Jonathan Stewart

CONTACT INFORMATION

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EDUCATION

Ph.D. in Statistics (Expected 2020), *Rice University*

Thesis: Statistical models, methods, and theory for exponential-family random graph models with overlapping block structure.

Committee: Dr. Michael Schweinberger (chair), Dr. Dennis Cox, and Dr. James Brown.

M.A. in Statistics (2018), *Rice University*

B.A. in Statistics (2013), *Rice University*

PAPERS UNDER REVIEW AND IN PREPARATION

1. **Stewart, J.** and Schweinberger, M. Generalized β-models with dependent edges and parameter vectors of increasing dimension, in preparation (2019).

2. Fujimoto, K., **Stewart, J.**, Westherim, J., Brauchle, N., Hallmark, C., Benbow, N., D'Aquila, R., Schneider, J.A., Schweinberger, M. Characterizing hotspot HIV transmission networks, in preparation (2019).

PUBLISHED / ACCEPTED PAPERS

3. Schweinberger, M., and **Stewart, J.** Concentration and consistency results for canonical and curved exponential-family models of random graphs. *Annals of Statistics*, to appear (2019). [PDF]

4. Schweinberger, M., Krivitsky, P. N., Butts, C. T., and **Stewart, J.** Exponential-family models of random graphs: Inference in finite-, super-, and infinite-population scenarios, *Statistical Science*, to appear (2019). [PDF]

5. **Stewart, J.**, Schweinberger, M., Morris, M., and Bojanowski, M. Multilevel network data facilitate statistical inference for curved ergms with geometrically weighted terms. *Social Networks*, 59 (2019), 98–119. [PDF]

6. Campbell, I. M., **Stewart, J. R.**, James, R. A., Lupski, J. R., Stankiewicz, P., Olofsson, P., and Shaw, C. A. Parent of origin, mosaicism, and recurrence risk: Probabilistic modeling explains the broken symmetry of transmission genetics. *The American Journal of Human Genetics*, 95 (4) (2014), 345–359. [PDF]

SOFTWARE

R package `mlergm` (*Creator, author, maintainer*)
Exponential-family random graph models for multilevel network data with known structure
More than 4,500 downloads since December, 2018

R package `hergm` (*Author*)
Hierarchical exponential-family random graph models with local dependence
More than 48,000 downloads

PRESENTATIONS AND SESSIONS

2020 Co-organizer, Workshop on Multilevel and Hierarchical Exponential-Family Random Random Graph Models With Local Dependence
International Sunbelt Social Networks Conference, Paris, France
(required by NSF award DMS-1812119)

International Conference on Computational and Methodological Statistics 2019, London, UK
Generalized β-models with dependent edges and parameter vectors of increasing dimension

International Sunbelt Social Network Conference
2019, Montreal, CA
Multilevel ERGMs with overlapping subsets of nodes: models, methods, and statistical theory

Joint Statistical Meeting, Section on Statistical Graphics
2012, San Diego, US
Graphical inference and the hanging rootogram

AWARDS

2019 Recipient of the James R. Thompson Student Award
Awarded annually by the Department of Statistics at Rice University for scholastic achievement

Travel Award, Department of Statistics, Rice University
Funding to attend and present at the 2019 CMStatistics conference

Travel Award, International Network for Social Network Analysis
Funding to attend and present at the 2019 INSNA Sunbelt conference in Montreal

Travel Award, Department of Statistics, Rice University
Funding to attend and present at the 2019 INSNA Sunbelt conference in Montreal

2012 Duncan College Master's Service Award, Rice University
Awarded once annually for outstanding service to the university and Duncan College

RESEARCH GRANTS

2018-2019 Consultant: NIH / NIMH award 1R01MH100021
YMAP: Young Men's Affiliation Project of HIV risk and prevention venue
PIs: Kayo Fujimoto, UTHealth Science Center, Houston and John A. Schneider, University of Chicago

SERVICE TO DEPARTMENT

Local co-organizer, technology and logistics
A Symposium on Optimal Stopping Time, June 25–29, 2018
http://www.optimalstopping.com

Department Representative to the Graduate Student Association
Statistics department voting representative (Academic years 2014–2015 and 2015–2016)

SERVICE TO UNIVERSITY

Student Association Senate Parliamentarian
Academic years 2009–2010, 2010–2011, and 2011–2012

Vice President, Duncan Residential College
Academic years 2010–2011 and 2011–2012
Primary author of college constitution and governing documents

Secretary, Jones Residential College
Academic year 2009–2010

SKILLS

Languages	English (fluent)
Programming	R and C/C++