

George Owen Mohler

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EDUCATION

- 2008 **PhD**, *University of California, Santa Barbara*, .
Mathematics
- 2004-2008 **NSF IGERT Fellow in Computational Science and Engineering**, *University of California, Santa Barbara*.
Department of Mathematics
- 2005 **MA**, *University of California, Santa Barbara*.
Mathematics
- 2003 **BS**, *Indiana University, Bloomington*.
Mathematics (graduated with highest distinction)

ACADEMIC POSITIONS

- 2023-present **Chair**, *Boston College*.
Department of Computer Science
- 2022-present **Daniel J. Fitzgerald Professor**, *Boston College*.
Department of Computer Science
- 2021-2022 **Professor**, *Indiana University - Purdue University Indianapolis*.
Department of Computer and Information Science
- 2019-2022 **Director**, *Indiana University - Purdue University Indianapolis*.
Institute for Mathematical Modeling and Computational Science
- 2016-2021 **Associate Professor**, *Indiana University - Purdue University Indianapolis*.
Department of Computer and Information Science
- 2010-2016 **Assistant Professor (Awarded Tenure 2016)**, *Santa Clara University*.
Department of Mathematics and Computer Science
- 2008-2010 **CAM Assistant Adjunct Professor**, *University of California, Los Angeles*.
Department of Mathematics

GRANTS AND AWARDS

- 9/2022-8/2027. AFOSR MURI grant FA9550-22-1-0380, Learning Dynamics and Detecting Causal Pathways in Coupled Online-Offline Systems, \$1,212,914 (Boston College portion). Joint w/ Jeff Brantingham (PI), Erin Hartman, Hongjing Lu, Fred Mortstatter, and Nancy Rodriguez.
- 9/2021-8/2024. NSF grant SCC-2125319, SCC-IRG Track 2: Independent Real-Time Sensing Data to Support Community Well-Being. Joint w/ Jeff Brantingham (PI), Erin Hartman, and James Hill, \$1,422,463.
- 9/2021-8/2024. CDC grant R01CE003362, Examining the iatrogenic effect of law enforcement disruptions to the illicit drug market on overdose in the surrounding community. Joint w/ Brad Ray (PI), Jennifer Carroll, Erin Comartin, Steven Korzeniewski, Grant Victor and Brandon del Pozo, \$1,087,500.
- 9/2021-8/2024. NSF grant ATD-2124313, ATD: Collaborative Research: Multi-task, Multi-Scale

Point Processes for Modeling Infectious Disease Threats, \$149,992.

NIJ Recidivism forecasting challenge, 1st, 3rd and 2nd place in three reducing bias categories of the competition. Joint w/ Mike Porter, \$30,000. 2021.

IUPUI AI Institute Seed Grant, Leveraging Artificial Intelligence and Machine Learning to Reduce Disparities in Suicide Trajectories: A BioPsychosocial Approach to Identify Modifiable Risk and Protective Processes. Joint w/ Y. Xiao, J. Carlson, and S. Fang, \$25,000. 2021-2022.

10/2020-9/2021. IU Racial Justice Research Fund, High-stakes pairing systems for mitigating police bias and misconduct. Joint w/ Jeremy Carter and James Hill. \$14,915.

1/2020-12/2021. NIJ grant 2019-R2-CX-0004, The Impact of Gunshot Detection Technology on Gun Violence in Kansas City and Chicago: A Multi-Pronged Synthetic Control Evaluation. Joint w/ Eric Piza (PI) and Jeremy Carter, \$503,305.

9/2017-8/2020. NSF grant SCC-1737585. SCC-IRG Track 2: Real-Time Algorithms and Software Systems for Heterogeneous Data Driven Policing of Social Harm. Joint with co-PIs Jeremy Carter and Rajeev Raje, \$791,513.

9/2017-8/2020. NSF grant ATD-1737996. ATD: Collaborative Research: Point Process Algorithms for Threat Detection from Heterogeneous Human Mobility and Activity Data, \$100,000.

3/2017-2/2020. NSF grant REU-1343123. REU Site: Data Science of Risk and Human Activity, joint with co-PI Mohammad al Hasan, \$287,377.

NIJ Real-time crime forecasting challenge. First place in nine categories of large business division. Joint w/ M. Porter, \$135,000. 2017.

9/2014-8/2017. NSF grant SES-1343123. INSPIRE: Computational modeling of grievances and political instability through global media, joint with LaFree (PI), Cunningham, Golbeck, and Torrens, \$2,594,533.

