Gavino Puggioni

Contact Information

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University of Rhode Island
Kingston, RI, 02881

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Scientific Interests

Bayesian Statistics, Spatial and Time Series Models, Simulation Methods, Stochastic Differential Equations. Applications to Ecology, Epidemiology, Econometrics, Project Evaluation, and Finance.

Employment

University of Rhode Island, Kingston, RI, USA
Dept. of Computer Science and Statistics (Main Appointment)
College of the Environment and Life Sciences (Joint appointment)

- Associate Professor of Statistics *(with tenure)* **07/2018 - Present**
- Section Head of Statistics **09/2017 - Present**
- Director of Graudates Studies **09/2016 - Present**
- URI CORE Biostatistician **06/2017 - Present**
  CTR-Advance RI (Clinical and Translational Research)
- Lead Statistician **06/2014 - 2018**
  West Africa ASSESS project (CELS and CRC)
- Assistant Professor of Statistics **08/2012 - 06/2018**

Emory University, Atlanta, GA, USA
Dept. of Biostatistics and Bioinformatics
Center for Disease Ecology, Department of Biology

- Postdoctoral fellow. Supervisors: L. Waller and L. Real. **09/2009 - 08/2012**

University of North Carolina, Chapel Hill, NC, USA
Department of Environmental Sciences and Engineering

- Research Associate. Supervisor: M. Serre. **10/2008 - 09/2009**

Duke University, Durham, NC, USA
Department of Statistical Science

- Research Assistant. Supervisor: A. Gelfand. **01/2005 - 08/2008**

Education

Duke University, Durham, NC, USA

- *Ph.D., Statistical Science* **12/2008**
  Dissertation title: "Using Data Augmentation
  and Stochastic Differential Equations in Spatio Temporal Modeling"
  Advisor: A. Gelfand. Committee: R. Wolpert, S. Mukerjee, J. Clark
- *M.Sc., Statistics and Decision Sciences* **04/2006**

Università Commerciale "Luigi Bocconi", Milan, Italy

- *M.Sc., Economics* (Concentration in Econometrics) **06/2003**
- *B.Sc., Economics (Summa cum laude)* **03/2002**
  Thesis title: "Recent Advance Spectral Methods (SSA, MEM, MTM) with
  applications in Econometrics and Forecasting." Advisors: B. Sitzia and M. Manera.

Other Education

University of Rhode Island, Kingston, RI
- *Teaching Fellows workshop and seminar series* **2012-2013**

Universitat Politcnica de Catalunya, Barcelona, Spain
- *Statistical Models in Financial Series. 8th International Summer School* **07/2005**

CIDE, Centro Interuniversitario di Econometria, Bertinoro, Italy
- *IX Summer School of Econometrics* - MIDAS and nonparametric methods **06/2005**
- *VIII Summer School of Econometrics* - Bayesian Econometrics **06/2004**

Università Commerciale "Luigi Bocconi", Milan, Italy
- *Summer School of Probalility and Statistics* - Semiparametric models **07/2004**

Honors and Awards

- University of Cagliari, International Visiting Associate Professor (2019)
- Fellow of the Center for Disease Ecology at Emory University (2009-2012)
- Duke University Graduate Fellowship (2003-2004)
- Bocconi University Fellowship for Graduate Studies Abroad (2003-2005)
- Bocconi University "Academic Year 2001-02 Best Graduates" Gold Medal Award (2002)
- Invernizzi Foundation's Fellowship for Graduate Studies in Economics (2002-2003)
- ISU Bocconi University Undergraduate Full Scholarship (1997-2002)

Travel Awards

- SAMSI Program Model Uncertainty (2018)
- SAMSI Program Methods for Climate and the Earth System (2017)
- *Hope & Heritage* Award travel funding (2013-Present)
- College of Arts and Sciences travel funding (2013-2017)
- Computer Science and Statistics Department travel funding (2013-2017)
- Emory University travel funding (2009-2012)
- Duke University travel funding (2003-2008)

