CHRISTOPHER THOMAS GRUBB

CONTACT INFO	Center for Biostatistics and Health Data Science Fralin Biomedical Research Institute at VTC 4 Riverside Circle Roanoke, VA 24016

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RESEARCH INTERESTS

Synthetic populations; network visualization, inference, and community detection; Bayesian linear models; latent variable models; computational statistics; surrogate modeling

EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY [VIRGINIA TECH]
Ph.D. Statistics, Aug 2023, co-advised by David Higdon & Leanna House
Committee: Leanna House (Chair), David Higdon, Jyotishka Datta, Jennifer Van Mullekom
Diss.: *Inference for Populations: Uncertainty Propagation via Bayesian Population Synthesis*

MILLERSVILLE UNIVERSITY OF PENNSYLVANIA
B.Sc. Mathematics, May 2016
Options: Actuarial Science, Statistics
Honors: *magna cum laude*

PROFESSIONAL POSITIONS

Research Scientist, Aug 2023 – pres
Center for Biostatistics and Health Data Science, Department of Statistics, VIRGINIA TECH

HONORS & AWARDS

Honorable Mention, Poster Competition, Conference on Statistical Practice 2023
Daniel M. Wardrop Ph.D. '85 and Barbara J. Wardrop Graduate Fellowship, 2021
John J. Bartko Ph.D. '62 Award, 2020
Millersville University Dean's List, 2014-2015

PEER-REVIEWED JOURNAL ARTICLES

Emily Tirrell, Nahid Kalantaryardebily, Anna Feldbush, Lindsey Sydnor, **Christopher Grubb**, Kevin Parcetich, Netta Gurari. (2025). Considerations for Tactile Perceptual Assessments: Impact of Arm Dominance, Nerve, Location, and Sex in Young and Older Adults. *Experimental Brain Research*, 243(4). https://doi.org/10.1007/s00221-025-07044-5

Quintessa Hay, **Christopher Grubb**, Sarah Minucci, Michael S. Valentine, Jennifer Van Mullekom, Rebecca L. Heise, Angela M. Reynolds. (2024). Age-dependent ventilator-induced lung injury: Mathematical modeling, experimental data, and statistical analysis. *PLOS Computational Biology*, 20(2). https://doi.org/10.1371/journal.pcbi.1011113

Alasdair Cohen, Ayella Maile-Moskowitz, **Christopher Grubb**, Raul A. Gonzalez, Alessandro Ceci, Amanda Darling, Laura Hungerford, Ronald D. Fricker Jr., Carla V. Finkielstein, Amy Pruden, and Peter J. Vikesland. (2022). Subsewershed SARS-CoV-2 Wastewater Surveillance and COVID-19 Epidemiology Using Building-Specific Occupancy and Case Data. *ACS ES&T Water*, 2(11), 2047-2059. https://doi.org/10.1021/acsestwater.2c00059

Jeremiah R. Foley, IV, Thomas J. McAvoy, **Christopher Grubb**, Albert E. Mayfield, III, Brian Strahm, Scott M. Salom. (2022). Subterranean Survivorship and Seasonal Emergence of Laricobius spp. (Coleoptera: Derodontidae), Biological Control Agents for the Hemlock Woolly Adelgid. *Environmental Entomology*, 51(1). https://doi.org/10.1093/ee/nvab124

IN REVIEW

Jamie K. Turner, **Christopher Grubb**, Jacqueline Britz, Alexandra L. Hanlon, John W. Epling, Michelle S. Rockwell. Variation in Inappropriate Opioid Prescribing for Adults with Acute Pain in Rural vs. Non-Rural Virginia. (Not yet publicly available)

Michelle S. Rockwell, **Christopher Grubb**, Jamie K. Turner, Matthew Vinson, Isaiah Yim, Alexandra L. Hanlon, John W. Epling. Disproportionate High-Risk Nonsteroidal Anti-inflammatory Drug (NSAID) Prescribing in Rural Virginia. https://doi.org/10.1101/2025.01.03.25319965

GRANTS

Co-Investigator (PI: Hanlon), NIH/NINDS. *Ensuring Reproducible Research through Rigorous Study Design, Statistical Analysis Planning, and Data Presentation within a Team Science Framework.* Jul 2024 to Jun 2027. Total Award: $263,736 (Code: UE5).   15% FTE; Jul 2024 – pres

Biostatistician (PI: Hanlon), NIH/NIDA-NIAAA. *CUBE: A Collaborative Undergraduate Biostatistics Experience to Diversify and Bring Awareness to the Field of Collaborative Biostatistics.* May 2023 to Mar 2028. Total Award: $1,321,900 (Code: R25).   10% FTE; May 2024 – pres

Research Scientist (PI: Dunkenberger). *Roanoke & Alleghany Health Districts Community Engagement.* Jun 2023 to Nov 2026. Total Award: $359,998.   120 Hours + 5% FTE; May 2024 – pres

OTHER FUNDING

Research Scientist (PI: Howe), NIH/NIDDK. *A gut-brain interaction controlling reward learning.* Aug 2022 to May 2027. Total Award: $1,290,742 (Code: R01).   160 Hours; Mar 2024 – Jan 2025

Co-Investigator (PI: Higdon), The MITRE Corporation. *Statistical Methodology for Synthetic Population Generation.* Apr 2024 to Feb 2025. Total Award: $47,000.   15% FTE; Apr 2024 – pres

POSTERS

Automating Data Cleaning, Merging, Processing, and Visualization in Real Time. **Christopher Grubb**. Conference on Statistical Practice, 2023.

