Eric Yanchenko

Akita International University Global Connectivity Program ericyanchenko.com eyanchenko@aiu.ac.jp

| Education | NORTH CAROLINA STATE UNIVERSITY2023PhD, StatisticsAdvisors: Dr. Brian Reich and Dr. Srijan Sengupta |
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| | THE OHIO STATE UNIVERSITY2019B.S. Mathematics, B.S. Physics. Statistics Minorwith Honors in the Arts and Sciences, Summa Cum Laude |
| Positions | AKITA INTERNATIONAL UNIVERSITY Assistant Professor of AI & Data Science (tenure-track), Global Connectivity Pro- gram 2024-Presen |
| | Токуо Institute of Technology JSPS Short-term Fellow, Dr. Petter Holme, Dr. Tsuyoshi Murata 2023 |
| | NORTH CAROLINA STATE UNIVERSITYResearch Assistant, Dr. Brian Reich2020-2023Research Assistant, Dr. Srijan Sengupta2020-2023Duke Clinical Research Institute NHBLI Integrated Biostatistical Training Programfor CVD research T32 training grant trainee, Dr. Hwanhee Hong2021-2023Data-Enabled Science and Engineering of Atomic Structures Fellow2020-2023 |
| | THE OHIO STATE UNIVERSITY2015-2019Research Assistant, Department of Physics, Dr. Leonard Brillson2015-2019Research Assistant, Department of Statistics, Dr. Christopher Hans2016 |
| | UNIVERSITY OF MICHIGAN Participant, Big Data Summer Institute, Dr. Jenna Wiens, Dr. Danai Koutra 2018 |
| | JUSTUS-LIEBIG UNIVERSITY Research Assistant, Institute of Applied Physics, Dr. Derck Schlettwein 2017 |
| Publications | Yanchenko, E. and Sengupta, S., (2024+) A generalized hypothesis test for com- munity structure in networks, <i>Network Science</i> , 1-17. https://doi.org/10.1017/ nws.2024.1 |
| | Yanchenko, E., Stevens, S.R., Burns, L., Wruck, L., Hong, H. (2024+) Effect of imbalanced treatment allocation ratio on combining multiple historical controls in clinical trials, <i>Submitted</i> . |
| | Yanchenko, E., Bondell, H.D. and Reich, B.J. (2024) Spatial regression model- ing via the R2D2 framework, <i>Environmetrics</i> , 35 (2), e2829. http://doi.org/10. 1002/env.2829 |

Yanchenko, E., Murata, T. and Holme, P. (2023) Link prediction for ex ante influence maximization on temporal networks, *Applied Network Science*, 8, 70. https://doi.org/10.1007/s41109-023-00594-z

Yanchenko, E. (2023+) BOPIM: Bayesian Optimization for influence maximization on temporal networks, arXiv link: https://arxiv.org/abs/2308.04700

Yanchenko, E., Murata, T. and Holme, P. (2023+) Influence maximization on temporal networks: a review, arXiv link: https://arxiv.org/abs/2307.00181

Swaminathan, A.C., Snyder, L.D., Hong, H., Stevens, S.R., Long, A.S., Yanchenko, E., Qiu, Y., Liu, R., Zhang, H., Fischer, A., Burns, L., Wruck, L., Palmer, S.M. (2023) Generalizability of External Clinical Trial and Electronic Health Record Control Arms in Idiopathic Pulmonary Fibrosis, *American Journal of Respiratory and Critical Care Medicine*, 208 (5), 579-588. https://doi.org/10.1164/rccm.202210-19470C.

Yanchenko, E. and Sengupta, S. (2023) Core-periphery structure in networks: a statistical exposition, *Statistics Surveys*, **17**, 42-74, https://doi.org/10.1214/23-SS141

Yanchenko, E. (2022) A divide-and-conquer algorithm for core-periphery identification in large networks. *Stat.* pp. e475. https://doi.org/10.1002/sta4.475

Yanchenko, E., Bondell, H.D. and Reich, B.J., (2021+) The R2D2 prior for generalized linear mixed models, arXiv link: https://arxiv.org/abs/2111.10718

Asel, T., Yanchenko, E., Yang, X., Jiang, S., Krymowski, K., Wang, Y., Trout, A., McComb, D., Windl, W., Goldberger, J., Brillson, L., (2018) Identification of Ge Vacancies as Electronic Defects in Methyl- and Hydrogen-Terminated Germanane, *Applied Physics Letters*, **113**, 061110.