International Projects

- Johannes Kepler University, Linz, Austria. Data-driven estimation of undetected cases during the Covid-19 pandemic in Austria. Statistical expert (2020)
- USAID Senegal. Evaluation du renforcement instituionnel des Conseils Locaux de Peche Artisanale (CLPA) et de ses impacts sur la gestion des ressources halieutiques. Statistical Consultant (2018)
- USDA Ghana FFPr Poultry Project Evaluation Commissioned Activity (USAID - USDA). Leading statistician. (2015)
- West Africa Analytical Support Services and Evaluations for Sustainable Systems in Agriculture, Environment and Trade (USAID). Statistical and Econometrics Specialist for the Commissioned Activity "Review of Baseline Methodology". Advised the team on sampling and data collection methodology, and assisted in writing the debriefing presentation and the final report. (2014)

Funded Research

- Bayesian Mediation Analysis for Neonatal Neurodevelopmental Outcomes in Pregnancy with Opioid Exposure (NIH-R15HD097588)
  Award Amount: USD 256,727 (2020-2021)
  PI: Xuerong Wen, my role: Statistical Collaborator
- Acoustic Cry Analyzer for the Diagnosis of Infants Suffering Withdrawal Due to Prenatal Opioid Exposure (BBII)
  Total Award Amount: USD 105,700 (Brown University, 2020-2021)
  PI: Barry Lester, my role: Statistical consultant
- Improved A Framework for the Deconvolution of Oversampled Fields of Geophysical Parameters Obtained from Satellite-Borne Passive Microwave Radiometers (NASA).
  Award amount: USD 400,000 (2020-2023)
  PI: Peter Cornillon, my role: Co-PI
- Neonatal Cry Acoustics and Neurobehavioral Characteristics as Early Markers of Risk for Autism Spectrum Disorder (NIH-R01MH121345-01)
  Total Award Amount: USD 6,000,000 (2019-2024), PI: Stephen Sheinkopf. my role: Co-I
  Total Subaward Amount: about USD 260,000 (2019-2024), PI: Gavino Puggioni
- Neurobiological markers of language and literacy in low SES bilingual children (INBRE)
  Award amount: USD 200,000 (2019-2020), PI: Alisa Baron, Vanessa Harwood. My role: Co-I
- RI Center for Clinical and Translational Research (CTR). Subcontract from Brown University (NIH-U54GM115677-01)
  Total Award amount: USD 2,755,295, PI: Padbury (2016-2021)
  Subaward amount: about USD 20,000 per year (2017-2021), PI: Gavino Puggioni
- Improved Spatial Resolution Sea Surface Temperature Fields from AMSR-E (NASA).
  Award amount: USD 400,000 (2016-2018)
  PI: Peter Cornillon, my role: Co-PI
- West Africa Analytical Support Services and Evaluations for Sustainable Systems in Agriculture, Environment and Trade (USAID)
  Award Amount: USD 6,500,000 (2014-2019)
  PI: Karen Kent and Rick Rhodes, my role: Co-I
- Children, Youth and Family at Risk (CYFAR): Integrating Nutrition Education into Providence Full Sevice Schools in Providence RI
  Award amount: USD 100,000 (2013)
  PI: Linda Sebelia. My role: Statistical consultant