9/2010-8/2013. NSF grant DMS-0968309. FRG: Collaborative Research: Mathematics of large scale urban crime, 9/2010-8/2013, joint with Andrea Bertozzi (PI), George Tita, Jeff Brantingham, Martin Short, Lincoln Chayes, and Frederic Schoenberg, \$1,008,105.

EDITORIAL POSITIONS

Co-Editor in Chief. Journal of Quantitative Criminology. 2026-present

Associate Editor. Journal of Quantitative Criminology. 2022-2025

Editorial Board Member, Spatial Statistics, 2025-present

Associate Editor. International Journal of Forecasting. 2020-present

PATENTS

USSN 13/605,737, Title: Event Forecasting System

USSN 13/306,919, Title: Systems and Methods for Data Fusion Mapping Estimation

JOURNAL PUBLICATIONS

[59] Piza, E., N. Connealy, R. Arietti, G. Mohler, and J. Carter. (2025). The relative and joint effects of gunshot detection technology and video surveillance cameras on case clearance in Chicago. *Criminology & Public Policy*.

[58] Phillips, S., Mohler, G., and Schoenberg, F. (2025). Detection of surges of SARS-Cov-2 using nonparametric Hawkes models. *Epidemics*.

- [57] Manring, I., Wang, H., Mohler, G., and Miscouridou, X. (2025). BSTPP: a python package for Bayesian spatiotemporal point processes. *Journal of Applied Statistics*, 1–20.
- [56] Brantingham, P. J., Mohler, G., and Vorobeychik, Y. (2025). Calling the police as an interdependent security game. *The Journal of Mathematical Sociology*.
- [55] Leverso, J., O’Neill, K. K., Knorre, A., and Mohler, G. (2025). The limits of digital liberation: The social locations of gang-affiliated girls and women in the digital streets. *Journal of Criminal Justice*.
- [54] Connealy, N. T., Piza, E. L., Arietti, R. A., Mohler, G. O., and Carter, J. G. (2024). Staggered deployment of gunshot detection technology in Chicago, IL: a matched quasi-experiment of gun violence outcomes. *Journal of Experimental Criminology*, 1-27.
- [53] Piza, E. L., Mohler, G. O., Connealy, N. T., Arietti, R., and Carter, J. G. (2024). Space-Time Association between Gunshot Detection Alerts, Calls for Service, and Police Enforcement in Chicago: Differences Across Citizen Race and Incident Type. *Journal of Quantitative Criminology*, 1-22.
- [52] Leverso, J., Diouane, Y., and Mohler, G. (2024). Measuring Online–Offline Spillover of Gang Violence Using Bivariate Hawkes Processes. *Journal of Quantitative Criminology*, 1-29.
- [51] X. Miscouridou, S. Bhatt, G. Mohler, S. Flaxman, and S. Mishra. (2023). Cox-Hawkes: doubly stochastic spatiotemporal Poisson processes. *Transactions on Machine Learning Research*, 1-20.
- [50] Piza, E. L., Hatten, D. N., Mohler, G. O., Carter, J. G., and Cho, J. (2023). Gunshot detection technology effect on gun violence in Kansas City, Missouri: A microsynthetic control evaluation. *Criminology & Public Policy*, 1-30.
- [49] Piza, E. L., Arietti, R. A., Carter, J. G., and Mohler, G. O. (2023). The effect of gunshot detection technology on evidence collection and case clearance in Kansas City, Missouri. *Journal of Experimental Criminology*, 1-26.
- [48] Ray, B., Korzeniewski, S. J., Mohler, G., Carroll, J. J., Del Pozo, B., Victor, G. Huynh, P. and Hedden, B. J. (2023). Spatiotemporal Analysis Exploring the Effect of Law Enforcement Drug Market Disruptions on Overdose, Indianapolis, Indiana, 2020–2021. *American Journal of Public Health*, 113(7), 750-758.
- [47] Badirli, S., Picard, C. J., Mohler, G., Richert, F., Akata, Z., and Dundar, M. (2023). Classifying the unknown: Insect identification with deep hierarchical Bayesian learning. *Methods in Ecology and Evolution*.
- [46] Mohler, G., and Mateu, J. (2023). Second-order preserving point process permutations. *Stat*, 12(1).
- [45] Piza, E. L., Hatten, D. N., Carter, J. G., Baughman, J. H., and Mohler, G. O. (2023). Gunshot Detection Technology Time Savings and Spatial Precision: An Exploratory Analysis in Kansas City. *Policing: A Journal of Policy and Practice*, 17.
- [44]. Short, M. B., and Mohler, G. (2023). A Fully Bayesian, Logistic Regression Tracking Algorithm for Mitigating Disparate Misclassification. *International Journal of Forecasting*, 39(3), 1238-1252.
- [43] Brantingham, P. J., Mohler, G., and MacDonald, J. (2022). Changes in public–police cooperation following the murder of George Floyd. *PNAS Nexus* 1, no. 5.
- [42] MacDonald, J., Mohler, G., and Brantingham, P. J. (2022). Association between race, shooting hot spots, and the surge in gun violence during the COVID-19 pandemic in Philadelphia, New York and Los Angeles. *Preventive medicine*, 107241.
- [41] Sledge, D., Thomas, H., Hoang, B. and Mohler, G. Impact of Medicaid, (2022). *Race/Ethnicity*,

