Yeonwoo Rho, Ph.D. — Curriculum Vitæ

Contact Information

Department of Mathematical Sciences
Michigan Tech
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Education

- Ph.D. in Statistics, University of Illinois at Urbana-Champaign, USA, August 2014. Thesis adviser: Dr. Xiaofeng Shao
- M.S. in Statistics, Seoul National University, Seoul, Korea, February 2009.
- B.S. in Mathematics / B.A. in Economics, Seoul National University, Seoul, Korea, August 2006.

Main Research Interests

- Time Series, Econometrics, Resampling Methods, Mixed Frequency Data.

Employment

- Assistant Professor, Michigan Tech, August 2014 –

Current Grant Support

- "CPS: Medium: Collaborative Research: An Actuarial Framework of Cyber Risk Management for Power Grids," PI: Dr. Chee-Wooi Ten, Role: co-PI, NSF, 09/01/2017-08/31/2020.

Selected Honors, Awards, and Fellowships

- Outstanding Faculty Research Award (Junior level), Department of Mathematical Sciences, Michigan Tech, 2018
- ASA Nonparametric Statistics Section Student Paper Awards, JSM, 2013
- IMS Travel Award, 2013
- Finalist receiving honorable mention for the Horace W. Norton prize for outstanding thesis in Statistics, 2013
- Graduate College for the Fall 2013 Conference Travel Award, UIUC, 2013
- BK21 Fellowship, Korea Government, 2007-2009
- Hong Sung Dae Scholarship, SNU, 2005
- Scholarship for Superior Academic Performance, SNU, 2002-2005

Publications in Refereed Journals

6. **Yeonwoo Rho** and Xiaofeng Shao (2018). Bootstrap-Assisted Unit Root Testing with Piecewise Locally Stationary Errors. *Econometric Theory*, In press. Also available at arXiv.

5. Yun Liu and **Yeonwoo Rho** (2018). On the Choice of Instruments in Mixed Frequency Specification Tests. *Communications in Statistics - Theory and Methods*, Accepted. Available at arXiv.

4. Xiaoyu Liang, Qiuying Sha, **Yeonwoo Rho**, and Shuanglin Zhang (2018), HCM: A Hierarchical Clustering Method for Joint Analysis of Multiple Phenotypes. *Genetic Epidemiology*, 42(4), 344–353.

3. Henriette Groenvik and **Yeonwoo Rho** (2018). A Self-Normalized Approach to the Specification Test of Mixed Frequency Models. *Communications in Statistics - Theory and Methods*, 47(8), 1913–1922.

2. **Yeonwoo Rho** and Xiaofeng Shao (2015). Inference for Time Series Regression Models With Weakly Dependent and Heteroscedastic Errors. *Journal of Business & Economic Statistics*, 33(3), 444–457.

1. **Yeonwoo Rho** and Xiaofeng Shao (2013). Improving the Bandwidth-Free Inference Methods by Prewhitening. *Journal of Statistical Planning and Inference*, 143(11), 1912–1922.

Papers Under Review

- Zhiyuan Yang, Anna Y. Liu, Meghan Campbell, Chee-Wooi Ten, **Yeonwoo Rho**, and Lingfeng Wang (2018+). Cyber Insurance Premium for Power Grids. Submitted.

Papers In Preparation

- **Yeonwoo Rho** (2018+). A Fixed-b Asymptotics of the Dependent Wild Bootstrap for Irregularly Spaced Time Series. Under preparation.
- Yun Liu and **Yeonwoo Rho** (2018+). Panel Nonparametric MIDAS Model: A Clustering Approach. Under preparation.
- **Yeonwoo Rho** (2018+). The cointegration rank test with piecewise locally stationary errors. Under preparation.
- Songhyeon Kim, Chae Young Lim, and **Yeonwoo Rho** (2018+). Spatial-Temporal Modeling of Dependent Risk with an Application to Cybersecurity Insurance. Under preparation.
- Latika Gupta and **Yeonwoo Rho** (2018+). Separating Demand and Supply Shocks in the Oil Market: An Analysis Using Disaggregated Data. Under preparation.
- Latika Gupta and **Yeonwoo Rho** (2018+). Demand and Supply Shocks in the Oil Market: Evidence From Developed Countries. Under preparation.

Presentations

17. *Panel Nonparametric MIDAS Model: A Clustering Approach,* Invited. The 11th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2018), Pisa, Italy, December 2018.

16. *A Fixed-b Asymptotics of the Dependent Wild Bootstrap for Irregularly Spaced Time Series,* Invited. SNU International Statistics Workshop, Seoul, Korea, January 2018.

15. *A Fixed-b Asymptotics of the Dependent Wild Bootstrap for Irregularly Spaced Time Series,* The 27th Annual Meeting of the Midwest Econometrics Group, College Station, TX, October 2017.

14. *A Fixed-b Asymptotics of the Dependent Wild Bootstrap for Irregularly Spaced Time Series,* 47th Annual Meetings of Illinois Economics Association, Chicago, IL, October 2017.

13. *A Fixed-b Asymptotics of the Dependent Wild Bootstrap for Irregularly Spaced Time Series,* The Third Kliakhandler Conference, Houghton, MI, August 2017.