Publications

Peer-reviewed Journal Articles

1. Yang S, **Puggioni G** (2021)"A Bayesian Zero-in ated Latent Class Growth Model for Adolescent Health Risk Behaviors". *Statistics and its Interface*, Vol. 14, No. 2, 151-163. doi: 10.4310/20-SII623
2. Sudhakaran PO, **Puggioni G**, Uchida H, Opaluch J (2021) "Effect of Oyster Farms on Housing Prices in Rhode Island". Published online in *Aquaculture Economics and Management*. doi: 10.1080/13657305.2020.1869857
3. **Puggioni G**, Couret N, Serman E, Akanda A, Ginsberg H (2020)"Spatiotemporal risk of Dengue Fever in Puerto Rico" *Spatial and Spatio-Temporal Epidemiology*, Volume 35. doi: 10.1016/j.sste.2020.100375
4. Wibisono E, **Puggioni G**, Firmana E, Humphries A (2020) "Identifying hotspots for spatial management of the Indonesian deep-slope demersal fishery". Accepted for publication *Conservation Biology*, doi: 10.1111/csp2.356
5. Langan J, **Puggioni G**, Oviatt C, Henderson E, Collie J (2020)" Climate Alters the Migration Phenology of Coastal Marine Species". Accepted for publication *Marine Ecology Progress Series*.
6. Dyer M, Requintina M, Berger K, **Puggioni G**, Mather T (2020) "Evaluating the effect of minimal risk natural products for control of the tick, Ixodes scapularis (Acari: Ixodidae) " *Journal of Medical Entomology*, doi: 10.1093/jme/tjaa188
7. Hayes R, **Puggioni G**, Parker W, Tiley C, Bednarick A, Fastovsky D (2020)"Modeling the dynamics of a Late Triassic vertebrate extinction: The Adamanian/Revueltian faunal turnover, Petrified Forest National Park, Arizona, USA", *Geology*, doi: 10.1130/G47037.1
8. Boussidi B, Cornillon P, **Puggioni G**, Gentemann G (2019) "Determining the AMSR-E SST Footprint from Co-located MODIS SSTs", *Remote Sensing*, 11, 715; doi:10.3390/rs11060715
9. Spinette RF, Brown SM, Ehrlich A, **Puggioni G**, Deacutis C, Jenkins BD (2019) "Diazotrophic Activity in Narragansett Bay Sediments Measured during the Summer of 2013 and 2014: Effects of Dissolved Oxygen and Organic Matter", *Marine Ecology Progress Series*, Vol. 614: 35-50; doi: 10.3354/meps12901
10. Sheinkopf S, Levine T, McCormick C, **Puggioni G**, Conradt E, Lagasse L, Lester B (2019)"Developmental Trajectories of Autonomic Functioning in Autism from Birth to Early Childhood", *Biological Psychology*, 142:13-18. doi: 10.1016/j.biopsycho.2019.01.003
11. Buchanan S, Buffum B, **Puggioni G** , Karraker N (2018) "Occupancy of freshwater turtles across a gradient of altered landscapes", *The Journal of Wildlife Management*, 83 (2), 435-445. doi: 10.1002/jwmg.21596
12. Cannas M, **Puggioni G** (2017) "On the Support of Matching Algorithms " *Statistics and Probability Letters*, 131, 72-77.
13. McDonough C, Helm P, Muir D, **Puggioni G**, Lohmann R (2016)"Polycyclic Musks (PCMs) in the Air and Water of the Lower Great Lakes: Spatial Distribution and Volatilization from Surface Waters", *Environmental Science and Technology*, 50 (21), 11575-11583.
14. McDonough C, **Puggioni G**, Helm P, Muir D, Lohmann R (2016) "Spatial Distribution and Air-Water Exchange of Organic Flame Retardants in the Lower Great Lakes", *Environmental Science and Technology*, 6; 50(17) : 9133-9141.
15. Altonji M, Lang C, **Puggioni G** (2016), "Can urban areas help sustain the preservation of open space? Evidence from statewide referenda", *Ecological Economics*, 130(2016), 82-91.
16. Lopez M, **Puggioni G**, Bengston D (2016), "Ecology of Menidia *Menidia Larvae* in Two Temperate Estuarine Littoral Habitats", *Fisheries Bulletin*, 10-23-2016.

17. Yang S, **Puggioni G**, Harlow L, Redding C (2016)"A Comparison of Different Methods of Zero-Inflated Data Analysis and an Application in Health Surveys"*Journal of Modern Applied Statistical Methods*, 16 (1), Article 29.
18. Gerardo-Giorda L, **Puggioni G**, Rudd J, Waller L, Real L (2013), "Structuring targeted surveillance for monitoring disease emergence by mapping observational data onto ecological process". *Journal of the Royal Society Interface, Jul 17, 10(86)*
19. Vaillant J, **Puggioni G**, Waller L, Dougrois J (2011) "A spatio-temporal analysis of the spread of sugar cane yellow leaf virus", *Journal of Time Series Analysis, Special Issue: Time Series in the Environmental Sciences, Vol. 32, Issue 4, p 396-406.*
20. Li Y, MacDonald Gibson J, Jat P, **Puggioni G**, Hasan M, West J, Vizuete W, Sexton K, and Serre M (2010) "Burden of Disease Attributed to Anthropogenic Air Pollution in the United Arab Emirates: Estimates Based on Observed Air Quality Data", *Journal of Total Environment, vol.408, p. 5784-5793*
21. **Puggioni G**, Gelfand AE (2010) "Analyzing Space-time Sensor Network Data under Suppression and Failure in Transmission", *Statistics and Computing, Volume 20:4, October 2010, p. 409-419.*
22. Rodriguez A, **Puggioni G** (2010) "Mixed frequency models: Bayesian approaches to estimation and prediction", *International Journal of Forecasting, vol. 26, Issue 2, p 293-311.*
23. **Puggioni G**, Gelfand AE, Miglioretti D, Elmore J (2008) "Joint Modeling of Sensitivity and Specificity", *Statistics in Medicine, Volume 27, Issue 10, 1745 - 1761*