and Criminal Justice Referral on Opioid Use Disorder Treatment. *Journal of the American Academy of Psychiatry and the Law*, 210137.

[40] Chiang, W. H., Liu, X., and Mohler, G. (2022). Hawkes process modeling of COVID-19 with mobility leading indicators and spatial covariates. *International Journal of Forecasting*, 38(2), 505-520.

[39] Mohler, G., S. Mishra, B. Ray, L. Magee, P. Huynh, M. Canada, D. O'Donnell, and S. Flaxman. (2021). A modified two-process Knox test for investigating the relationship between law enforcement opioid seizures and overdoses. *Proceedings of the Royal Society A* 477, no. 2250, 20210195.

[38] Brantingham, P. J., Carter, J., MacDonald, J., Melde, C., and Mohler, G. (2021). Is the recent surge in violence in American cities due to contagion?. *Journal of Criminal Justice*, 76, 101848.

[37] Mohler, G., and Porter, M. D. (2021). A note on the multiplicative fairness score in the NIJ recidivism forecasting challenge. *Crime Science*, 10(1), 1-5.

[36] Carter, Jeremy G., George Mohler, Rajeev Raje, Nahida Chowdhury, and Saurabh Pandey. (2021). The Indianapolis harmspot policing experiment. *Journal of Criminal Justice* 74, 101814.

[35] Jeffrey Brantingham, P., Tita, G. E., and Mohler, G. (2021). Gang-related crime in Los Angeles remained stable following COVID-19 social distancing orders. *Criminology & Public Policy*.

[34] Khorshidi, S., Carter, J., Mohler, G., and Tita, G. (2021). Explaining crime diversity with Google street view. *Journal of Quantitative Criminology*, 1-31.

[33] Mohler, G., Short, M. B., Schoenberg, F., and Sledge, D. (2021). Analyzing the impacts of public policy on COVID-19 transmission: A case study of the role of model and dataset selection using data from Indiana. *Statistics and Public Policy*, 8(1), 1-8.

[32] Sha, H., Al Hasan, M., and Mohler, G. (2021). Learning network event sequences using long short-term memory and second-order statistic loss. *Statistical Analysis and Data Mining: The ASA Data Science Journal*, 14(1), 61-73.

[31] Guber, N., Mohler, G., Huynh, P., Arkins, T., O'Donnell, D., Carter, J. and Ray, B., (2020). Impact of COVID-19 Pandemic on Drug Overdoses in Indianapolis. *Journal of Urban Health*, 1-6.

[30] Mohler, G., McGrath, E., Buntain, C., and LaFree, G. (2020). Hawkes binomial topic model with applications to coupled conflict-twitter data. *Annals of Applied Statistics*, 14(4), 1984-2002.

[29] Liu, X., Carter, J., Ray, B., and Mohler, G. (2021). Point process modeling of drug overdoses with heterogeneous and missing data. *The Annals of Applied Statistics*, 15(1), 88-101.

[28] Andrea L Bertozzi, Elisa Franco, George Mohler, Martin B Short, Daniel Sledge. (2020). The challenges of modeling and forecasting the spread of COVID-19. *Proceedings of the National Academy of Sciences*. 117 (29), 16732-16738.

[27] Mohler, G., Bertozzi, A., Carter, J.G., Short, M.B., Sledge, D., Tita, G., Uchida, C. and Brantingham, P.J. (2020). Impact of social distancing during COVID-19 pandemic on crime in Los Angeles and Indianapolis. *Journal of Criminal Justice* (68).

[26] Daniel Smolyak, Kathryn Gray, Sarkhan Badirli, and George Mohler. (2020). Coupled IGMM-GANs with Applications to Anomaly Detection in Human Mobility Data. *ACM Trans. Spatial Algorithms Syst.* 6 (4).

[25] Mohler, G., Porter, M., Carter, J., and LaFree, G. (2020). Learning to rank spatio-temporal event hotspots. *Crime Science*, 9(1), 1-12.

