# 2025 NBER-NSF Time Series Conference

Friday-Saturday, September 19-20
Rutgers University

**Local organizers and program committee (Rutgers University)**:
Rong Chen, Yaqing Chen, Koulik Khamaru, Yuan Liao, Kenwin Maung, Norman Swanson, Han Xiao, Xiye Yang

**Ongoing organizers**:
Richard Davis (Columbia), Serena Ng (Columbia), Ruey Tsay (Chicago)

The conference web site is Conference Website.

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# Program

## Friday, September 19

**Venue: Rutgers University College Ave Student Center Main Lounge and Multipurpose**
**Main. Address: 126 College Avenue, New Brunswick, NJ 08901.**

**08:15 – 08:50 Registration and Breakfast (lobby of main venue)**

**08:50 – 09:00 Welcome (main venue)**
**2025 NBER-NSF Time Series Conference, Rutgers University**
Chair: Rong Chen (Department of Statistics)
• Juli Wade (Executive Dean, School of Arts and Sciences)
• Norman Swanson (Department of Economics)

**09:00 – 10:30 Oral Session 1 (main venue)**
<u>**Vector Autoregression, Univariate, and Multivariate Time Series**</u>
Chair: Xiaohong Chen (Yale University)
• *Bootstrap Prediction Inference of Non-linear Autoregressive Models*
Dimitris N. Politis (University of California, San Diego), with Kejin Wu.
• *Score-type Tests for Markov Switching Models*
Enrique Sentana (CEMFI), with Dante Amengual, Xinyue Bei, Marine Carrasco.
• *Estimating Invertible Processes in Hilbert Spaces, with Applications to Functional ARMA Processes*
Alexander Aue (University of California, Davis), with Sebastian Kuehnert, Gregory Rice.

**10:30 – 11:00 Coffee Break**

**11:00 – 12:30 Oral Session 2 (main venue)**
<u>**Panel Data**</u>
Chair: Xu Cheng (University of Pennsylvania)
• *Global Identification of Dynamic Panel Models with Interactive Effects*
Jushan Bai (Columbia), with Pablo Mones.
• *Analysis of Multiple Long-Run Relations in Panel Data Models with Applications to Financial Ratios*
Alexander Chudik (Federal Reserve Bank of Dallas), with M. Hashem Pesaran, Ron P. Smith.
• *Conditional Nonparametric Variable Screening by Neural Factor Regression*
Weining Wang (University of Bristol), with Jianqing Fan, Yue Zhao.

**12:30 – 14:00 Lunch and Poster Session 1 (lobby of main venue)**

1. *The Identification Problem for Linear Rational Expectations Models*
   Majid M. Al-Sadoon (Durham University) with Piotr Zwiernik.
2. *High-Dimensional IV Multicointegration Estimation and Inference*
   Igor L. Kheifets (University of North Carolina at Charlotte) with Peter C.B. Phillips.
3. *Stability and Performance Guarantees for Misspecified Multivariate Score-Driven Filters*
   Simon Donker van Heel (Erasmus University Rotterdam) with Rutger-Jan Lange, Dick van Dijk, Bram van Os.
4. *High-dimensional Oaxaca–Blinder Decomposition with an Application to Gender and Hukou Discrimination in the Chinese Labor Market*
   Jun Cai (Huazhong University of Science and Technology) with Jian Zhang, Yahong Zhou.
5. *Can Central Banks Integrate Climate Risk into Monetary Policy amid Geopolitical Tensions*
   Fredj Jawadi (University of Lille) with Karim Cheffou, Philippe Rozin.