Peer-reviewed Conference Proceedings

1. Silberstein A, **Puggioni G**, Gelfand A, Munagala K, Yang J (2007) "Making Sense of Suppressions and Failures in Sensor Data: A Bayesian Approach" *VLDB 2007: 842-853.* Acceptance rate: 45 out of 275.
2. Silberstein A, Braynard R, Filpus G, **Puggioni G**, Gelfand A, Munagala K, Yang J (2007) "Data-Driven Processing in Sensor Networks". In *Proceedings of the 3rd Biennial Conference on Innovation Data Systems Research (CIDR '07)".* Acceptance rate: 34 out of 98.

Articles currently under peer-review

1. Wang S, **Puggioni G**, Wen X, "Bayesian Latent Class Model for Predicting Gestational Age in an Automated Database". Under review for *Statistics in Medicine.*
2. Garay U, **Puggioni G**, Molina G, Ter-Horst E,"A Bayesian Dynamic Regression Model for Art Prices"Submitted.
3. Liu T, Uchida E, **Puggioni G** (2020) "The direct and spillover effects of residential zoning policy on land development". Submitted.

Articles in progress

1. Posada J, **Puggioni G**, Molina G, Ter-Horst E (2020) "Predicting Instantaneous Photsyhthetic Photon Flux Density for Days with Different Degree of Overall Cloudiness using a Bayesian Finite Mixtures Approach"
2. Guilfoos T, **Puggioni G** (2015) "Do International Borders Accelerate Depletion in Large Scale Groundwater Systems ? "
3. Lobach A, **Puggioni G** (2017) "Bubble Modeling by Mixed Causal-Non Causal Autoregressive Processes"
4. Boussidi B, Cornillon P, **Puggioni G**, Gentemann C (2017) "Analyses of the global bias between MODIS infrared and AMSR-E microwave SSTs"

5. **Puggioni G**, Gerardo-Giorda L, Waller L, Real L, (2015), "A Dynamic Nonparametric Spatial Point Process Model".
6. Lobach A, **Puggioni G**, Heskett D, and Young B (2016) "Dirichlet Process Mixture of Voigt Profiles with application to Peak Detection in X-ray Photoelectron Spectroscopy Data"
7. **Puggioni G**, Gelfand AE (2011), "Spatiotemporal modeling using Stochastic Differential Equations"

Books and Chapters

- Li Y, **Puggioni G**, Jat P, Hasan M, Davidson C, Serre M, Sexton K, MacDonald Gibson J, West J (2014) "Burden of Disease from Outdoor Air Pollution", in *Environmental Burden of Disease Assessment*, Springer, 2014.

Talks and Presentations

Invited Conference Presentations

1. "Step Change Detection and Forecasting of Vector-Borne Diseases", *ENAR Meeting*, Philadelphia, PA (2019)
2. "Statistical Methods in Remote Sensing Applications. A discussion." *The 32nd New England Statistics Symposium*, Amherst, Massachusetts (2018)
3. "Spatiotemporal Modeling of Vector-Borne Disease Risk". *CM Statistics*, London, UK (2017)
4. "Bayesian Mixed Frequency Models for US Unemployment Data Analysis and Forecasting" *The 34th Quality and Productivity Research Conference Quality and Statistics: A Path to Better Life*, University of Connecticut, Storrs, CT (2017)
5. "Spatiotemporal analysis of Vector-Borne diseases risk", *The 31st New England Statistics Symposium*, University of Connecticut, Storrs, CT (2017)
6. "Bayesian Mixed Frequency Data Analysis with Application to US unemployment Forecasting", *International Society for Bayesian Analysis World Meeting*, Pula, Italy (2016)
7. "A Nonparametric Bayesian Model for Spatial Point Processes with Application to Raccoon Rabies Spread". *Eastern North American Region / International Biometric Society meeting*, Baltimore, MD (2014)
8. "A Bayesian Nonparametric Method for Spatial Point Processes with Application to Sea Turtles Nesting Patterns". *Joint Statistical Meeting*, Montreal, QC, Canada (2013)
9. "A Bayesian Nonparametric Approach for Spatial Point Processes". *Workshop on Analysis of Information from Diverse Sources*, DIMACS, Rutgers University, NJ (2013)
10. "Stochastic Differential Equations for Space Time Modelling". *Joint Statistical Meeting*, Washington, DC (2009).
11. "Analyzing Space-time Sensor Network Data under Suppression and Failure in Transmission". *INTERFACE 2008. RISK: reality.* Durham, NC (2008).
12. "Joint Modeling of Sensitivity and Specificity". *Breast Cancer Surveillance Consortium (BCSC) Meeting of statisticians*, University of North Carolina at Chapel Hill (2006).