Jiang, S., Krymowski, K., Asel, T., Arguilla, M., Cultrara, N., Yanchenko, E., Yang, X., Brillson, L., Windl W., Goldberger, J.G., (2016) Tailoring the Electronic Structure of Covalently Functionalized Germanane via the Interplay of Ligand Strain and Electronegativity, *Chemistry of Materials*, **28**, 8071-8077.

Presentations The R2D2 prior for generalized linear mixed models, 6th International Conference on Statistics and Econometrics (EcoSta 2023), Waseda University, Tokyo, Japan 2023 Spatial regression modeling via the R2D2 framework, Workshop on Bayesian Statistics and Econometrics, Temple University Japan, Tokyo, Japan 2023Comparing Bayesian methods for combining multiple historical controls in clinical trials, Annual Meeting of the Japanese Society of Biometrics, Sapporo, Japan 2023 The R2D2 prior for generalized linear mixed models, Faculty of Economics, The University of Tokyo, Tokyo, Japan 2023A generalized hypothesis test for community structure in networks, Center for Computational Social Science, Kobe University, Kobe, Japan 2023 A divide-and-conquer algorithm for core-periphery identification in large networks, Invited talk, North Carolina State University, Raleigh, NC 2022 A divide-and-conquer algorithm for core-periphery identification in large networks (poster), SRCOS Summer Research Conference, Jekvll Island, GA 2022 A generalized hypothesis test for community structure and homophily in networks, Sunbelt 2022, INSNA, Cairns, Australia 2022 Quantifying the presence/absence of meso-scale structures in networks, North Carolina State University, Raleigh, NC 2022

| | A model-agnostic hypothesis test for community structure and homophily in net (poster), <i>SRCOS Summer Research Conference</i> , Jekyll Island, GA A model-agnostic hypothesis test for community structure and homophily in works, <i>Joint Statistical Meeting</i> , Seattle, WA Big Data Summer Institute Symposium and Poster Session, Ann Arbor, MI | works 2021 n net- 2021 2018 |
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| Teaching | Teaching Assistant, ST 758 (Advanced Statistical Computing), NCSU Introduction to Bayesian inference lecture for astrostatistics group, NCSU Guest lecture for ST740 (Advanced Bayesian Inference, NCSU), Bayesian Vo Selection Guest lecture for ST758 (Advanced Statistical Computing, NCSU), Networks, munity Structure and Combinatorial Optimization Instructor for statistics first-year PhD qualifying exam boot camp Wrote and recorded tutorial for SEAS program on p-values / hypothesis testin | 2023 2023 uriable 2022 Com- 2021 2021 g2021 |
| Reviewer service | Served as a peer-reviewer for the following journals: IEEE Transactions on Network Science and Engineering Journal of the American Statistical Association – Theory & Methods Journal of Computational and Graphical Statistics Journal of Statistical Software Scientific Reports Statistical Methods in Medical Research | |
| Awards | Travel Award, ISBA World Meeting, \$300 (declined) Clint Miller Award (best graduate student poster), SRCOS Summer Research ference NC State Datathon, 3rd Place Paige Plagge Graduate Award for Citizenship, NCSU Statistics Department Awarded for good citizenship to "a graduate student with an outstanding academic record, who in the judgment of the committee has especially enhanced the life of fellow students with encouragement, generosity and/or humor." | 2022 Con- 2021 2021 2020 |
| | Provost Doctoral Fellowship, NCSU Graduate School, \$24,0002019University Graduate Fellowship, NCSU Graduate School, \$4,0002019Phi Beta Kappa2019 |)-2020)-2020 2019 |
| Service | Department of Statistics Seminar Committee, NCSU NC State-Duke Summer Institute in Biostatistics Graduate Student Mentor GRAD-Future Workshop Panelist, NCSU Climate Committee, Department of Statistics, NCSU 2021 Started an English Conversation Club in NCSU Dept. of Stat. where four international students and two domestic students met weekly to encourage do ment camaraderie while also teaching idioms and other American-English spec conventions to the international students 2019 | 2023 2022 2022 1-2022 to six epart- eaking 9-2023 |
| Languages | English: Native Japanese: JLPT N5/N4 | |