6. *A Framework for Common Long Cycles*
   Vadim Marmer (University of British Columbia) with James A. Duffy, Da (Natasha) Kang, Jérôme R. Simons.
7. *Dynamics of U.S. Tax Progressivity Across the Income Distribution*
   Kun Ho Kim (Concordia University) with Wentao Hu, Wei Biao Wu, Jiheum Yeon.
8. *Forecasting Volatility of Currencies and Oil with Brown Firms: A Mixed-Frequency Approach*
   Weijia Peng (Sacred Heart University) with Lorán Chollete, Keener Hughen, Ching-Chih Lu.
9. *A General Randomized Test for Alpha*
   Pierluigi Vallarino (Erasmus University Rotterdam) with Daniele Massacci, Lucio Sarno, Lorenzo Trapani.
10. *The Flexibility and Labor Supply of the Gig Economy: Based on Micro Big Data of the Ride-Hailing Market*
    Pingfang Zhu (Shanghai Academy of Social Sciences).
11. *Fitting Dynamically Misspecified Models: An Optimal Transportation Approach*
    Jean-Jacques Forneron (Boston University) with Zhongjun Qu.
12. *Estimation of Nonlinear DSGE Models through Laplace Based Solutions*
    Roberto Leon-Gonzalez (National Graduate Institute for Policy Studies) with Elnura Baiaman kyzy.
13. *On Recovering (Sum of) Sparse and Dense Signals*
    CY (Chor-yiu) Sin (National Tsing Hua University).
14. *Dimension-agnostic Change Point Detection*
    Runmin Wang (Texas A&M University, St. Louis) with Hanjia Gaoa, Xiaofeng Shao.
15. *Change-Point Detection for Object-valued Time Series*
    Yi Zhang (University of Illinois Urbana-Champaign).
16. *A Dynamic Copula Model for Probabilistic Forecasting of Non-Gaussian Multivariate Time Series*
    John Zito (Duke University) with Daniel Kowal.
17. *Riemannian Factor Model: Dimension Reduction for Manifold-Valued Time Series*
    Shuo-Chieh Huang (Rutgers University).
18. *Regularized Estimation of Loading Matrix in Factor Models for High-Dimensional Time Series*
    Xialu Liu (San Diego State University) with Xin Wang.
19. *Factor Analysis for Causal Inference on Large Non-Stationary Panels with Endogenous Treatment*
    Ruoxuan Xiong (Emory University) with Junting Duan, Markus Pelger.
20. *Gaussian Maximum Likelihood Estimation of Static and Dynamic State-Space Factor Models*
    Peter A. Zadrozny (Bureau of Labor Statistics).
21. *A Deep Generative Model for High-resolution, Multi-day Wind Speed Data*
    Mingshi Cui and Zern Ke (Rutgers University) with Justin Greene, Kevin Eng, Arash Sodagartojgi, Zhiqiu Xia, Gemma Moran, Michael Stein.
22. *Dynamic Spectral Co-clustering of Directed Networks to Unveil Latent Community Paths in VAR-type Models*
    Younghoon Kim (Cornell University) with Changryong Baek.
23. *A Network Regression Approach for Forecast Reconciliation*
    Feng Li (Peking University) with Jiaxin Shi, Hansheng Wang.

**14:00 – 15:30 Oral Session 3 (main venue)**

**Forecasting**

Chair: Laura Liu (University of Pittsburgh)

• *Diffusion Index Forecast with Tensor Data*
Bin Chen (University of Rochester), with Yuefeng Han, Qiyang Yu.

• *Nowcasting with Neural State Space Models*
Yikai Zhang (One River Asset Management), with Jiahe Lin, George Michailidis, Anderson Schneider.

• *Forecasting and Managing Correlation Risks*
Sophia Zhengzi Li (Rutgers University), with Tim Bollerslev and Yushan Tang.

**15:30 – 16:00 Coffee Break**

**16:00 – 18:00 Oral Session 4 (main venue)**
**High Dimensional Modelling and Factor Models**
Chair: Kenwin Maung (Rutgers University)
• *Covariance-Adjusted Deep Causal Learning for Heterogeneous Panel Data Models*
Yuefeng Han (University of Notre Dame), with Guanhao Zhou, Xiufan Yu.
• *Sparsity Tests for High-Dimensional Linear Regression Models in Time Series*
Daniel Gutknecht (Goethe University), with Valentina Corradi, Jack Fosten.
• *Regularized Partial Least Squares Estimation of an Approximate Envelope Model for Supervised Dimension Reduction in Time Series Forecasting*
John C. Chao (University of Maryland), with Norman R. Swanson.
• *How Weak Are Weak Factors? Uniform Inference for Signal Strength in Signal Plus Noise Models*
Anna Bykhovskaya (Duke University), with Vadim Gorin, Alexander Sodin.

**19:00 – Dinner at Catherine Lombari (this restaurant is across the street from the Heldrich at 3 Livingston Ave., New Brunswick, NJ 08901)**

## Saturday, September 20

**Venue: Rutgers University College Ave Student Center Main Lounge and Multipurpose Main. Address: 126 College Avenue, New Brunswick, NJ 08901.**

**08:30 – 09:00 Breakfast (lobby of main venue)**

**09:00 – 10:30 Oral Session 5 (main venue)**
**Exogeneity, Instrumental Variables and Causal Model Estimation**
Chair: Yaqing Chen (Rutgers University)
• *Identification and Estimation of Causal Effects in High-Frequency Event Studies*
Adam McCloskey (University of Colorado), with Alessandro Casini.
• *Unifying Regression-Based and Design-Based Causal Inference in Time-Series Experiments*
Zhexiao Lin (University of California, Berkeley), with Peng Ding.
• *The Relevance of Temporal Aggregation for the Propagation of Macroeconomic Shocks*
Tatevik Sekhposyan (Texas A&M University University), with Yeon Jik Lee.