[24] G. Mohler., P.J. Brantingham, J. Carter, and M.B. Short. Reducing bias in estimates for the

law of crime concentration. *Journal of Quantitative Criminology*, (2019), 1-19.

[23] G. Mohler and M. Porter. Rotational grid, PAI maximizing crime forecasts. *Statistical Analysis and Data Mining* (2018), 1-10. DOI 10.1002/sam.11389

[22] Y. Cheng, M. Dundar, and G. Mohler. A coupled ETAS-I2GMM point process with applications to fault detection. *Annals of Applied Statistics*, 12 (3) (2018), 1853-1870.

[21] J. Brantingham, M. Valasik, and G. Mohler. Does Predictive Policing Lead to Biased Arrests? Results from a Randomized Controlled Trial. *Statistics and Public Policy*, 5 (1), (2018).

[20] J. Carter, G. Mohler, and B. Ray. Spatial Concentration of Opioid Overdose Deaths in Indianapolis: An Application of the Law of Crime Concentration at Place to a Public Health Epidemic. *Journal of Contemporary Criminal Justice* (2018). DOI 10.1177/1043986218803527

[19] S. Khorshidi, M. Al Hasan, G. Mohler, and M. Short. The role of graphlets in viral processes on networks. *Journal of Nonlinear Science*. 2018. <https://doi.org/10.1007/s00332-018-9465-y>

[18] G. Mohler, J. Carter, and R. Raje. Improving social harm indices with a modulated Hawkes process. *International Journal of Forecasting*, 34 (3), (2018) 431-439.

[17] G. Mohler, M.B. Short, and P.J. Brantingham. "The concentraion-dynamics tradeoff in crime hot spotting" in *Unravelling the Crime Place Connection* (Ed. David Weisburd and John Eck). (2017).

[16] G. Mohler, M.B. Short, S. Malinowski, M. Johnson, G.E. Tita, A.L. Bertozzi, and P.J. Brantingham, Randomized controlled field trials of predictive policing, *Journal of the American Statistical Association*, 110 (512), (2015) 1399-1411.

[15] J. T. Woodworth, G. Mohler, A. L. Bertozzi and P. J. Brantingham, Non-local crime density estimation incorporating housing information, *Philosophical Transactions of the Royal Society A*, 372 (2028) (2014), 15 pages.

[14] G. Mohler, Marked point process hotspot maps for homicide and gun crime prediction in Chicago, *International Journal of Forecasting*, 30 (2014), 491.

[13] G. Mohler, Modeling and estimation of multi-source clustering in crime and security data, *Annals of Applied Statistics*, 7 (3) (2013), 1866.

[12] G. Mohler, Discussion of: Estimating the historical and future probabilities of large terrorist events, *Annals of Applied Statistics*, 7 (4) (2013), 1525.

[11] M. Short, G. Mohler, P. J. Brantingham, and G. Tita, Gang rivalry dynamics via coupled point process networks, *Discrete and Continuous Dynamical Systems*, 34 (2014), 1459.

[10] D. Sledge and G. Mohler, Eliminating malaria in the American South: An analysis of the decline of malaria in 1930s Alabama, *American Journal of Public Health*, 103 (8) (2013), 1381.

[9] G. Mohler and M. Short, Geographic profiling from kinetic models of criminal behavior, *SIAM J. Applied Math.*, 72 (1) (2012), 163.

[8] E. Lewis, G. Mohler, P. J. Brantingham, and A. Bertozzi, Self-exciting point process models of civilian deaths in Iraq, *Security Journal*, 25 (3) (2012), 244.

[7] G. Mohler, M. Short, P. Brantingham, F. Schoenberg, and G. Tita, Self-exciting point process modeling of crime, *Journal of the American Statistical Association*, 106 (493) (2011), 100.

[6] M. G. Ascenzi, C. Blanco, I. Drayer, H. Kim, R. Wilson, K. Retting, K. Lyons, and G. Mohler, Effect of localization, length and orientation of chondrocytic primary cilium on murine growth plate organization, *Journal of Theoretical Biology*, 285 (1) (2011), 147.

