

Nathaniel Josephs

ACADEMIC EXPERIENCE

North Carolina State University

- Assistant Professor of Statistics

2023 – Present

Yale University

- Postdoctoral Associate
 - Supervisor: Forrest Crawford

2021 – 2023

EDUCATION

Boston University, Boston, MA

- Doctor of Philosophy in Statistics
 - Dissertation Advisor: Eric D. Kolaczyk

2017 – 2021

Wesleyan University, Middletown, CT

- Master of Arts in Mathematics
 - Thesis Advisor: Christopher Rasmussen

2014 – 2015

- Bachelor of Arts in Mathematics & Philosophy

2010 – 2014

Charles University, Prague, Czech Republic

- Undergraduate Program in Central European Studies

Fall 2015

PUBLICATIONS

SUBMITTED

- [2] Chia, S. Y., Swain, A., **Josephs, N.**, Lin, L. & Fagan, W. F. (2025+). Birds that don't exist: niche pre-emption as a constraint on morphological evolution in the Passeroidea. *bioRxiv*, 2025-09 (Conditionally accepted at *Ecology Letters*)
- [1] **Josephs, N.**, Amini, A., Paez, M., & Lin, L. (2025+). Nested stochastic block model for simultaneously clustering networks and nodes. *arXiv preprint arXiv:2307.09210* (Conditionally accepted at *Journal of Machine Learning Research*). — [Code](#)

PUBLISHED

- [10] **Josephs, N.**, & Upton, E. (2025+). Hypergraph adjusted plus-minus. To appear in *Journal of Quantitative Analysis in Sports*. — [Code](#)
- [9] **Josephs, N.**, Peng, S., & Crawford, F. W. (2024) Communication network dynamics in a large organizational hierarchy. *The Annals of Applied Statistics*. — [Code](#)
- [8] **Josephs, N.**, Feehan, D. M., & Crawford, F. W. (2024). A sample size formula for network scale-up methods. *Sociological Methods & Research*. — [Code](#)
- [7] Tannir, S., Pan, Y., **Josephs, N.**, Cunningham, C., Hendrick, N. R., Beckett, A., McNeely, J., Beeler, A., Jeffries-EL, M., & Kolaczyk, E. D. (2024) Predicting Emission Wavelengths in Benzobisoxazole-Based OLEDs with Gradient Boosted Ensemble Models. *The Journal of Physical Chemistry A*. — [Code](#)
- [6] Shen, L., Amini, A., **Josephs, N.**, & Lin, L. (2024). Bayesian community detection for networks with covariates. *Bayesian Analysis*. — [Code](#)
- [5] Chen, L., **Josephs, N.**, Lin, L., Zhou, J., & Kolaczyk, E. D. (2024). A spectral-based framework for hypothesis testing in populations of networks. *Statistica Sinica*.
- [4] **Josephs, N.**, Lin, L., Rosenberg, S., & Kolaczyk, E. D. (2023). Bayesian classification, anomaly detection, and survival analysis using network inputs with application to the microbiome. *The Annals of Applied Statistics*. — [Code](#)
- [3] **Josephs, N.**, Li, Wenrui & Kolaczyk, E. D. (2022). Network Recovery from Unlabeled Noisy Samples. *2021 55th Asilomar Conference on Signals, Systems, and Computers*. — [Code](#)
- [2] Thompson, L. L., Chang, M. S., Polyakov, N. J., Blum, A. E., **Josephs, N.**, ... , & Chen, S. T. (2021). Prognostic significance of cutaneous immune-related adverse events in patients with melanoma and other cancers on immune checkpoint inhibitors. *Journal of the American Academy of Dermatology*.
- [1] Condylis, C., Lowet, E., Ni, J., Bistrong, K., Ouellette, T., **Josephs, N.**, & Chen, J. L. (2020). Context-dependent sensory processing across primary and secondary somatosensory cortex. *Neuron*.

THESIS

[2] **Josephs, N.** (2021). Statistical Solutions for Multiple Networks. PhD dissertation.

[1] **Josephs, N.** (2015). Finding Rational Solutions on a Nonsingular Cubic Surface in \mathbb{P}^3 . MA thesis.

**JOURNAL
REVIEW**

- Annals of Applied Statistics
- Bayesian Analysis
- Computational Statistics and Data Analysis
- Data Science in Science
- Environmetrics
- Journal of the American Statistical Association, Applications and Case Studies
- Journal of the American Statistical Association, Theory and Methods
- Journal of Computational and Graphical Statistics
- Journal of Machine Learning Research
- Journal of the Royal Statistical Society: Series C
- Nature Communications
- Sankhya A
- Social Networks
- Statistics and Computing
- Statistica Sinica
- Statistics in Medicine

TEACHING

NCSU Department of Statistics

- *Instructor*
 - ST705, *Linear Models and Variance Components* Spring 2026
- *Instructor*
 - ST501, *Fundamentals of Statistical Inference I* Falls 2023 - 2025

[CV compiled on 2026-01-05]