Jeff Mohl, Ph.D.

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Education

Duke University Durham, NC
Ph.D., Neurobiology May 2020
- NDSEG Fellow (national fellowship, 3 years tuition and stipend, 5-10% award rate)

Montana State University Bozeman, MT
B.S., Mechanical Engineering; Minor: Mechatronics (EE/CS); Highest Honors May 2014
- Academic All-American (Track and Field) 2011-2014

Experience

AMGA, Sr. Director – Data & Analytics Jan 2024 – Jun 2025
- Conducted and disseminated novel population health research as a Primary Investigator addressing critical drivers of the high cost of healthcare, with a focus on large clinical database studies and implementation science.
- Managed a team of analysts who conduct research and analytics in support of AMGA Research & Analytics' mission to translate population-based analytics into action.
- Directed database programming team in developing datasets and data related development work to support research projects.
- Lead multi-stakeholder research collaborations with academic and corporate partners.
- Contributed to the development and implementation of department short- and long-term strategic plan that aligns with AMGA's strategic plan, mission, vision, and values.
- Recruited and trained analysts and programmers across a range of experience levels.
- Lead and managed grant writing and program development to initiate and acquire funding for new research initiatives from governmental sources and life sciences companies.

AMGA, Director – Research & Analytics Nov 2021 – Jan 2024
- Designed, conducted, and published rigorous population health research covering an array of topic areas including opioid use, cancer, heart disease, diabetes, and clinical predictive models
- Leveraged sound statistical techniques and machine learning approaches to extract insights from electronic health record and administrative claims data covering >100M lives
- Supervised a team of population health research analysts to complete 8 to 10 quantitative and qualitative research projects per year for both internal and external stakeholders
- Directed cross-disciplinary collaborations with programming, communications, and operations teams to manage timelines and ensure priorities align with departmental strategic objectives
- Lead interactions with external partner organization representatives at the Director or Departmental Lead level to propose projects, align objectives with team capabilities and resources, and deliver finished research products

AMGA, Senior Population Health Research Analyst Nov 2020 – Nov 2021
- Collaborated with internal and external stakeholders to develop research questions, provide quantitative expertise, and communicate data driven insights that support population health improvement for medical groups and integrated health care systems across the US

- Developed and validated predictive models using clinical and administrative data to predict health related outcomes, for use by medical practitioners to inform decision making
- Communicated research through proposals, scientific papers, and presentations

Duke University, Postdoctoral Research Associate May 2020 – Nov 2020
Department of Psychology and Neuroscience

- Implemented machine learning techniques (non-linear regression, Bayesian classification) to integrate neural and behavioral data and interpreted results to provide novel insights
- Wrote and edited research reports, manuscripts, and grant proposals
- Supervised junior PhD and undergraduate students on multiple lines of research

Duke University, Graduate Researcher Aug 2014 – May 2020
Department of Neurobiology

Doctoral work: *Multisensory Integration and Causal Inference in Audio-Visual Spatial Perception*

- Developed research questions, then designed and carried out studies in humans and non-human primates to understand how auditory and visual cues interact to affect perception
- Computationally modeled perceptual decisions extracted from unstructured eye-tracking data
- Implemented novel statistical methods on neural time-series data to uncover fluctuating signals
- Communicated scientific findings via presentations, posters, and multiple manuscripts

Collaborative work: *Neural Multiplexing Group (Statistics, Psychology, Neurobiology)*

- Collaborated across labs with members of the Statistical Science Department to release an open source statistical package for analyzing time varying neural signals
- Leveraged cross-competency in statistical modeling and scientific subject matter to facilitate communication between statisticians and neuroscientists
- Interfaced with stakeholders across 4 universities to implement analysis on diverse datasets

Technical Skills

Research: Research design and protocol development; Literature review and synthesis; Scientific writing (manuscripts, grants)
Scientific Programming: R; MATLAB; Python; SQL
Data Analysis: ETL; Data cleaning and validation; Data visualization
Statistics and ML: Causal inference from observational data (regression, DiD, matching); Supervised learning (regularized regression, boosted trees, random forest); Advanced statistical modeling (novel techniques for unusual datasets); Dimensionality reduction; Prompt engineering and development of LLM enabled workflows

Publications

Mohl JT, Moreno CA, Sadik K, Singhal M, Rooney A, Ciemins EL. Evaluation of Blood Pressure Control, Medication Adherence, and Therapeutic Inertia in US Patients With Hypertension Prescribed Multiple Antihypertensives. *Journal of the American Heart Association* 2025; 14 (12), e034787

Rodriguez HP, Ciemins E, Rubio K, Rattelman C, Cuddeback JK, **Mohl JT**, Bibi Salma, Shortell Stephen. Telemedicine use and decrements to type 2 diabetes and hypertension care during the COVID-19 pandemic. *BMC Digital Health* 2024; 2 (1), 1-14

Schmehl MN, Caruso VC, Chen Y, Jun NY, Willett SM, **Mohl JT**, Ruff DA, Cohen M, Ebihara AF, Freiwald W, Tokdar ST, Groh JM. Multiple objects evoke fluctuating responses in several regions of the visual pathway. *eLife* 2024; 13 e91129

Ciemins EL, **Mohl JT**, Moreno CA, Colangelo F, Smith RA, Barton M. Development of a Follow-Up Measure to Ensure Complete Screening for Colorectal Cancer. *JAMA Netw Open*. 2024; 7(3)

Rodriguez HP, Ciemins E, Rubio K, Rattelman C, Cuddeback JK, **Mohl JT**, Bibi Salma, Shortell Stephen M. Telemedicine use and decrements to type 2 diabetes and hypertension care during the COVID-19 pandemic. *BMC Digital Health* 2024; 2 (1), 2

