**Penelope S. Pooler Eisenbies**

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**Statistician, Ph.D.**

I have more than 20 years of professional and post-graduate education, applied research, consulting and teaching experience in private sector, academic, and government settings. I also have specialized teaching and communication skills and extensive collaborative experience.

* Professor of Statistics and Analytics Practice at Syracuse University
* Senior statistical consultant in the private sector for a global consulting firm
* Experienced in risk analysis, public health, and environmental health research
* Experienced in pharmaceutical clinical trial research and associated SAS programming skills
* Collaborated on epidemiology research using the NHANES database
* Specialize in teaching and communicating study design principles, quantitative analytical concepts, and software methods to a wide variety of undergraduate and graduate students (list of courses taught included)
* Extensive consulting experience in many fields including (but not limited to) environmental risk analysis, public and environmental health, agriculture
* Experienced in implementing innovative, computer-intensive Bayesian analytical methods
* Awarded over $500K in grant funding to i) Develop innovative analysis methods for understanding variability in water quality at different spatial and temporal scales and ii) Develop a Bayesian network model to evaluate salt marsh condition and trends
* Substantial body of collaborative publications in a variety of statistical peer-reviewed journals

**Education**

**Ph.D. Statistics (2005)**

Department of Statistics, Virginia Tech (VPI and SU), Blacksburg, VA

Dissertation: “Bayesian hierarchical methods and use of ecological thresholds and changepoints for habitat selection models”

Committee: Eric P. Smith (Statistics Department Chair at Virginia Tech; Advisor), David R. Smith (USGS; Co-Advisor), Keying Ye, Samantha Bates, Jeffrey Birch

**M.S. Statistics (1998)**

Department of Statistics, Oregon State University, Corvallis, OR

Advisor: Paul Murtaugh (Statistics Professor at Oregon State University)

**B.F.A Dual Degree Economics and Metalsmithing (1991)**

Departments of Fine Arts and Department of Economics, Syracuse University, Syracuse, NY

**Academic Honors and Awards**

**Virginia Tech**

Outstanding Graduate Student Consultant Award. 2004.

Klaus Hinkelmann Outstanding Graduate Assistant Award. 2004.

Mu Sigma Rho (Graduate Statistics Honor Society)

- Chapter Vice President April 2003 - April 2004

**Oregon State University**

Ruth Kruger Fellowship for Graduate Study. 1997.

**Professional Experience**

**Professor of Statistics/Analytics Practice**

Syracuse University Whitman School of Management

August 2016 to Present

Duties and accomplishments include:

* Developed and currently teaching BUA 455 – Data Management for Business
* Collaborated with other Analytics faculty to Develop and launched new major in Business Analytics (Launched Fall 2020)
* Teach MAS 261 – Introductory Statistics for Management
* Teach BUA 345 – Business Analytics for Management Decisions
* Taught MAS 362 – Decision Tools for Management to multiple sections (Course discontinued after Spring 2020 Semester)
* Teach (Facilitate) FIN 654 in collaboration with Kivanç Avrenli
* Collaborate with Whitman and other university faculty and students on study design, data collection and analysis methods to further research and projects

**Facilitator for Syracuse University First Year Experience**

Syracuse University

August 2018 to December 2019

Duties and accomplishments include:

* Completed training in group facilitation (Summer 2018 and Summer 2019)
* Facilitated five week First Year Experience sections (Fall 2018 - 25 Students; Fall 2019 - 18 students)

**Visiting Assistant Professor**

Syracuse University Whitman School of Management

January 2016 to May 2016

Duties and accomplishments include:

* Developed course material for MAS 261
* Taught four sections (155 students)

**Senior Scientist**

Integral Consulting Inc.

December 2014 to January 2016

Duties and accomplishments include:

* Provide expert insight on methods and interpretation for a wide variety of internal and external clients
* Provide a forensic review of another firm's analyses for Nixon Peabody legal team
* Developing R code to streamline statistical analyses for many of the firms large ongoing projects

**Senior Statistician**

Department of Public Health and Preventive Medicine, State University of New York Upstate Medical University, (SUNY-UMU)

September 2013 to December 2014 (Extended One-Year Position)

Duties and accomplishments include:

* Lead programmer for pharmaceutical clinical trials
* Developed SAS macros for permanent department macro library
* Validated all SAS code and results for clinical trial products
* Collaborated on epidemiology research publication using data NHANES data