Invited Research Seminars

1. "Step Change Detection and Forecasting of Vector-Borne Diseases", *Dipartimento di Scienze Economiche*, Cagliari, Italy (2019)
2. "Spatio-Temporal Hierarchical Models for Vector-Borne Disease Risk". *BCAM Scientific Seminar*, Basque Center for Applied Mathematics, Bilbao, Spain (2018)
3. "A Bayesian Nonparametric Approach for Spatiotemporal Point Processes". *Mathematical Sciences Department*, Worcester Polytechnic Institute, Worcester, MA (2017)
4. "Disease mapping through space-time CAR models: the case of Dengue fever in Puerto Rico", *Department of Statistics*, University of Connecticut, Storrs, CT (2016)
5. "A Bayesian Zero-Inflated Latent Class Model for Longitudinal Data". *Department of Statistics*, Harvard University, Boston MA (2015)
6. "Advanced Statistical Methods for the Analysis of Space-Time Environmental Data", *Biological and Environmental Sciences Seminar Series*, University of Rhode Island, Kingston RI (2014).
7. "Bayesian Hierarchical Models with Dynamic Structures and Latent Variables for Space-time Data: Methodology and Applications." *Fairborz-Maseeh Department of Mathematics and Statistics seminar*, Portland State University, Portland, OR (2012).
8. "Bayesian Hierarchical Models with Dynamic Structures: Methodology and Environmental Applications." *Department of Mathematics and Statistics seminar*, University of Rhode Island, Kingston, RI (2012).
9. "Bayesian Hierarchical Models with Dynamic Structures and Latent Variables for Space-time Data: Methodology and Applications." *Department of Biostatistics and Epidemiology seminar*, University of Maryland, College Park, MD (2012).
10. "Bayesian Hierarchical Models with Dynamic Structures and Latent Variables: Methodology and Applications. " *Department of Mathematical Sciences seminar*, New Jersey Institute of Technology, Newark, NJ (2012).
11. "Bayesian Hierarchical Models with Dynamic Structures: Methodology and Environmental Applications." *Department of Mathematics and Statistics seminar*, University of Toledo, OH (2012).

Invited Lectures and Workshops

1. "Introduction to Bayesian Statistics", Workshop, *Dipartimento di Scienze Economiche*, Cagliari, Italy (2019)
2. "Introduction to Seasonal Models", Guest lecture for the graduate Time Series Analysis course, Harvard University, Cambridge, MA (2019)
3. "A Quick Intro to Understanding and Explaining Probability", *CSC 592: Bioinformatics*, University of Rhode Island, Kingston RI (2019)
4. "The Journalists Guide to Understanding and Explaining Probabilities", *19th Annual Science Immersion Workshop for Journalists Coastal Impacts: Global Change in Coastal Environments*, Metcalf Institute for Marine & Environmental Reporting (2017)
5. "An Introduction to Bayesian Methods in Psychological Research", *PSY 612: Structural Modeling*, University of Rhode Island, Kingston RI (2016).
6. "An Introduction to Bayesian Methods and an Application to Adolescent Risky Behavior", *PSY 612: Structural Modeling*, University of Rhode Island, Kingston RI (2015).
7. "Bayesian Methods for Stock Assessment Training Workshop" *Atlantic States Marine Fisheries Commission*, Providence, RI (2015)

8. "Modern Statistical Methods and No-Boundary Thinking", *CSC 592: No Boundary Thinking*, University of Rhode Island, Kingston RI (2015).
9. "Statistical Learning and Data Mining: Bayesian Nonparametric Examples", *CSC 592: High Performance Computing*, University of Rhode Island, Kingston RI (2014).