- [5] G. Mohler , A. Bertozzi, T. Goldstein and S. Osher, Fast TV Regularization for 2D Maximum Penalized Likelihood Estimation, *Journal of Computational and Graphical Statistics*, 20 (2) (2011), 479.
- [4] L. Smith, M. Keegan, T. Wittman, G. Mohler, and A. Bertozzi, Improving density estimation by incorporating spatial information, *EURASIP Journal on Advances in Signal Processing*, Vol 2010, 12 pages.
- [3] H. D. Cenicerros, G. H. Fredrickson, and G. O. Mohler, Coupled flow-polymer dynamics via statistical field theory: modeling and computation, *Journal of Computational Physics*, 228 (5) (2009), 1624.
- [2] E. M. Lennon, G. O. Mohler, H. D. Cenicerros, C. J. Garcia-Cervera, and G. H. Fredrickson, Numerical solutions of the complex Langevin equations in polymer field theory, *Multiscale Modeling and Simulation*, 6 (4) (2008), 1347.
- [1] H. D. Cenicerros and G. O. Mohler, A practical splitting method for stiff SDEs with applications to problems with small noise, *Multiscale Modeling and Simulation*, 6 (1) (2007), 212.

CONFERENCE PUBLICATIONS

- [18] Chiang, W. and Mohler, G. (2025). Upper confidence bound multi-armed bandits for partially observed Hawkes processes. *International Joint Conference on Neural Networks (IJCNN 2025)*.
- [17] Diouane, Y., Schoenberg, F., and Mohler, G. (2024). Accurate estimation of cross-excitation in multivariate Hawkes process models of infectious diseases. *The 11th IEEE International Conference on Data Science and Advanced Analytics (DSAA 2024)*. Best paper award, research track.
- [16] Pandey, R., Carter, J., Hill, J., and Mohler, G. (2023). Rewiring police officer training networks to reduce forecasted use of force. *Proceedings of 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, (KDD 2023)*.
- [15] Manring, I, Hill, J., Mohler, G., P.J. Brantingham, Williams, T., and White, B. Low-Cost Gunshot Detection System with Localization for Community Based Violence Interruption. *The 10th IEEE International Conference on Data Science and Advanced Analytics (DSAA 2023)*.
- [14] Chiang, Wen-Hao and George Mohler. Hawkes Process Multi-armed Bandits for Search and Rescue. *IEEE International Conference on Machine Learning Applications (ICMLA 2022)*.
- [13] Khorshidi, Samira, Wang, Bao, and George Mohler. Adversarial Attacks on Deep Temporal Point Process. *IEEE International Conference on Machine Learning Applications (ICMLA 2022)*.
- [12] Badirli, Sarkhan, Zeynep Akata, George Mohler, Christine Picard, and Murat Dundar. Fine-Grained Zero-Shot Learning with DNA as Side Information. *Advances in Neural Information Processing Systems (NeurIPS 2021)*.
- [11] Sha, Hao, Mohammad Al Hasan, and George Mohler. Group Link Prediction Using Conditional Variational Autoencoder. In *Proceedings of the International AAAI Conference on Web and Social Media*, vol. 15, pp. 656-667. 2021.
- [10] Sha, Hao, Mohammad Al Hasan, and George Mohler. Source detection on networks using spatial temporal graph convolutional networks. *2021 IEEE International Conference on Data Science and Advanced Analytics (DSAA)*. IEEE, 2021.
- [9] Khorshidi, S., G. Mohler, and J.G. Carter. Assessing GAN-based approaches for generative modeling of crime text reports. *2020 IEEE International Conference on Intelligence and Security Informatics (ISI)*. IEEE, 2020.

- [8] Pandey, S., Chowdhury, N., Raje, R. R., Mohler, G., and Carter, J. (2019). Trust Estimation of Historical Social Harm Events in Indianapolis Metro Area. In 2019 IEEE International Smart Cities Conference (ISC2) (pp. 193-198). IEEE.
- [7] Carr, T., Zhuang, J., Sablan, D., LaRue, E., Wu, Y., Al Hasan, M., and Mohler, G. (2019). Into the Reverie: Exploration of the Dream Market. In 2019 IEEE International Conference on Big Data (Big Data) (pp. 1432-1441). IEEE.
- [6] J. Lu, S. Sridhar, R. Pandey, M. Al Hasan, and G. Mohler, Investigate Transitions into Drug Addiction through Text Mining of Reddit Data. Proceedings of 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining, (KDD 2019).
- [5] Pandey, R., and Mohler, G. O. (2018). Evaluation of crime topic models: topic coherence vs spatial crime concentration. In 2018 IEEE International Conference on Intelligence and Security Informatics (ISI) (pp. 76-78). IEEE.
- [4] R. Vijayan and G. Mohler. Forecasting retweet count during elections using graph convolution neural networks. IEEE International Conference on Data Science and Advanced Analytics (DSAA 2018).
- [3] S. Pandey, N. Chowdhury, M. Patil, R. Raje, G. Mohler, and J. Carter. CDASH: Community data analytics for social harm. IEEE International Smart Cities Conference (ISC2 2018).
- [2] G. Mohler, R. Raje, J. Carter, M Valasik, and P.J. Brantingham. A penalized likelihood method for balancing accuracy and fairness in predictive policing. IEEE International Conference on Systems, Man, and Cybernetics (SMC2018).
- [1] G. Mohler, Learning convolution filters for inverse covariance estimation of neural network connectivity, Advances in Neural Information Processing Systems (NeurIPS 2014).