12. *Bootstrap-Assisted Unit Root Testing With Piecewise Locally Stationary Errors,* Invited. The 1st International Conference on Econometrics and Statistics (EcoSta 2017), Hong Kong, June 2017.

11. *A Fixed-b Asymptotics of the Dependent Wild Bootstrap for Irregularly Spaced Time Series,* Statistics and Applied Math Group Seminar, Houghton, MI, March 2017.
10. *A Self-Normalized Approach to the Specification Test of Mixed Frequency Models,* The 26th Annual Meeting of the Midwest Econometrics Group, Champaign, IL, October 2016.
9. *A Self-Normalized Approach to a Unit Root Testing,* Joint Statistical Meetings, Chicago, IL, July 2016.
8. *Bootstrap-Assisted Unit Root Testing With Piecewise Locally Stationary Errors,* Joint Statistical Meetings, Seattle, WA, August 2015.
7. *Inference for Time Series Regression Models With Weakly Dependent and Heteroscedastic Errors,* 2015 Fifth International IMS-FIPS Workshop, New Brunswick, NJ, June 2015.
6. *Inference for Time Series Regression Models With Weakly Dependent and Heteroscedastic Errors,* Korean Statistical Society Spring Meeting, Cheongju, South Korea, May 2015.
5. *Unit Root Testing with Piecewise Locally Stationary Errors,* Robert Bohrer Memorial Workshop in Statistics, Champaign, IL, November 2013.
4. *Unit Root Testing with Piecewise Locally Stationary Errors,* Midwest Econometrics Group Meetings, Bloomington, IN, October 2013.
3. *Inference for Time Series Regression Models with Nonstationary Heteroscedastic Errors,* Joint Statistical Meetings, Montreal, Canada, August 2013.
2. *Inference for Linear Regression Models with Locally Stationary Errors,* Poster presentation. Midwest Statistics Research Colloquium, Madison, WI, March 2013.
1. *Inference for Linear regression Models with Locally Stationary Errors,* Robert Bohrer Memorial Workshop in Statistics, Champaign, IL, November 2012.

Presentations Given by Students

- Yun (Anna) Liu
  3. *Panel Nonparametric MIDAS Model: A Clustering Approach,* The 28th Annual Meeting of the Midwest Econometrics Group, Madison, WI, October 2018.
  2. *On the Choice of Instruments in Mixed Frequency Specification Tests,* Joint Statistical Meetings, Vancouver, Canada, August 2018.
  1. *On the Choice of Instruments in Mixed Frequency Specification Tests,* 47th Annual Meetings of Illinois Economics Association, Chicago, IL, October 2017.
- Meghan Campbell
  1. *A Loss Model for Cyber-Security Insurance in Electrical Grids,* Poster, The 2018 Undergraduate Research Symposium, Houghton, MI, March 2018.

Mentoring

- Yun (Anna) Liu. PhD in progress / MS in Mathematical Sciences (Dec 2015).
- Xing Ling. PhD in progress.
- Meghan Campbell (May 2018). BS in Mathematical Sciences with concentration in Actuarial Sciences.

- Teresa Woods (May 2017). MS in Mathematical Sciences. Co-advised with Dr. Shari Stockero.
- Henriette Groenvik (May 2016). MS in Mathematical Sciences.

Thesis Committee

- Zhiyuang Yang (Dec 2018, expected). PhD in Electrical Engineering.
- Aref Majdara (May 2018). PhD in Electrical Engineering.
- Xiaoyu Liang (May 2018). PhD in Statistics.
- Jing Han (Dec 2015). MS in Economics.
- Shuaimin Kang (May 2015). MS in Mathematical Sciences.

Teaching Experience

- Instructor
  - MA4780/5781 Time Series Analysis, MTU (2016, 2017, 2018, 2019 Spring)
  - MA 5741 Multivariate Statistics, MTU (2015, 2019 Spring)
  - MA 5731 Linear Models, MTU (2016 Fall)
  - MA 3710 Engineering Statistics, MTU (2014 Fall / 2015 Spring / 2015 Fall / 2016 Fall / 2017 Fall / 2018 Fall)
  - STAT200 Statistical Analysis, UIUC (2013 Fall / 2012 Fall / 2011 Spring)
- Guest Lecturer
  - UN 5550 Introduction to Data Science, Guest Lectures for Introductory Statistics, MTU (2015, 2016 Fall)

Departmental Service

- Wrote and graded qualifying exams and comprehensive exams.
- Served on recruitment committee (2014–2015, 2017–2018)
- Served on undergraduate committee (2015–2016)
- Served on graduate committee (2016–2017)

University Service

- Reviewed the REF-SEED grant applications (2016)

Consulting Experience

- Illinois Statistics Office, Department of Statistics, University of Illinois at Urbana-Champaign, Summer 2011-Spring 2013

Referee for Journals

- Communications in Statistics - Theory and Methods
- Econometric Theory
- Electronic Journal of Statistics
- Journal of Korean Statistical Society
- Journal of Multivariate Statistics
- Journal of Nonparametric Statistics
- Journal of Statistical Planning and Inference
- Journal of the American Statistical Association
- Journal of Time Series Analysis
- Statistics and Probability Letters
- The Econometrics Journal

Reference Available Upon Request.