**Primary Consultant and Owner**

Pooler Statistical Consulting, DBA, Syracuse, NY

April 2013 to Present

Work with private sector, academic, and nonprofit clients to provide statistical and quantitative solutions

Example of services offered:

Research study design, data analysis, statistical model development, Bayesian analyses, R and SAS code development, data management

Most recent projects:

* Contracted to develop a survey and dashboard for a community wide religious school. Work will be done Summer 2023
* Ongoing working relationship with Adirondack Research (Adkres.org) on statistical aspects of environmental research projects throughout the Adirondacks and New York State. Most recent project completed in February of 2022.
* Worked on Robert Wood Johnson ‘Culture of Health’ research of Nursing Wellness.
* Worked with Professor Shena Ashley to developed a logistic regression model to examine relationships between funding of non-profit groups in Georgia and various metrics that measure competition

**Quantitative Ecologist**

National Park Service, Inventory and Monitoring Program, Kingston, Rhode Island

January 2009 to December 2012

Supervisor: Sara M. Stevens, Northeast Coastal and Barrier Network Program Manager

Duties and accomplishments included:

* Collaborated with National Park Service (NPS) colleagues and cooperators to address complex monitoring questions in northeastern national parks
* Presented monitoring plans, analyses, and analytical methods in oral presentations, technical reports and peer reviewed publications
* Consulted with other NPS networks and parks on sampling protocol development and analysis protocol development
* Submitted grant proposals to leverage funding to improve and augment network monitoring program and answer related research questions (Received funding for two grants in fiscal year 2011 totaling $515,000)
* Lead a monthly Bayesian webinar study group for NPS and USGS researchers
* Developed and taught an intensive 3-day R short course for scientists at Cape Cod National Seashore

**Adjunct Professor**

Department of Natural Resources Science (NRS), University of Rhode Island

October 2010 to June 2012

Department Chair: Scott McWilliams

Duties and accomplishments include:

* Developed and taught a graduate level quantitative methods course
* Developed computer lab exercises using R and SAS
* Collaborated and consulted on quantitative aspects of research with faculty and graduate students in the NRS and Plant Sciences departments
* Served on graduate student committees
* Served on a search committee for statistics/multidisciplinary faculty
* Developed and taught a 3-day R short course for faculty and students in the NRS department at URI

**Research Associate**

Department of Wildlife and Fisheries, Mississippi State University

July, 2008 to January 2009.

Supervisors: Matthew Marshall, Eastern Rivers and Mountain Network Program Manager

Brian Mitchell, Northeast Temperate Network Program Manager

Sara Stevens, Northeast Coastal and Barrier Network Program Manager

Duties and accomplishments included:

* Sampling design and statistical model development to answer NPS research questions of interest.
  + Often modeling repeated measures data using generalized linear mixed models
* Presented monitoring plans and analyses in oral presentations, technical reports, and peer reviewed publications

**Postdoctoral Research Associate**

Department of Statistics, Virginia Tech

January 2006 to January 2008

Supervisor: Eric Smith, Statistics Department Chair at Virginia Tech

Duties and accomplishments included:

* Developed statistical models to answer research questions in salt marsh, forest, shoreline, and submerged coastal ecosystems
* Revised sampling plans for salt marsh vegetation and nekton monitoring protocols to increase power and assure that sampling design met assumptions of intended analyses methods
* Presented monitoring plans and analyses in oral presentations, technical reports, and peer reviewed publications

**Statistics Instructor**

Department of Statistics, Virginia Tech

August 2005 to May 2006

Department Chair: Eric Smith, Statistics Department Chair at Virginia Tech

Duties and accomplishments included:

* Taught three graduate level statistics courses for non-statistics majors
* Developed course curriculum to aid natural resources students in designing their own studies and analyzing data
* Emphasized practical applications of Statistics in ecological research
* Taught one undergraduate statistics course for engineering students.
  + All courses included computer component requiring students to use SAS to implement concepts from class lectures

*Descriptions of all courses taught on Pages 10-12*

**Biological Statistician**

U.S.G.S. Biological Resources Division, Aquatic Ecology Branch of the Leetown Science Center

July 1998 to July 2001

Supervisor: David R. Smith, Research Statistician (Biology)

Duties and accomplishments included:

* Collaborated on development of long-term ecological monitoring program for horseshoe crabs (*Limulus polyphemus*) throughout the Delaware Bay
* Analyzed data from large scale ecological studies and synthesized results for oral presentations, technical reports, and peer reviewed publications

**Mathematics and Statistics Instructor**

Department of Mathematics, Shepherd University

January 1999 to December 2000

Supervisor: Peter Morris, Mathematics Department Chair in 1999; has subsequently retired

Duties and accomplishments included:

* Developed course curriculum and taught two courses in Mathematics and Statistics for non-majors.
* Taught statistical methods specifically for a non-technical audience

**Academic Work Experience**

Department of Statistics, Virginia Tech

August 2001 to December 2005

Department Chair: Eric P. Smith, Statistics Department Chair at Virginia Tech

* Graduate Student Statistical Consultant, January 2002 to December 2005.
* Provided advice on applying statistical and quantitative methods to aid professors and students in other departments in designing research studies and analyzing data
* Specialized in ecological research and environmental assessment
* Collaborated on preparation of technical reports and peer reviewed publications
* Selected academic and professional consulting projects described at end of CV
* Received award for outstanding student consulting (2004)
* Research Assistant, August 2003 to May 2005
* Dissertation research to develop horseshoe crab spawning habitat model was partially funded by grants from the U.S.G.S. Biological Resources Division and the Delaware Department of Natural Resources and Environmental Control
* Graduate Student Instructor, August 2003 to December 2003
* Taught undergraduate level statistics courses for non-statistics and statistics majors
* Responsible for all aspects of course curriculum and management

Department of Statistics, Oregon State University

September 1996 to June 1998

Advisor: Paul Murtaugh, Statistics Professor at Oregon State University

* Teaching Assistant, September 1996 to June 1998
* Instructed and graded computer lab component of graduate and undergraduate statistics courses
* Graduate Student Statistical Consultant, March 1998 to June 1998.
* Provided advice on statistical methods to clients in other academic departments

**Organizations**

* Mu Sigma Rho (Graduate Statistics Honor Society)
  + Vice President April, 2003 - April, 2004
* Sigma Xi Scientific Research Society
* American Statistical Association
* American Public Health Association
* Estuarine Research Federation
* National Speleological Society

**Computer Skills**

* Statistical Packages: R/RStudio, Python, S-Plus, SAS (including SAS macros), WinBUGS, Minitab, SPSS, OpenEpi, StatTools
* Other Packages: Github, ArcGIS Visual Basic Applications for Excel
* Applications: LATEX, R Markdown, common Windows database, spreadsheet, and presentation software
* Algorithms: Experience programming Markov Chain Monte Carlo simulations of Bayesian posterior distributions

**Publications and Presentations**

**Grants and Proposals**

**Pooler P.S.** 2021. Learning and Innovation Grant to develop the required course BUA 455 – Data Management for Business for the Whitman School of Management Business Analytics major. $6,000.

Neckles, H.A. and **P.S. Pooler**. 2011. Integration of Estuarine Water-Quality Data in Parks of the NPS Northeast Coastal and Barrier Network at Local and Regional Scales. $285,574. USGS National Park Monitoring Project.

Kashuba, R.O.,**P.S. Pooler**., M.C. Freeman, S.M. Stevens. 2011. Quantifying NPS Inventory and Monitoring Conceptual Models Using a Bayesian Network Approach. $229,358. USGS National Park Monitoring Project.

**Peer Reviewed Publications**

**P.S. Pooler**, P.E. Goodrum, D. Crumbling, L.D. Stuchal, S. Roberts. 2018. Incremental Sampling Methodology: Applications for Background Screening Assessments. *Risk Analysis* 38(1):194-209

N.J. Sleight, Volk, T.A., Johnson, G.A., Eisenbies, M.H., Shi, S., Fabio, E.S., **P.S. Pooler**. 2016. Change in Yield Between First and Second Rotations in Willow (Salix spp.) Biomass Crops is Strongly Related to the Level of First Rotation Yield. *Bioenergy Research* 9(1): 270-287

Caldwell, J.M., M.E. Nixon, H.A. Neckles, **P.S. Pooler**. 2015. Estuarine water quality in parks of the Northeast Coastal and Barrier Network: Vital signs estuarine nutrient-enrichment monitoring, 2006–11. Natural Resource Report NPS/NCBN/NRR–2015/902. National Park Service, Fort Collins, Colorado. 208 pp.