WORKSHOP PUBLICATIONS

- [13] H. Sha, M. Al Hasan, J. Carter and G. Mohler. Interpretable Hawkes Process Spatial Crime Forecasting with TV-Regularization. In 2020 IEEE International Conference on Big Data (Big Data).
- [12] J. Wong, H. Sha, M. Al Hasan, G. Mohler, S. Becker, and C. Wiltse. Automated Corn Ear Height Prediction Using Video-Based Deep Learning. In 2020 IEEE International Conference on Big Data (Big Data) .
- [11] S. Khorshidi, J. Carter, and G. Mohler. Repurposing recidivism models for forecasting police officer use of force. In 2020 IEEE International Conference on Big Data (Big Data).
- [10] H. Sha, M. Al Hasan, P.J. Brantingham, and G. Mohler. (2020). Dynamic topic modeling of the COVID-19 Twitter narrative among U.S. governors and cabinet executives. 5th International Workshop on Social Sensing (SocialSens 2020).
- [9] R. Pandey, P.J. Brantingham, C. Uchida, and G. Mohler. Building knowledge graphs of homicide investigation chronologies. International Workshop on Mining and Learning in the Legal Domain (MLLD-2020).
- [8] Morehead, A., Ogden, L., Magee, G., Hosler, R., White, B., and Mohler, G. (2019). Low Cost Gunshot Detection using Deep Learning on the Raspberry Pi. In 2019 IEEE International Conference on Big Data (Big Data) (pp. 3038-3044). IEEE.
- [7] Stanhope, A., Sha, H., Barman, D., Al Hasan, M., and Mohler, G. (2019). Group Link Prediction. In 2019 IEEE International Conference on Big Data (Big Data) (pp. 3045-3052). IEEE.

- [6] W. Chiang, B. Yuan, H. Li, B. Wang, A. Bertozzi, J. Carter, B. Ray, and G. Mohler. System for Overdose Spike Early Warning using Drug Mover's Distance-based Hawkes Processes. ECML-PKDD Workshop on Data Science for Social Good, 2019.
- [5] Baas, A., Hung, F., Sha, H., Al Hasan, M., and Mohler, G. (2018). Predicting Virality on Networks Using Local Graphlet Frequency Distribution. In 2018 IEEE International Conference on Big Data (Big Data) (pp. 2475-2482). IEEE.
- [4] Gray, K., Smolyak, D., Badirli, S., and Mohler, G. (2018). Coupled IGMM-GANs for improved generative adversarial anomaly detection. In 2018 IEEE International Conference on Big Data (Big Data) (pp. 2538-2541). IEEE.
- [3] G. Mohler, M. Porter, J. Carter, and G. LaFree. Learning to rank spatio-temporal event hotspots. 7th International Workshop on Urban Computing (UrbComp 2018).
- [2] G. Mohler and Jeff Brantingham. Privacy preserving, crowd sourced crime Hawkes process. Third Annual International Workshop on Social Sensing (SocialSens 2018).
- [1] Ramaiah, C., Tran, A., Cox, E. and Mohler, G. Deep learning for driving detection on mobile phones. KDD Workshop on Machine learning for large scale transportation systems. ACM 2016.

BOOK CHAPTERS

- [2] Chen, B., Shrestha, P., Bertozzi, A. L., Mohler, G., and Schoenberg, F. (2022). A Novel Point Process Model for COVID-19: Multivariate Recursive Hawkes Process. In Predicting Pandemics in a Globally Connected World, Volume 1 (pp. 141-182). Birkhäuser, Cham.
- [1] Mohler, G., Short, M. B., and Brantingham, P. J. (2017). The concentration-dynamics tradeoff in crime hot spotting. In Unraveling the crime-place connection (pp. 19-39). Routledge.

