

# Eric Yanchenko

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- Education**
- NORTH CAROLINA STATE UNIVERSITY 2023  
PhD, Statistics  
Advisors: Dr. Brian Reich and Dr. Srijan Sengupta
- THE OHIO STATE UNIVERSITY 2019  
B.S. Mathematics, B.S. Physics. Statistics Minor  
*with Honors in the Arts and Sciences, Summa Cum Laude*
- Positions**
- AKITA INTERNATIONAL UNIVERSITY  
Assistant Professor of AI & Data Science (tenure-track), Global Connectivity Program 2024-Present
- TOKYO INSTITUTE OF TECHNOLOGY  
JSPS Short-term Fellow, Dr. Petter Holme, Dr. Tsuyoshi Murata 2023
- NORTH CAROLINA STATE UNIVERSITY  
Research Assistant, Dr. Brian Reich 2020-2023  
Research Assistant, Dr. Srijan Sengupta 2020-2023  
Duke Clinical Research Institute NHBLI Integrated Biostatistical Training Program  
for CVD research T32 training grant trainee, Dr. Hwanhee Hong 2021-2022  
Data-Enabled Science and Engineering of Atomic Structures Fellow 2020-2021
- THE OHIO STATE UNIVERSITY  
Research Assistant, Department of Physics, Dr. Leonard Brillson 2015-2019  
Research Assistant, Department of Statistics, Dr. Christopher Hans 2018
- 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 community structure in networks, Accepted, *Network Science*, arXiv link: <https://arxiv.org/abs/2107.06093>
- 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, *Submitted*.
- Yanchenko, E.**, Bondell, H.D. and Reich, B.J. (2023) Spatial regression modeling via the R2D2 framework, *Environmetrics*, 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 2023  
Comparing 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 2023  
A 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*, Jekyll 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 networks (poster), <i>SRCOS Summer Research Conference</i> , Jekyll Island, GA	2021
	A model-agnostic hypothesis test for community structure and homophily in networks, <i>Joint Statistical Meeting</i> , Seattle, WA	2021
	Big Data Summer Institute Symposium and Poster Session, Ann Arbor, MI	2018
<b>Teaching</b>	Teaching Assistant, ST 758 (Advanced Statistical Computing), NCSU	2023
	Introduction to Bayesian inference lecture for astrostatistics group, NCSU	2023
	Guest lecture for ST740 (Advanced Bayesian Inference, NCSU), <i>Bayesian Variable Selection</i>	2022
	Guest lecture for ST758 (Advanced Statistical Computing, NCSU), <i>Networks, Community Structure and Combinatorial Optimization</i>	2021
	Instructor for statistics first-year PhD qualifying exam boot camp	2021
	Wrote and recorded tutorial for SEAS program on $p$ -values / hypothesis testing	2021
<b>Reviewer service</b>	Served as a peer-reviewer for the following journals: <i>IEEE Transactions on Network Science and Engineering</i> <i>Journal of the American Statistical Association – Theory &amp; Methods</i> <i>Journal of Computational and Graphical Statistics</i> <i>Journal of Statistical Software</i> <i>Scientific Reports</i> <i>Statistical Methods in Medical Research</i>	
<b>Awards</b>	Travel Award, <i>ISBA World Meeting</i> , \$300 (declined)	2022
	Clint Miller Award (best graduate student poster), <i>SRCOS Summer Research Conference</i>	2021
	NC State Datathon, 3rd Place	2021
	Paige Plagge Graduate Award for Citizenship, NCSU Statistics Department <i>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.”</i>	2020
	Provost Doctoral Fellowship, NCSU Graduate School, \$24,000	2019-2020
	University Graduate Fellowship, NCSU Graduate School, \$4,000	2019-2020
	Phi Beta Kappa	2019
<b>Service</b>	Department of Statistics Seminar Committee, NCSU	2023
	NC State-Duke Summer Institute in Biostatistics Graduate Student Mentor	2022
	GRAD-Future Workshop Panelist, NCSU	2022
	Climate Committee, Department of Statistics, NCSU	2021-2022
	Started an English Conversation Club in NCSU Dept. of Stat. where four to six international students and two domestic students met weekly to encourage department camaraderie while also teaching idioms and other American-English speaking conventions to the international students	2019-2023
<b>Languages</b>	English: Native Japanese: JLPT N5	