Mclean, E.L., K. Rützler, **P.S. Pooler**. 2015. Competing for Space: Factors That Lead to Sponge Overgrowth When Interacting with Octocoral. *Open Journal of Marine Science* 5(1): 64-80

Dibble, K.L., M. Tyrell, **P.S. Pooler**. 2015. Factors That Drive Restoration of Nekton Communities in Impaired Salt Marshes of Northeastern North America. Estuaries and Coasts 38(4):1304-1316

Dibble, K.L., **P.S. Pooler**, and L.A. Meyerson. 2013.Impacts of plant invasions can be reversed through restoration: a regional meta-analysis of faunal communities*. Biological Invasions* DOI 10.1007/s10530-012-0404-9 (Print version to follow).

Neckles, H.A., B.S. Kopp, B.J. Peterson, **P.S. Pooler**. 2012. Integrating Scales of Seagrass Monitoring to Meet Conservation Needs. *Estuaries and Coasts* 35(1): 23-46

Raithel, C.J., P.W.C. Paton, **P.S. Pooler**, F.C. Golet. 2011. Assessing Long-Term Population Trends of Wood Frogs Using Egg-Mass Counts. *Journal of Herpetology* 45(1): 23-27

Schwartz, B.F., M.E. Schreiber, **P.S. Pooler**, and J.D. Rimstidt. 2008. Calibrating

Access-tube Time Domain Refectometry Soil Water Measurements in Deep Heterogeneous Soils. *Soil Science Society of America Journal* 72(4):917-930

Murtaugh, P.A., and **P.S. Pooler**. 2006. Evaluating Ecological Indicators: Lakes in

the Northeastern United States. *Environmental Monitoring and Assessment* 119(1-

3):83-96.

**Pooler, P.S.**, D.R. Smith. 2005. Optimal Sampling Design for Estimating Spatial

Distribution and Abundance of a Freshwater Mussel Population. *Journal of the North*

*American Benthological Society* 24(3):525-537.

McNabb, F.M.A., C.T. Larsen, **P.S. Pooler**. 2004. Ammonium Perchlorate Effects on

Thyroid Function and Growth in Bobwhite Quail Chicks. *Environmental Toxicology*

*and Chemistry* 23(4):997-1003.

**Pooler, P.S.**, D.R. Smith, R.E. Loveland, M.L. Botton, S.F. Michels. 2003. Assessment

of sampling methods to estimate horseshoe crab (*Limulus polyphemus* ) egg

density in Delaware Bay. Fishery Bulletin 101(3):698:703.

Smith, D.R., **P.S. Pooler**, B.L. Swan, S.F. Michels, W.R. Hall, P. Himchak, M. Millard.

2002a. Spatial and Temporal Distribution of Horseshoe Crab (*Limulus polyphemus*) Spawning in Delaware Bay: Implications for Monitoring. *Estuaries* 25(1):115-125.

Smith, D.R., **P.S. Pooler**, R.E. Loveland, M.L. Botton, S.F. Michels, R.G. Weber, and

D.B. Carter. 2002b. Horseshoe Crab (Limulus polyphemus) Reproductive Activity on

Delaware Bay Beaches: Interactions with Beach Characteristics. *Journal of Coastal*

*Research* 18(4):730-740.

**Technical Reports and Other Publications:**

Nicosia, E.L., and **P.S. Pooler**. 2012. Monitoring salt marsh vegetation and nekton at Fire Island

National Seashore: 2011 summary report. Natural Resource Data Series NPS/NCBN/NRDS—2012/397. National Park Service, Fort Collins, Colorado.

Nicosia, E.L., and **P.S. Pooler**. 2012. Monitoring salt marsh vegetation and nekton at Sagamore Hill National Historical Site: 2011 summary report. Natural Resource Data Series NPS/NCBN/NRDS—2012/398. National Park Service, Fort Collins, Colorado.

Nicosia, E.L., and **P.S. Pooler**. 2012. Monitoring salt marsh vegetation and nekton at William Floyd Estate, Fire Island National Seashore: 2011 summary report. Natural Resource Data Series NPS/NCBN/NRDS—2012/399. National Park Service, Fort Collins, Colorado.

Patenaude, E.L. and **P.S. Pooler**. 2011. Monitoring salt marsh vegetation and nekton at Assateague Island National Seashore: 2010 summary report. National Park Service, Natural Resource Stewardship and Science. Fort Collins, Colorado. Natural Resource Data Series. NPS/NCBN/NRDS—2011/312.