TALKS

- ASA Law and Justice Statistics Webinar, September 2025.
- Towson University, Baltimore, February 2025.
- University of Pennsylvania Criminology Colloquium, Philadelphia, October 2024.
- 2nd IOF Workshop on Gun Violence, National Institute of Statistical Sciences, May 2024.
- Plenary Talk at METMA-LATAM, Quito, June 2023.
- King Abdullah University of Science and Technology (virtual), Thuwal, February 2023.
- American Society of Criminology Annual Meeting, Atlanta, November 2022.
- Crime Rates During the Pandemic Workshop, National Academy of Science, Washington D.C., November 2022.
- Academy of Criminal Justice Sciences Annual Meeting, Las Vegas, March 2022.
- Boston College, Boston, February 2022.
- Georgetown University, Washington D.C., February 2022.
- Oregon State University (virtual), Corvallis, May 2021.
- University of California (virtual), Los Angeles, May 2020.
- University of Maryland, College Park, November 2019.
- NIMBIOS Workshop on Mathematics of Gun Violence, Knoxville, May 2019.

Banff International Research Station, Workshop on Mathematical Criminology, Banff, March 2019.

University of Virginia Data Science Institute, Charlottesville, March 2019.

American Society of Criminology, Atlanta, November 2018.

Invited panel participant, "So You Think You Can Predict Crime? Lessons Learned from the NIJ Spatiotemporal Crime Forecasting Competition," Joint Statistics Meetings, Vancouver, July 2018.

Third International Workshop on Social Sensing, Orlando, April 2018.

Resilience Week, Wilmington, September 2017.

Canadian Applied and Industrial Mathematics Society Annual Meeting, Halifax, July 2017.

SIAM Annual Meeting, Pittsburgh, July 2017. Invited tutorial on "The mathematics of crime."

Applied Mathematics Seminar, Georgia Tech, April 2017.

International Conference on Computational and Methodological Statistics, Seville, December 2016.

Department of Sociology, Montana State University, November 2016.

Institute of Transportation Studies, UC Berkeley, September 2016.

Department of Computer and Information Science, IUPUI, February 2016.

Department of Statistics , Oregon State University, February 2016.

Department of Statistics, Depaul University, February 2016.

Department of Statistics , Loyola University Chicago, February 2016.

Department of Operations and Information Systems , University of Utah, June 2015.

Analytics Seminar, University of San Francisco, February 2015.

Northgate High School, Walnut Creek, January 2015.

ESADE Executive Development Seminar, Santa Clara, June 2014.

Security Forum, Barcelona, May 2014.

Presentation High School, San Jose, February 2014.

SJSU Math Colloquium, San Jose, December 2013.

CAFFEET '13, Palo Alto, November 2013.

University of San Francisco Math Colloquium, San Francisco, October 2013.

ESADE Big Data: The New Internet Revolution conference, Barcelona, September 2013.

Joint Statistical Meetings, Montreal, August 2013.

Careers in Math Seminar, BYU, Provo, March 2013.

Woodside Priory High School, Woodside, January 2013.

PIMS Workshop on Computational Criminology, Vancouver, September 2012.

AIMS Conference on differential equations and dynamical systems, Orlando, July 2012.

Institute of Geophysics and Planetary Physics, UCSC, February 2012.

American Society of Criminology Annual Meeting, Washington D. C., November 2011.

Mathematics Department Colloquium, Sonoma State University, September 2011.

Joint Mathematics and Anthropology Department Colloquium, Santa Clara University, April 2011.

Sonoma County Law Enforcement Chiefs Association Training Conference, San Francisco, March 2011.

Joint AMS-MAA Annual Meeting, Special Session on Self-Organization in Human, Biological, and Artificial Systems, New Orleans, January 2011.

Mathematics Department Colloquium, Instituto Tecnológico Autónomo de México, November 2010.

American Mathematical Society Fall Sectional Meeting, UCLA, October 2010.

Mathematics Department Colloquium, Boise State University, February 2010.

Mathematics and Computer Science Department Colloquium, Santa Clara University, February 2010.

Center for Analysis and Modeling of Security, Universidad de Chile, January 2010.

American Society of Criminology Annual Meeting, Philadelphia, November 2009.

ARO MURI Meeting, Mathematics Department, Brown University, October 2009.

Jill Dando Institute of Crime Science, University College London, July 2009.

Statistics Department Seminar, UCLA, June 2009.

Statistics Department Colloquium, Indiana University, November 2008.

PROFESSIONAL SERVICE

Member, ASA committee on law and justice statistics, 2023-present.

Workshop co-chair, 31st ACM International Conference on Information and Knowledge Management, 2022.

Program co-chair, 6th International Workshop on Social Sensing (SocialSens 2021).

Co-organizer and general chair, IEEE BigData Workshop on Data Science for Smart and Connected Communities, 2020.