**10:30 – 11:00 Coffee Break**

**11:00 – 12:30 Oral Session 6 (main venue)**
**Financial Econometrics**
Chair: Zhijie Xiao (Boston College)
• *Connectedness-Driven Risk*
Umut Akovali (Koc University), with Kamil Yilmaz.
• *The Permanent and Temporary Effects of Stock Splits on Liquidity in a Dynamic Semiparametric Model*
Linqi Wang (Queen Mary, University of London), with Christian M. Hafner, Oliver B. Linton.
• *IVX Tests for Return Predictability and the Initial Condition*
Sam Astill (University of Essex), with Tassos Magdalinosb, A.M. Robert Taylor.

**12:30 – 14:00 Lunch and Poster Session 2 (lobby of main venue)**
1. *Conformal Prediction with Time-Series Data via Sequential Conformalized Density Regions*
   Kung-Sik Chan (University of Iowa) with Max Sampson.

2. *Time Varying Heterogeneous Treatment Effect in Event Studies*
   Laura Liu (University of Pittsburgh) with Irene Botosaru.
3. *Efficient Estimation of Nonlinear DSGE Models*
   Sean McCrary (Ohio State University) and Eva F. Janssens.
4. *Noise-cancelling Location Models*
   Jannik Steenbergen (Aarhus University) with Leopoldo Catania.
5. *Data-Secure Dual Transfer Learning from Heterogeneous Low-Rank and Sparse Panel VAR Model*
   Yuchen Xu (University of California, Los Angeles) with George Michailidis.
6. *Online Conformal Model Selection for Nonstationary Time Series*
   Yao Zheng (University of Connecticut) with Shibo Li.
7. *Smoothing Variances Across Time: Adaptive Stochastic Volatility*
   Jason B. Cho (Cornell University) with David S. Matteson.
8. *Types of Distribution-free Methods for Forecasting Financial Volatility*
   Kejin Wu (Loyola University Chicago) with Sayar Karmakar, Rangan Gupta.
9. *Risk in a Data-Rich Model*
   Molin Zhong (Federal Reserve Board) with Dario Caldara, Haroon Mumtaz.
10. *Beyond Returns: A Candlestick-Based Approach to Covariance Estimation*
    Yasin Simsek (Duke University).
11. *Restricted Large Bayesian Vector Autoregressions*
    Eva F. Janssens (University of Michigan) with Robin L. Lumsdaine.
12. *Estimation and Inference in Large Dimensional Threshold Factor Models with Weaker Loadings*
    Daniele Massacci (King's College London).
13. *Localized Sparse Principal Component Analysis of Multivariate Time Series in Frequency Domain*
    Jamshid Namdari (Emory University) with Amita Manatunga, Fabio Ferrarelli, Robert T. Krafty.
14. *Partial Envelope and Reduced-Rank Partial Envelope Vector Autoregressive Models*
    S. Yaser Samadi (Southern Illinois University), with Wiranthe B. Herath.
15. *Two-Way Factor Model for Matrix Time Series.*
    Elynn Chen (New York University) with Yuefeng Han, Jiayu Li, Ke Xu
16. *Dynamic Factor Model with Sparse Factor Transitions*
    Arash Sodagartojgi (Rutgers University).
17. *Estimation of Large Approximate Dynamic Matrix Factor Models Based on the EM Algorithm and Kalman Filtering*
    Luca Trapin (University of Bologna) with Matteo Barigozzi.
18. *(When and Why) State Dependent Local Projections Work*
    Valentin Winkler (Columbia University)
19. *Nonparametric GARCH: A Deep Learning Approach*
    Ngai Hang Chan (City University of Hong Kong) with Ruizhi Deng, Guohao Shen.
20. *Integer-Valued GARCH Modelling with the Gamma-Poisson Distribution*
    Molly Chou (Northwestern University) with Beth Andrews.
21. *Asymptotic Theory of QMLE of the Multiple-regime Threshold GARCH(1,1) Model*
    Shiqing Ling (Hong Kong University of Science and Technology) with Yaxing Yang, Dong Li.
22. *It's All About the Tails: The Benefits of Variance-Targeted, Non-Gaussian, Quasi-Maximum Likelihood Estimation of GARCH Models*
    Todd Prono (Federal Reserve Board).
23. *Long Memory in Dynamic Factor Models with Infinite-Dimensional Factor Spaces*
    Qin Wen (New York University) with Clifford M. Hurvich.
24. *Time-Varying High Quantile Estimation for Nonstationary Tail Dependent Time Series*
    Ting Zhang (University of Georgia) with Yu Shao.