Patenaude, E. L., and **P. S. Pooler**. 2011. Salt marsh vegetation and nekton community monitoring at George Washington Birthplace National Monument: 2010 summary report. Natural Resource Data Series NPS/NCBN/NRDS—2011/133. National Park Service, Fort Collins, Colorado.

Patenaude, E. L., and **P. S. Pooler**. 2011. Monitoring salt marsh vegetation and nekton at Gateway National Recreation Area’s Sandy Hook Unit: 2010 summary report. Natural Resource Data Series NPS/NCBN/NRDS—2011/132. National Park Service, Fort Collins, Colorado.

Patenaude, E. L., and **P. S. Pooler**. 2010. Salt marsh vegetation and nekton community monitoring at William Floyd Estates, Fire Island National Seashore: 2009 summary report. Natural Resource Data Series NPS/NCBN/NRDS— 2010/070. National Park Service, Fort Collins, Colorado.

Patenaude, E. L., and **P. S. Pooler**. 2010. Salt marsh vegetation and nekton community monitoring at George Washington Birthplace National Monument: 2008 summary report. Natural Resource Data Series NPS/NCBN/NRDS—2011/069. National Park Service, Fort Collins, Colorado.

Patenaude, E. L., and **P. S. Pooler**. 2010. Salt marsh vegetation and nekton community monitoring at Fire Island Island National Seashore: 2009 summary report. Natural Resource Data Series NPS/NCBN/NRDS— 2011/068. National Park Service, Fort Collins, Colorado.

Patenaude, E. L., and **P. S. Pooler**. 2010. Salt marsh vegetation and nekton community monitoring at Sagamore Hill National Historical Site: 2009 summary report. Natural Resource Data Series NPS/NCBN/NRDS—2010/067. National Park Service, Fort Collins, Colorado.

Patenaude, E. L., and **P. S. Pooler**. 2010. Salt marsh vegetation monitoring at Colonial National Historical Park: 2008 summary report. Natural Resource Data Series NPS/NCBN/NRDS—2010/066. National Park Service, Fort Collins, Colorado.

Patenaude, E. L., and **P. S. Pooler**. 2010. Salt marsh vegetation and nekton community

monitoring at Assateague Island National Seashore: 2008 summary report. Natural Resource Data Series NPS/NCBN/NRDS—2010/065. National Park Service, Fort Collins, Colorado.

Psuty, N.P., and **P.S. Pooler**. 2007. Northeast Coastal and Barrier Network

Geomorphological Monitoring Protocol, Standard Operating Procedure (SOP) No. 7:

Change Calculation, Data Analysis, and Reporting. National Park Service Inventory

and Monitoring Program Northeast Coastal and Barrier Network.

**Pooler, P.S.** 2005. Bayesian Hierarchical Methods and the Use of Ecological

Thresholds and Changepoints for Habitat Selection Models. PhD Dissertation.

Virginia Tech, Blacksburg, Virginia.

**Book Reviews:**

**Pooler, P.S.** 2004. Statistical Tools for Environmental Quality Measurement by

M.E. Ginevan and D.E. Splitstone. Journal of the American Statistical Association

99(467):900-901.

**Invited Presentations:**

**Pooler, P.S.**, D.R. Smith, E.P. Smith.2014. Bayesian Hierarchical Modeling of multi-site longitudinal data: A study or horseshoe crab spawning in the Delaware Bay from 1999 to 2012. Annual Meeting of the American Statistical Association Syracuse Chapter, Syracuse, New York, April 2014.

**Pooler, P.S.** 2013. A quantitative perspective on the National Park Service Inventory and Monitoring Program. Department of Computer and Information Science and Engineering, Syracuse University, Syracuse, New York, November 2013.

Neckles, H.A., J.M. Caldwell, J. Kiddon, M. Nixon, **P.S. Pooler**, and D. Skidds. 2012. Integrating Estuarine Water Quality Monitoring in Northeastern National Parks at Local and Regional Scales. Eighth National Monitoring Conference, Portland, Oregon, April-May 20

**Pooler, P.S.**, M.C. Tyrrell, K.A. Lellis-Dibble, H.K. Bayley, S.M. Stevens. 2011. Invited Workshop Presenter. Modeling Trends in Northeast Coastal Salt Marshes: A Comparison of Bayesian Hierarchical and Multivariate Nonparametric Approaches. George Wright Society Biennial Conference, New Orleans, Louisiana, March 2011.