Mohl JT, Stempniewicz N, Cuddeback JK, Kent DM, MacLean EA, Nicholls L, Kerrigan C, Ciemins EL. Predicting Chronic Opioid Use Among Patients With Osteoarthritis Using Electronic Health Record Data. *Arthritis Care & Research* 2023; 75 (7), 1511-1518

Mohl JT, Ciemins EL, Miller-Wilson L, Gillen A, Luo R, Colangelo F. Rates of Follow-up Colonoscopy After a Positive Stool-Based Screening Test Result for Colorectal Cancer Among Health Care Organizations in the US, 2017-2020. *JAMA Netw Open*. 2023; 6(1)

Rodriguez HP, Ciemins EL, Rubio K, Rattelman C, Cuddeback JK, **Mohl JT**, Bibi S, Shortell SM. Health systems and telemedicine adoption for diabetes and hypertension care. *Am J Manag Care.* 2023; 29(1):42-49

Glynn C, Tokdar ST, Zaman A, Caruso VC, **Mohl JT**, Willett SM, Groh JM. Analyzing second order stochasticity of neural spiking under stimuli-bundle exposure. *Ann Appl Stat. 2021; 15 (1):41-63*

Mohl JT, Pearson JM, Groh JM. Monkeys and humans implement causal inference to simultaneously localize auditory and visual stimuli. *J Neurophysiol* 2020; 124 (3), 715-727

Mohl JT, Caruso VC, Tokdar ST, Groh JM. Sensitivity and specificity of a Bayesian single trial analysis for time varying neural signals. *Neurons, Behavior, Data Analysis, and Theory* 2020; 3 (1)

Caruso VC, **Mohl JT**, Glynn C, Lee J, Willett SM, Zaman A, Ebihara AF, Estrada R, Freiwald WA, Tokdar ST, Groh JM. Single neurons may encode simultaneous stimuli by switching between activity patterns. *Nature Communications* 2020; 9 (1), 2715

Presentations

Mohl, JT; Singh, S; Perreault, L. 2025. Navigating Obesity: The Patient's Journey Through Treatment and Weight Loss. *AMGA Annual Conference*

Turchin, A; Pantalone, K; **Mohl JT**. 2024. Overcoming Therapeutic Inertia: Leadership Roundtable Discussion. *American Diabetes Association Scientific Sessions*

Mohl, JT; Rattelman, CR; Bidassie, B; Robar, C; Rajpura, JR. 2023. Prevalence of Atherosclerosis, Heart Failure, and Chronic Kidney Disease Among Patients With Type 2 Diabetes and Management With Diabetes Pharmacotherapy. *American Heart Association Scientific Sessions 2023*

Ciemins, EL; **Mohl, JT;** Miller-Wilson, L; Gillen, A; Lou, R; Colangelo, F. 2022 Trends in follow-up colonoscopy after a positive stool-based screening test for colorectal cancer among health care organizations in the United States. *AcademyHealth Annual Research Meeting*

Mohl, JT; Ciemins, EL; Miller-Wilson, L; Gillen, A; Lou, R; Colangelo, F. 2022 Impact of the COVID-19

pandemic on follow-up colonoscopy rates after a positive stool-based screening test for colorectal cancer among US health care organizations. *AcademyHealth Annual Research Meeting*

Mohl, JT; Stempniewicz, N; Cuddeback, JC; Maclean, EA; Nicholls, L; Ciemins, EL. 2022. Using electronic health record data to identify chronic opioid use in patients with osteoarthritis. *AMIA 2022 Clinical Informatics Conference*

Mohl, JT; Rogers, JT; Ciemins, EL. 2022. Closing the loop on home-based screening for colorectal cancer. *2022 AMGA Annual Conference*

Mohl, JT; Tokdar, S; Groh, JM. 2018. Distinct codes as a substrate for causal inference in primate superior colliculus neurons. *Society for Neuroscience; Advances & Perspectives in Auditory Neuroscience*

Jun, NY; **Mohl, JT**; Cohen, M; Groh, JM. 2018. Fluctuating activity (time-division multiplexing) varies across sensory brain regions. *Society for Neuroscience*

Caruso, VC; **Mohl, JT**; Glynn, C; Lee, J; Willett, S; Zaman A; Estrada R; Tokdar S; Groh, JM. 2017. Fluctuating activity and coding of multiple items. *Cognitive and Computational Neuroscience meeting, New York, 2017*

Mohl, JT; Tokdar, S; Groh JM. 2017. A dynamic neural code may underlie multisensory integration and segregation in the primate superior colliculus. *Advances & Perspectives in Auditory Neuroscience (selected for poster teaser highlight), Society for Neuroscience*

Mohl, J.T; Caruso, V. C.; Glynn, C; Tokdar, S; Groh, JM. 2016. Characterization of a novel analysis method for single trial analysis of fluctuating neural responses. *Society for Neuroscience*

Honors and Awards

National Defense Science and Engineering Graduate Fellowship
Walter Byers Graduate Scholarship Finalist
NCAA Division I All-American, Heptathlon, 2013; Decathlon, 2014
USTFCCCA Academic All-American, 2011-2014
MUS Honors Tuition Waiver

Teaching and Mentorship

Gallatin High School, Track and Field Coach, 2020-2025
Neurobiology Bootcamp, Session Leader
Principles of Neurobiology, Teaching Assistant
Duke Biosciences and Engineering Camp, Counselor
Tutor, Mechanical Engineering
Montana State Track and Field Camp, Counselor