Probabilistic Population Synthesis for Decision-Making. **Christopher Grubb**, David Higdon, and Leanna House. Contributed poster at Joint Statistical Meetings, 2021.

Advancing Advancement with Data Science. **Christopher Grubb**, and Jennifer Van Mullekom. Poster at Conference on Statistical Practice, 2021.

OTHER EMPLOYMENT

Lead Collaborator, May 2017 – May 2021
STATISTICAL APPLICATIONS AND INNOVATIONS GROUP, VIRGINIA TECH; BLACKSBURG, VA
Hosted drop-in & long-term consulting, offering statistical mentorship for Virginia Tech student & faculty researchers. Developed & taught short-courses on various R topics.

Data Science Intern, May 2018 – Aug 2018
MICROSOFT; REDMOND, WA
Implemented deep feature synthesis for a then-unreleased product that became Power BI's Cognitive Services, an AutoML solution designed for corporations with little to no statistical or machine learning knowledge.

Data Science Intern, May 2019 – Aug 2019
MICROSOFT; REDMOND, WA
Leveraged market basket analysis to investigate the predictive power of transactional history within a recommender system for XBox Store. Worked primarily in Python and was required to learn a proprietary query language (SCOPE) that evolved into U-SQL.

LECTURING   INSTRUCTOR, VIRGINIA TECH, CMDA 2006: INTEGRATED QUANTITATIVE SCIENCE II
Second year undergraduate course in statistics covering categorical data analysis, hypothesis testing, linear regression, logistic regression, and cross-validation. 30 75-minute lectures in Fall 2019.

OTHER TEACHING EXPERIENCE   SHORT COURSES, VIRGINIA TECH, STATISTICAL APPLICATIONS AND INNOVATIONS GROUP

1. Basics in R; Spring 2021 (Instructor)
2. Graphics in Base R; Spring 2021 (Instructor)
3. Graphics in R using `ggplot2`; Fall 2020 (Instructor)
4. Data Manipulation in R; Spring 2020 (Co-Instructor), Fall 2020 (Instructor)

RECITATION LEADER, VIRGINIA TECH, STAT 2004: INTRODUCTORY STATISTICS
Instructor: Leanna House. 15 50-minute labs in Fall 2016.

TUTOR, MILLERSVILLE UNIVERSITY
Private tutor for various courses in Mathematics & Statistics; 2014 – 2015.

MENTORSHIP   *Abbreviations:*
TBMH ≡ Translational Biology, Medicine, and Health
DAAS ≡ Data Analytics & Applied Statistics

	Role	Degree – Focus Area	Date(s)
Doctorate–level			
Emily Tirrell	Non-Committee Mentor	**Ph.D.** TBMH	Nov 2023–pres
Jamie Turner	Non-Committee Mentor	**Ph.D.** TBMH	Sep 2023–pres
Masters–level			
Meredith Atanasio	Committee Member	**M.A.** DAAS	May 2024–pres
M.D.–level			
Brayden Copeland	Biostatistics Mentor	**M.D.**	Mar 2025–pres
Tylin Stiller	Biostatistics Mentor	**M.D.**	Mar 2025–pres
Belinda Tucker	Biostatistics Mentor	**M.D.**	Mar 2025–pres
Kishu Chaudry	Biostatistics Mentor	**M.D.**	Mar 2025–pres
Sydney Dinn	Biostatistics Mentor	**M.D.**	Sep 2024–pres
Nancy Wu	Biostatistics Mentor	**M.D.**	Sep 2024–pres
Brianna Chang	Biostatistics Mentor	**M.D.**	Sep 2024–pres
Sabri Conde-Yassin	Biostatistics Mentor	**M.D.**	Jul 2024–pres
Lucas Arney	Biostatistics Mentor	**M.D.**	Jul 2024–pres
Cole Pieroni	Biostatistics Mentor	**M.D.**	Apr 2024–pres
Kuenho (Bryan) Kim	Biostatistics Mentor	**M.D.**	Mar 2024–pres
C Hebert	Biostatistics Mentor	**M.D.**	Feb 2024–Sep 2024
Steven Thomas	Biostatistics Mentor	**M.D.**	Jan 2024–pres
Dana Wang	Biostatistics Mentor	**M.D.**	Jan 2024–pres
Alyssa Sze	Biostatistics Mentor	**M.D.**	Jan 2024–pres
Courtney Barth	Biostatistics Mentor	**M.D.**	Oct 2023–pres
Marina Levochkina	Primary Mentor	**M.D.**	Sep 2023–pres

PROFESSIONAL
MEMBERSHIP
International Society for Bayesian Analysis, 2024 – pres
Whole Health Consortium, 2024 – pres
American Statistical Association, 2019 – pres.