Neckles, H.A., J.M. Caldwell, **P.S. Pooler**, D. Skidds. 2011. Integration of Estuarine Water-Quality Data in Northeast Coastal and Barrier Network Parks at Local and Regional Scales. George Wright Society Biennial Conference, New Orleans, Louisiana, March 2011.

Neckles, H. A., B. S. Kopp, B.J. Peterson, **P.S. Pooler**. 2009. Integrating scales of seagrass monitoring. Coastal and Estuarine Research Federation Biennial Conference, Portland, Oregon USA, November 2009

**Pooler, P.S.**, S. Stevens. 2008. Sampling Design and Statistical Methods for Vital

Signs Monitoring in the Northeast Coastal and Barrier Network of the National Park

Service. National Park Service Network Review, South Kingstown, Rhode Island

USA, May 2008

**Pooler, P.S.**, D.R. Smith, and E. P. Smith. 2005. Characterizing horseshoe crab

(Limulus polyphemus) spawning habitat in the Delaware Bay using finite mixture

models. Biennial Conference of the Estuarine Research Federation, Norfolk, Virginia, October 2005.

**Contributed Conference Presentations and Posters:**

**Pooler, P.S.** 2022. Developing a New Major and a Lynchpin Course in Analytics. Joint Statistical Meetings, Washington, D.C., August 2022.

MacPherson, M.A., C. Rewakowski, **P.S. Pooler**. 2019. Community Engagement: Work/Life Satisfaction, Healthy Lifestyles and Balance (Part 2) – A Culture of Health Survey at the 2017 Great new York State Fair. Association of Public Health Nurses Annual Conference –Atlanta, April 2019.

MacPherson, M.A., C. Rewakowski, **P.S. Pooler**. 2018. Community Engagement: Work/Life Satisfaction, Healthy Lifestyles and Balance (Part 1) – A Culture of Health Survey at the 2017 Great new York State Fair. American Nurses Association – New York 6th Annual Meeting, Albany, NY, October 2018.

**Pooler, P.S.**, D.R. Smith, E.P. Smith.2014. Bayesian Hierarchical Modeling of multi-site longitudinal data: A study or horseshoe crab spawning in the Delaware Bay from 1999 to 2012. Joint Statistical Meetings, Boston, Massachusetts, August 2014.

Ellsworth, A.C., **P.S. Pooler**, W. Gauley. 2011. Quality Air and Water at Arcadia National Park: An Historical Perspective. George Wright Society Biennial Conference on Parks, Protected Areas, and Cultural Sites, New Orleans, Louisiana, March 2011.

**Pooler, P.S.**, M.C. Tyrrell, K.A. Lellis-Dibble, H.K. Bayley, S.M. Stevens. 2010. Modeling Trends in Nekton and Associated Changes in Northeast Coastal Salt Marshes. 3rd United States Geological Survey Modeling Conference, Broomfield, Colorado, June 2010.

Neckles, H. A., B. S. Kopp, B. Peterson, **P. Pooler**, S. Stevens. 2009. Seagrass Monitoring in the Northeast Coastal and Barrier Network. Poster presentation at the George Wright Society Biennial Conference on Parks, Protected Areas, and Cultural Sites, Portland, Oregon, March 2009

Neckles, H. A., B. S. Kopp, B. J. Peterson, and **P. S. Pooler**. 2007. A hierarchical framework for seagrass monitoring in northeastern estuaries. Biennial Conference of the Estuarine Research Federation, Providence, Rhode Island, November 2007

Bezak, B. J., C. Hession, **P. S. Pooler**, and T. Johnson. 2007. Influence of Bank

Vegetation on Stream Temperature in Urban and Rural Watersheds. American Society of Agricultural and Biological Engineers International Meeting. Minneapolis,

Minnesota USA, June, 2007.

**Pooler, P.S.**, E.P. Smith, and K. Ye. 2005. Bayesian Hierarchical Changepoint Models

for Classifying Habitat. Joint Statistical Meetings, Minneapolis, Minnesota USA,

August, 2005.