Co-organizer and program committee chair, IEEE BigData Special Symposium: National Symposium for NSF REU Research in Data Science, Systems, and Security 2018, 2019.

Program committee member for SocialSens 2018, 2019, 2020 and IEEE Smart Cities Conference 2018, 2019. Reviewer for NIPS and AAAI.

Reviewer for the following journals: Journal of the Royal Statistical Society A and B, Journal of the American Statistical Association, Journal of Computational and Graphical Statistics, Statistics and Computing, IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Information Theory, Multiscale Modeling and Simulation, Annals of Applied Statistics, Annals of Statistics, SIAM J. on Applied Mathematics, International Journal of Forecasting, Nonlinear Processes in Geophysics, Applied Mathematics Research Express, Journal of Criminal Justice, Canadian Journal of Criminology and Criminal Justice, American Journal of Criminal Justice, Criminology and Public Policy, Journal of Quantitative Criminology, Discrete and Continuous Dynamical Systems, Nature Human Behavior, Nature Machine Intelligence, Proceedings of the National Academy of Sciences

Co-organizer (with Kevin Novak, Uber) of 2016 KDD Workshop on Machine Learning for Large Scale Transportation Systems. Guest editor for special issue of Transactions on Intelligent Transportation Systems.

Co-organizer (with Andrea Bertozzi and Martin Short) of the special session: Mathematics of Criminality, AMS Fall Section meeting, Los Angeles, 2010.

Panelist for NSF REU program and reviewer for NSF program on methodology measurement and statistics.

POSTDOCTORAL FELLOWS ADVISED

Alex Knorre, 2023-2025. Starting as Assistant Professor at University of South Florida in Fall 2025.

Youness Diouane, 2023-2025.

GRADUATE STUDENTS ADVISED

Ritika Pandey, PhD IUPUI 2023, first employment: Research Assistant Professor, Boston College School of Social Work.

Samira Khorshidi, PhD IUPUI 2022, first employment: Apple.

Xiuying Liu, PhD IUPUI 2022, first employment: Postdoctoral Fellow, St. Jude Children's Research Hospital.

Wen-Hao Chiang, PhD IUPUI 2022, first employment: Amazon.

Hao Sha, PhD IUPUI 2021, first employment: Career Builder.

Bo Peng, MS IUPUI 2019, currently PhD student at Ohio State.

Raghavendran Vijayan, MS IUPUI 2018, first employment: Palo Alto Networks.

UNDERGRADUATE REU STUDENTS ADVISED

J. Mullen, An otree experimental platform for testing AI deterrence strategies in online python exams, Boston College, 2024.

S. Oliver and S. Penrice, Changes in the reproduction number of mass shootings in the United States following the COVID-19 pandemic, Boston College, 2023.

G. Magee, A. Morehead, and L. Ogden, Low-cost gun shot detection using deep learning on the Raspberry Pi. IUPUI, summer 2019.

Kathryn Gray and Daniel Smolyak. Coupled IGMM-GANs for improved generative adversarial anomaly detection in mobility data. IUPUI, summer 2018.

Ryan Hosler and March Saper. RaspBary: Hawkes Point Process Wasserstein Barycenters as a Service. IUPUI, summer 2018.

Elvis Nunez, My Dinh and Kristina Swift. Point process modeling of social harm. IUPUI, summer 2017.

Daljeet Viridi, Machine learning algorithms for driver finger printing, SCU, winter 2015.

David Nola, Design of algorithms for epileptic seizure prediction from EEG data, SCU, summer 2014.

Vanessa Casalegno and Connor Zellmer, Optimal patrol route design using a TSP-type annealing algorithm, SCU, summer 2013.

Bobby Fatemi, Data visualization and analytics software for SCU bike thefts, SCU, summer 2012.

Austen Alleman, Geographic profiling through 6D nonparametric density estimation, SCU, summer 2011.

Christian Blanco, Ian Drayer, Hannah Kim, and Ryan Wilson, Modeling and simulation of bone cell division and organization, UCLA, summer 2010.

Tony DeCino and Tawny Lim, Numerical simulation and stability analysis of point process-networks, UCLA, Fall 2009.

Bryant Hirai and Kit Curtius, Statistical inference for anomalous diffusion with trapping with applications to geographic profiling, UCLA, Summer 2009.

Kym Louie, Michael Egesdal, Jeremy Neuman, Chris Fathauer, Statistical and stochastic modeling of gang rivalries in Los Angeles, UCLA and Harvey Mudd College, Summer 2009.

Daniel Salazar, Adaptive integration for a field theoretic model of polymer phase separation, UCSB, Summer 2007.