

# Jonathan Stewart

## CONTACT INFORMATION

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*Website*            <https://jrstew.github.io>

## EDUCATION

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**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*

## PUBLISHED PAPERS AND PAPERS IN PRESS

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1. 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]
2. 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]
3. **Stewart, J.**, SCHWEINBERGER, M., MORRIS, M., AND BOJANOWSKI, M. Multi-level network data facilitate statistical inference for curved ergms with geometrically weighted terms. *Social Networks*, 59 (2019), 98–119. [PDF]
4. 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]

## PAPERS IN PREPARATION

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5. **Stewart, J.** AND SCHWEINBERGER, M. Generalized  $\beta$ -models with dependent edges and parameter vectors of increasing dimension, in preparation (2019+).
6. 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+).

## SOFTWARE

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### **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

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### **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  $\beta$ -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

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### **2019 Recipient of the James R. Thompson Student Award**

*Awarded annually to up to two PhD students in the Department of Statistics at Rice University for excellence in research*

### **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

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### **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**

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### **Local co-organizer**

*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 PROFESSION**

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Reviewed for WIREs Computational Statistics

## **PROFESSIONAL MEMBERSHIPS**

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Institute of Mathematical Statistics

American Statistical Association

## **SERVICE TO UNIVERSITY**

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### **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**

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*Languages*      English (fluent)

*Programming*    R and C/C++