**Pooler, P.S.**, E.P. Smith, and D.R. Smith. 2004. Incorporating Response Uncertainty

into Longitudinal Habitat Selection Data. Joint Statistical Meetings, Toronto,

Canada, August, 2004.

**Pooler, P.S.**, J.A. Young, and D.R. Smith. 2003. Estimating Fetch Within a Large

Bay Using GIS and SAS. College of Natural Resources Student GIS Poster Symposium. Virginia Tech, Blacksburg, Virginia, December, 2003. (Poster Presentation)

DiMaio, J., J.L. Metcalfe-Smith, and **P.S. Pooler**. 2000. Quantitative Assessment

of Freshwater Mussels in Sydenham River, Ontario. North American Benthological

Society Annual Meeting, Keystone, Colorado USA, May June, 2000.

Smith, D.R., and **P.S. Pooler**. 1999. Temporal and Spatial Variation in Horseshoe

Crab Spawning: Implications for Long-term Monitoring. American Fisheries Society

Annual Meeting, Charlotte, North Carolina USA, August - September, 1999.

**Pooler, P.S.** , and D.R. Smith. 1999. Sampling to Estimate Spatial Distribution

of a Freshwater Mussel Population. Annual Joint Statistical Meetings, Baltimore,

Maryland USA, August 1999.

**Pooler, P.S.** , and D.R. Smith. 1999. Sampling Effectively to Estimate the Spatial

Distribution of Freshwater Mussels. Freshwater Mollusk Conservation Society Symposium, Chattanooga, Tennessee, USA, March 1999.

**Descriptions of Semester and Short Courses Taught**

**Semester Courses**

**Syracuse University**

*BUA 455 Data Management for Business*

January 2021 – Present (usually 40 - 60 students)

This course provides a fundamental knowledge of data management including how to acquire, clean, visualize, store, and present data and how to use software scripts so that tasks can be done efficiently and reproduced with consistency.  Students will be using statistics, data management, and coding software (R and RStudio).

*FIN 654 Financial Analytıcs*

January 2021 – May 2021 (20 students)

An introduction to methods and tools useful in decision-making in the financial industry, including: macroeconomic event studies, analysis of term structures, Morningstar equity data, style analysis, credit card receivables, trading analytics, execution algorithms, etc.

*BUA 345 Business Analytics for Management Decisions*

January 2020 – Present (40 - 80 students)

Introduction to business analytics and statistical techniques used by managers to make decisions. Topics include defining business problems, identifying data needs to solve defined problems, and using information technologies to collect, analyze, and communicate findings.

*MAS 362 Decision Tools for Management*

Aug. 2016 – May 2020 (20 - 45 students)

Review of important statistical concepts. Mathematical models for management data emphasizing correct use and interpretation of results. Linear regression. Time series analysis. Model assumptions and limitations.

*MAS 261 Introductory Statistics for Management*

Aug. 2016 – Present (80 - 170 students)

Basic statistical theory and data analysis methods: describing data graphically and numerically, probability distributions, sampling, statistical tests and intervals, simple linear regression, use of computer statistics programs. Course content developed to emphasize choice, limitations, and interpretation of methods for management use.

**University of Rhode Island**

*NRS 520 Quantitative Techniques in Natural Resource Research*

Jan. – May 2011 (19 students)

Jan. – May 2012 (14 students)

Applied survey of statistical methods: probability and the fundamental concepts of distributions, one and two sample hypothesis tests, simple and multiple linear regression, logistic and Poisson regression, ANOVA, experiment design, mixed models, repeated measures, and ANCOVA. This course included a computer lab component. Students were taught to implement methods from lecture using both SAS and R. Student evaluations were very positive are available on request.

**Virginia Tech (Virginia Polytechnic Institute and State University)**

Department Chair: Eric Smith 540-231-5657

*STAT 5616 Statistics in Research II* Jan. – May 2006 (80 students)

Experimental designs: basic concepts; completely randomized designs; randomized complete block designs; balanced incomplete block designs; Latin square designs; factorial treatment designs; mixed effects designs; split-plot designs. Multiple linear regression: general formulation, estimation and inference, variable selection, and model diagnostics.

*STAT 4706 Statistics for Engineers* Jan. – May 2006 (Approx. 25 students)

Basic concepts of probability and statistics with emphasis on engineering applications: Sampling distributions, estimation, hypothesis testing, simple and multiple regression, analysis of variance, factorial experiments.