Contributed Presentations

1. "Bayesian Space-Time CAR models for Dengue Mapping in Puerto Rico". Talk. *Joint Statistical Meetings*, Chicago, IL (2016).
2. " A Nonparametric Bayesian Model for Spatial Point Processes". Talk. *Joint Statistical Meetings*, Seattle, WA (2015).
3. "A Bayesian Nonparametric Approach for Spatiotemporal Point Processes". Poster. *10th Conference on Bayesian Non Parametrics*, Raleigh, NC (2015)
4. " Bayesian Hierarchical Models for Parameter Estimation in SEIR Disease Dynamics". Talk. *Joint Statistical Meetings*, Miami Beach, FL (2011).
5. " Bayesian Hierarchical Models for Parameter Estimation in SEIR Disease Dynamics". Poster. *EEID Conference and Workshop*, Santa Barbara, CA (2011)
6. "Incorporating observational data in disease dynamics for targeted surveillance ". Poster (co-presented with L. Gerardo-Giorda). *EEID Conference and Workshop*, Santa Barbara, CA (2011)
7. "Spatio-Temporal Modeling Using Stochastic Differential Equations". Poster. *Joint Statistical Meetings*, Salt Lake City, UT (2007).
8. "Spatio-Temporal Modeling Using Stochastic Differential Equations". Talk. *Sminaire Europen de Statistique 2007. Statistics for stochastic differential equations models*, La Manga del Mar Menor, Cartagena, Spain (2007).
9. "Analysis of Mixed Frequency Data: a Model Selection Approach". Poster (joint work with Abel Rodriguez). *Valencia International Meetings on Bayesian Statistics*, Benidorm, Spain (2006).
10. "Spatio-Temporal Modeling Using Stochastic Differential Equations". Talk. *32nd Spring Lecture Series, Spatial and Spatio-Temporal Statistics.* University of Arkansas, Fayetteville, AK (2006).

Teaching Experience

University of Rhode Island, Rhode Island, USA

Main Instructor **Fall 2012 - Present**

- CSC 499 *Project in Computer Science (practicum)*
  Existing undergraduate course. Taught in 2020
- STA 591 *Independent Study: Advanced Mathematical Statistics*
  Course for selected advanced graduate students.
  Taught in 2016, 2017, and 2018, 2019
- STA 460 *Introduction to Time Series Analysis*
  New undergraduate course created by me. Taught in 2017
- STA 308 *Introduction to Statistics*
  Existing undergraduate course. Taught in 2017, and 2018
- STA 545/592 *Bayesian Statistics* (Advanced)
  New graduate course created by me. Taught in 2017, 2019
- STA 560 *Time Series Analysis*
  New graduate course created by me. Taught in 2014, 2016, 2019
- STA 515 *Spatial Data Analysis*
  Existing graduate course completely redisigned by me.
  Taught in 2014, 2016, 2018, 2021
- STA 550 *Ecological Statistics*
  Existing graduate course completely redisigned by me.
  Taught in 2013, 2014, 2015, 2016, 2017, 2019, 2020
- STA 545 *Bayesian Statistics*
  Existing graduate course completely redisigned by me. Taught in 2013, 2015
- STA 409 *Statistical Methods for Research I*
  Existing upper level undergraduate course. I partially revised the content.
  Taught in 2012, 2013

Duke University, Durham, North Carolina USA

Teaching Assistant **2003 - 2004**

- STA 290 *Statistical Laboratory*
  (Graudate course, 2004)
- STA 103 *Probability and Statistical Inference*
  (Upper level undergraduate course, 2003, 2004)

Università Commerciale "Luigi Bocconi", Milan, Italy

Teaching Assistant **2002 - 2003**

- *Applied Econometrics*
  (Undergraduate course, 2002, 2003)

Mentoring

Ph.D. and Postdoctoral advisees

- Joseph Squillace, Postdoctoral Multicultural Fellow in Statistics.
  Research: topics in probability and distribution theory. (August 2020-Present)

- Brahim Boussidi, Postdoctoral Fellow in Oceanography
  NASA project: *Improved Spatial Resolution Sea Surface Temperature Fields from AMSR-E*
  Joint supervision with Peter Cornillon (August 2016 - August 2019)

- Prateesh Sudhakaran. PhD Student in Natural Resource Economics
  Dissertation: *Three Essays on Shellfish Management in Rhode Island*
  Joint supervision with Hiro Uchida (August 2013 - August 2015)

