Michael Dumelle

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EDUCATION

test 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

Peer-Reviewed Journal Publications (see the associated GitHub repositories for code, data, and a version of the work when available)

- 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*.
  GitHub: github.com/michaeldumelle/
- **Dumelle, Michael.**, Lamb, Jesse F., Jacobson, Kym., Hunsicker, Mary., Morgan, Cheryl., Burke, Brian., & Peterson, William. 2020. Characterizing Spatial Coherence of Copepods in the Northern California Current. *In Review*.
  GitHub: github.com/michaeldumelle/
- **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**., McDonald, Brian., Gound, Micah., Olsen, Connor., Schmid, Chas, & Kowalewski, Alec. 2020. Comparing Rates of Minearal Oil, Sulfur, and Phosphorous Acid on Microdochium Ptach Suppression, Green-Cover Percentage, and Turfgrass Quality. *In Review*.
  GitHub: github.com/michaeldumelle/
- 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. *In Review*.
  GitHub: github.com/michaeldumelle/

Proceedings and Technical Reports Publications (see the associated GitHub repositories for code, data, and a version of the work when available)

- 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.* Github: github.com/michaeldumelle/
- Walsh, Kenneth C., **Dumelle, Michael.**, & Williams, Katy. (2020). Tracking Student Engagement with OER Resources and Homework. *Physics Educational Research Conference 2019 Proceedings.* GitHub: github.com/michaeldumelle/

Presentations

- 2019. A Mixed Model Approach to the Product-Sum Spatio-Temporal Covariance Function with Computational Advances. Joint Statistical Meetings. Contributed Poster.
  GitHub: github.com/michaeldumelle/
- 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.
  GitHub: github.com/michaeldumelle/
- 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.
  GitHub: github.com/michaeldumelle

Software

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

Grants

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

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