*STAT 5615 Statistics in Research I* Aug. – Dec. 2005 (150 students)

Concepts in statistical inference, including basic probability, estimation, and test of hypothesis, point and interval estimation and inferences; simple linear regression; one-way analysis of variance and categorical data analysis.

*STAT 5665 Statistics for Soc. Sc. Research* Aug. – Dec. 2005 (Approx 25 students)

Basic concepts of statistical inference, including probability, point and interval estimation, hypothesis testing logic; one-sample and two-sample tests on means, variances and proportions; one-way and two-way analysis of variance; multiple comparison procedures.

*STAT 3615 Biological Statistics*  Jan. – May 2004

Descriptive and inferential statistics in a biological context; Fundamental principles, one- and two-sample parametric inference, simple linear regression, frequency data.

*STAT 3005 Statistical Methods* Aug. – Dec. 2003

Basic statistical methodology: exploratory data techniques, estimation, inference, comparative analysis by parametric, nonparametric, and robust procedures. Analysis of variance (one-way), multiple comparisons, and categorical data.

**Shepherd College (Now Shepherd University)**

Mathematics Department Chair: Peter Morris (Emeritus)

*MATH 154 Finite Mathematics* Jan. – May 2000

Mathematical models for the analysis of decision-making problems are examined. Topics include the echelon method for solving linear equations, matrix manipulations, optimization by linear programming including the simplex method, risk decisions using probability, expected value, and statistics.

*MAT 314 Probability and Statistics* Sep. – Dec. 1999

This is a first course in statistics, primarily for those needing knowledge of statistical methods and the interpretation of statistical data. It discusses basic probability ideas, then deals with frequency distributions, measures of central tendency and dispersion; hypothesis testing using z, t, and chi-square tests; correlation, linear regression, and one-way ANOVA.

**Short Courses, Invited Teaching Demonstrations, and Guest Lectures:**

**Guest Lectures:**

**Pooler, P.S.** 2022. Statistics and Data Science: Answering Questions with Data. Jamesville

Dewitt Middle School 6th Grade Math Classes (presented to 3 classes). Dewitt, NY, May 2022.

**Pooler, P.S.** 2016**.** Statistical Consulting: Working in Academia, the Private Sector, and For Yourself. Syracuse University Mathematics Department. Syracuse, NY, February 2016.

**Invited Teaching Demonstrations:**

**Pooler, P.S.** 2014**.** A Gentle Introduction to R. Central New York Master's of Public Health Brown Bag Lecture Series. Syracuse, NY, November 2014.

**Short Courses on using R:**

**National Park Service Cape Cod National Seashore**

Developed a two-day course for biologists and park service staff (Fall 2011).

**University of Rhode Island**

Developed a three-session course for professors and graduate students in the Department of Natural Resources Science (Fall 2009).

**University Service at Syracuse University:**

**Scientific Inquiry and Research Skills Shared Competency Community of Practice**

*Community Co-Chair (1 of 3)* Aug. 2022 – Present

Have begun working with co-chairs to recruit faculty and staff to this commnity from across the university to develop a university wide rubric for shared SIRS competencies.

**Information Literacy and Technology Agility Shared Competency Community of Practice**

*Active Community Participant*  Aug. 2020 – June 2022

Have been working with faculty and staff from across the university to develop a university wide rubric for shared ILTA competencies.

*Participant in ILTA Shared Competency Academy*  January 2022 – June 2022

Academy members attend intensive workshops and refine signature assignments for their respective courses where the developed rubric will be tested.

**Whitman Undergraduate Board**

*Board Co-chair* Aug. 2020 – Present

*Board member*  Aug. 2019 – Present

**Whitman Business Analytics Major Working Group**

*Collaborated on all aspects of developing major*  May 2018 – Aug. 2020

Tasks included but were not limited to

* Assessing interest among students, faculty, alumni, and employers
* Developing new courses and working with departments to determine which existing courses would be electives.
* Completing the review process set out by the undergraduate board, the Whitman faculty, and the university senate (Approved Spring 2020)
* Actively promoting the major in media material and at live events.

*Continuing as an active participant in the Working Group*  Aug. 2020 – Present

In addition to teaching one of two required courses for this major,

* Participate in discussions of the direction the curriculum will take
* Actively promote the major and its benefits to incoming students

**Whitman Scholar Selection Committee**

*Committee member* Oct. 2018 – Dec. 2018