Master of Statistics advisees

1. Broderick Prows. Current research: methods for the analysis of acoustic cry data. (Exp 2022)
2. Salam Turki. Current research: topics in statistical distribution theory. (Exp 2022)
3. Shuang Wang. Current research: Bayesian mediation models. (Exp 2021)
4. Joseph Langan. Current research: Bayesian methods in fisheries (Exp 2021)
5. Jacob Strock. Thesis: *Investigating Long-Term Physical, Chemical, and Biological Changes in Narragansett Bay Using Bayesian Multivariate Dyanmic Linear Models* (Dec 2020)
6. Shajratul Alam. Thesis: *Analysis of Missing Data in Marine Dissolved Oxygen Time Series Using Dynamic Linear Models.* Co-advised with J. Wu. (Aug 2020)
7. Marjana Catanzaro. Thesis: *Spatial and Temporal Trends of Drug Overdose Deaths in Connecticut and Rhode Island* (May 2020)
8. Enoch Cobbina. Thesis: *Development of Bayesian and non-Bayesian Melphalan Pharmacokinetic Models from Literature-Generated Data* (Dec 2019)
9. TingFang Lee. Thesis: *Skellam Process Modeling for Financial High-Frequency Data* (Aug 2019)
10. Manushi Welandawe. Thesis: emphA Mixed-Effects Regression Model with Application to Longitudinal Missing at Random Microbiome Data. Co-advised with J. Wu (Aug 2019)
11. Caoxin Sun. Thesis: *Bayesian Model Averaging of Space Time CAR Models with Application to U.S. House Price Forecasting* (May 2018)
12. Anton Lobach. Thesis: *Bubble Modeling by Mixed Causal-Non Causal Autoregressive Processes* (July 2017)
13. Yizhou Ye. Thesis: *Bayesian Network Meta-analysis for Biologic Therapies in Rheumatoid Arthritis* (July 2016)
14. Zonghao Zhu. Thesis: *Effect of Average Happiness for Twitter on the Dow Jones Industrial Average Return Volatility* (May 2015)
15. Si Yang. Thesis: *A Bayesian Zeroinflated Poisson Latent Class Model on Longitudinal data: Application to Smoking Behavior from Adolescent to Adulthood* (May 2015)
16. Craig Krebsbach. Thesis: *Modeling Brain Desynchronization by EEG Sensor Variance in Epileptic Patients* (May 2015)
17. Xinkai Huang. Thesis: *Forecasting the US Unemployment Rate using Job Openings Index* (May 2015)
18. Jennifer Huang. Thesis: *Modeling the Probability of Mortgage Default via Logistic Regression and Survival Analysis.* Co-adviside with N. Katenka (May 2015)

19. Yanan Li. Thesis: *Forecasting Stock Market Returns Volatility* (May 2014)

Mentored Students' Awards

- Shajratul Alam. Winner of the best poster award at 33rd New England Statistical Symposium (2019)
- Joseph Langan. Winner of the American Fisheries Society's Fish Habitat Section *Best Student Paper Award* (2018)
- Joseph Langan. Winner of the Southern New England Chapter of the American Fisheries Society *Saul Saila Best Student Paper Award* (2017)
- Anton Lobach. Winner of the best poster award at New England Statistical Symposium (2016)
- Prateesh Sudhakaran. Winner of the best dissertation award from the International Association of Aquaculture Economics and Management (2016)

Examination Service

Ph.D. committees

- Joe Langan, Jacob Strock, Virginie Sonnet, Christopher Starkey (Exp 2021)
- Anna Robuck, Alyssa Wibisono, Heather Kopsco (2020)
- Haoran Miao, Clayton Michaud, Khoop Panhinkong, George Sfinarolakis, Duncan McIntosh (2018)
- Yackar Mauzole, Elmira Shekari Namin, Carrie McDonough, Ahmed Alhasani,Scott Buchanan, Conor McManus (2017)
- Susan Gorelick (2014)

Masters committees

- Colby Slezak, Aubree Jones (Exp 2021)
- Joshua Tanzer, Madhukara Kekulandara, Clayton Graham, Jessica Carney (2020)
- Nicole Keefner, Reilly Hayes (2019)
- Corinne Truesdale, Vida Osei, Stephen Brenner, Dustin Meattey, Michael Tamayo (2018)
- Margarete Walden, Emily Serman, Daven Amin, Megan Dyer (2017)
- Rebecca Flynn, Chris Sims, Charles Harry III, Bianca Lauro, Caoxin Sun, Farrah Solomon (2015)
- Minho Kang, Craig Krebsbach, Yang Si, Meghan Gahm (2014)
- Kelsey Obenour, Samantha DeCuollo, Miranda Lopez (2013)

