation. Download PDF Visit GitHub Repository
- **Dumelle, Michael**., Mattox, Clint., Braithwaite, Emily., McDonald, Brian., & Kowalewski, Alec. 2019. Adjusting Standard ANOVA Methods to Account for Heterogeneous Variances with an Application to Turfgrass Management. ASA, CSSA and SSSA International Annual Meetings. Contributed Presentation. Download PDF Visit GitHub Repository
- **Dumelle, Michael.**, Ver Hoef, Jay., Fuentes, Claudio., & Gitelman, Alix. 2019. A Mixed Model Approach to the Product-Sum Spatio-Temporal Covariance Function with Computational Advances. Joint Statistical Meetings. Contributed Poster. Download PDF Visit GitHub Repository

Software

- **Dumelle, Michael.** & Burke, Brian. (2020). *sentinelstat: An R Package for Computing Summary Statistics with a Sentinel Station.*
  Github: Visit GitHub Repository
  CRAN: coming soon

Grants

- National Science Foundation Research Traineeship, $ 34,000, 2016.

SERVICE

Journals Refereed

- *Journal of Statistical Software*

Leadership Roles

- ASA Oregon Chapter Representative 2020 - Present

PROFESSIONAL AFFILIATIONS

Society Memberships

- American Statistical Association 2018 - Present
- WNAR Branch of the International Biometric Society 2019 - Present
- American Society of Agronomy 2019 - Present
- Crop Science Society of America 2019 - Present
- Soil Science Society of America 2019 - Present