Chaired Defenses

- Yizhou Ye (2017)
- Elaine Potter, Tingting Liu, Amy Parmenter (2014)
- Christian Buckingham, Daniel Ward , Julie Insingnares (2013)

Departmental Service

- Member of Diversit committee (2020-Present)
- Member of Space committee (2019-Present)
- Chair of statistics comprehensive exam committee (2016-Present)
- Chair of Statistics graduate studies committee (2017-2018)
- Organizer of the *Statistics and Big Data Seminar Series* (2015-Present)
- Chair of Statistics Multicultural Postdoctoral Fellow Search committee (2018-2020)
- Chair of Statistics Tenure Track Search committee (2 positions) (2018)
- Member of the group that designed the new Bachelor of Science in Statistics (2016-2017)
- Member of Lecturer Search Committee III (2017)
- Member of the working group *Machine Learning and Computational Statistics* (2016-2017)
- Member of Statistics Tenure Track Search Committee II (2016-2017)
- Ad interim Director of Statistics Graduate Studies (2015-2016)
- Member of Statistics Tenure Track Search Committee I (2015)
- Chair of Lecturer Search Committee II (2014-2015)
- Ad- hoc Member of Statistics Website Committee (2014-2015)
- Member of Multicultural Fellow Search Committee (2014)
- Member of Diversity Committee (2013-Present)
- Member of Graduate Committee (2012-Present)
- Member of Statistics Committee (2012-Present)
- Member of Lecturer Search Committee I (2014)

Service to the University

- Member of the Data Science Graduate Committee (2018-2020)
- Interviewed for Arts & Scienced promotional video
- Member of the URI College of Arts & Sciences Strategic Plan Committee (2017-2018)
- Marshall at the URI Undergraduate Commencement Ceremony (2014)
- Marshall at the Arts & Sciences Commencement Ceremony (2014)

Service to the Profession

International Society for Bayesian Analysis. Member since 2006. Life member

New England Statistical Society. Member since 2017. Life member

- 34th New England Statistics Symposium, Organizing Committee, Chair (2019-2021)
- New England Statistical Society Vice President for Scientific Program (2018-2021)
- New England Statistical Society Committee on Journal & Publication Member (2018-2020)
- 33rd New England Statistics Symposium, Organizing Committee, Co-Chair (2018-2019)
- 33rd New England Statistics Symposium, Invited Session organizer (2019)
- New England Statistical Society Council Member (2017-2019)

American Statistical Society. Member since 2005.

- Co-Organizer (with N. Katenka) and Chair of Invited Session:
  "Novel Approaches to Decision Making in Complex Systems,
  with Applications to Spatiotemporal Data and Networks"
  Joint Statistical Meetings 2015, Seattle WA.
- Chair of Invited Session "Random Matrices and Statistical Applications "
  Joint Statistical Meetings 2013, Montreal, Canada.
- Chair of Contributed Session "Bayesian Philosophies and Practicalities"
  Joint Statistical Meetings 2009, Washington DC.

Editorial Activity

- Spatial and Environmental Statistics Section Editor for *New England Journal of Statistics in Data Science*, (2020-Present).
- Invited Associate Editor for *Applied Stochastic Models in Business and Industry* (Special issue on Business Analytics and Data Science, 2019-2021)
- Referee for the following journals:
  Journal of the American Statistical Association
  Bayesian Analysis
  Journal of Agricultural, Biological and Environmental Statistics
  Electronic Journal of Statistics
  Ecological Modelling
  STAT
  Statistics Surveys
  Limnology and Oceanography

Computational Expertise

- Languages: R, C/C++
- Mathematics Packages: Matlab, Maple, Mathematica
- Statistics Packages: BUGS, SPSS, JMP
- Econometrics Packages: EViews, Stata, SSA-MTM Toolkit
- Applications: LaTeX, MS Office
- Operating Systems: OS, Unix, Linux, Windows

Languages

- Italian and Sardinian, Mother Tongue
- English, Fluent
- French and Spanish, Good