

IAER Econometrics Workshop 2025

June 19th – 20th, 2025

Institute for Advanced Economic Research

School of Economics

Strategic Planning Office

Office of Academic Research

Dongbei University of Finance and Economics

Dalian, China

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Dongbei University of Finance and Economics

Dongbei University of Finance and Economics (DUFE) was founded in October 1952. With the mission of “cultivating excellent financial and economic talents to serve economic and social developments,” DUFE is a multidisciplinary and research-oriented university focusing on economics, management, law, literature, and science. DUFE is now offering 48 Ph.D. programs, 97 master programs. 25 undergraduate programs have been selected as national first-class undergraduate programs, and 6 provincial. The proportion of first-class undergraduate programs is as high as 75.6%.

In 2012, China’s Ministry of Finance, Ministry of Education, and the Liaoning Provincial Government signed an agreement to foster DUFE’s development. Since then, DUFE has made great strides towards achieving better academic excellence. According to China University Subject Rankings (CUSR) released by the China Academic Degrees and Graduate Education Centre (CDGDC) in December 2017, Applied Economics at DUFE is ranked 2-5% (2% excluded, the same below), Business Administration and Statistics 5-10%, and Management Science and Engineering 10-20%. In recent years, the university subjects have developed in a balanced manner, with outstanding advantages in economics and management. The overall strength of the subjects has further improved, and a historic breakthrough has been made in the latest round of subject rankings.

DUFE initiated international exchanges at the beginning of the 1980s. Up to now, DUFE has established different forms of cooperative relations with over 140 universities and 8 international institutions from 28 different countries or regions, among which over 50 universities have carried out long-term stable cooperation with DUFE.

In the decades since its foundation, DUFE has achieved much progress in its teaching facilities, education quality, student disciplinary systems, and scientific research.

Institute for Advanced Economic Research

The Institute for Advanced Economic Research (IAER) at Dongbei University of Finance and Economics (DUFE) was established in 2019, with a mission to build a leading global institute known for its academic excellence in research, teaching, and mentoring. The goal is to attract world-class scholars with outstanding research or the potential of outstanding research. IAER offers tenure-track positions with various incentives for research and teaching, including competitive salaries, and benefits with lower teaching loads, and stimulating research environment.

As a newly-founded institute, IAER now has twenty full-time faculty members, with one more to join this coming fall. IAER young faculty members have papers published in journals, including *Journal of Development Economics*, *Journal of Economic Theory*, *Journal of Monetary Economics*, *Journal of Public Economics*, *Journal of Econometrics*, and *Games and Economic Behavior*. Faculty members received grants from the National Natural Science Foundation of China.

Ever since its establishment, IAER has successfully hosted conferences such as CES 2019 China Annual Conference and CES 2019 Presidents' Forum, and a series of workshops such as IAER Econometrics Workshop, IAER Macroeconomics Workshop, and IAER Microeconomics Workshop. In addition, IAER launched the IAER Seminar series in 2019, where more than 100 speakers have shared their latest research. With more faculty members joining, the IAER Internal Seminar series was introduced in 2022 for faculty members to share with each other their latest research agenda, to brainstorm together, and to exchange ideas.

DUFE Honors Program in Economics was granted a national honors program by Ministry of Education of China in 2020, which is one of the 20 honors programs in Economics in China. It's designed for students who are highly motivated to be an economist and are looking for a more research-intensive experience in his or her undergraduate studies. Around 25 DUFE freshmen are enrolled in this program every year. DUFE is continually investing the program.

The IAER Combined Master-Ph.D. Program in Economics was initiated in 2021, with the aim to build a leading graduate program in China with a strong focus on academic research. The program targets creative and inquisitive students with academic ambitions. By offering thorough training in economic theory and econometrics, and by rooting the program in the vibrant research environment at IAER, we offer inspirations for the students to explore their own research interests, cultivate students' research potential, and guide their development as researchers.

Invited Speakers

In Alphabetical Order



Prof. Songnian Chen, Zhejiang University

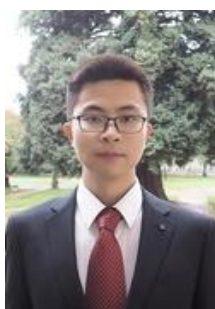
Dr. Chen Songnian is a professor and doctoral supervisor at the School of Economics, Zhejiang University. He received a bachelor's degree from Fudan University in 1986 and a doctorate from Princeton University in 1994. He has served as a Chair Professor in the Department of Economics at the National University of Singapore, a Chair Professor in the Department of Economics at the Hong Kong University of Science and Technology, and a senior researcher at the Institute for Advanced Study. He is currently an academican of the World Econometric Society. In 2022, he was appointed as a Qingshan Chair Professor at Zhejiang University. Professor Chen Songnian is the first Qingshan Chair Professor introduced to the Qingshan Institute for Business Studies at Zhejiang University.

Professor Chen Songnian mainly engages in research on theoretical and applied micrometrology. He is an internationally renowned scholar with a high reputation in the field of econometrics, especially achieving outstanding results in microeconometrics. His research in areas such as truncated and deleted regression, quantile regression, and sample selection models is renowned worldwide. Has has published nearly 50 papers in top-tier international academic journals including *Econometrica*, *Review of Economic Studies*, *Journal of Econometrics*, *Annals of Statistics*, and *Journal of the American Statistical Association*.

**Prof. Mathieu Rosenbaum, Ecole Polytechnique Paris**

Dr. Mathieu Rosenbaum obtained his Ph.D. at the University of Paris-Est in 2007. After having been Assistant Professor at the École Polytechnique, he became Professor at the Pierre and Marie Curie University (Paris 6, Sorbonne University) in 2011 before returning to X in 2016 as Professor in charge of the "Analytics and Models for Regulation" chair.

At Ecole Polytechnique, Mathieu Rosenbaum is notably one of the heads of the Master 2 "Probability and Finance". His research focuses mainly on statistical finance problems such as the study of high-frequency markets and algorithmic trading or volatility modelling. In particular, he has developed a large number of quantitative tools for optimizing market microstructure and has introduced "rough volatility" models. On these topics, he collaborates with many financial institutions and is one of the organizers of the "Market Microstructure Confronting Many Viewpoints" conference held every two years in Paris. In 2014, he was awarded the Europlace prize for the best young researcher in finance and in 2015 the ERC grant in mathematics.

**Prof. Xuetao Shi, The University of Sydney**

Dr. Xuetao Shi's research interest lies in Econometric Theory, Machine Learning, and Industrial Organization. Xuetao received his Ph.D. of Economics from University of Washington, M.A. of Economics from Vanderbilt University, M.Eng. of Electrical Engineering from Xi'an Jiaotong University, M.Sc. of Engineering from Ecole Centrale de Lyon, and B. Eng. of Electrical Engineering from Xi'an Jiaotong University.

**Prof. Ke-Li Xu, Indiana University Bloomington**

Dr. Xu's research focuses on econometrics, developing statistical methodologies, and theories to analyze economic models and data. He has written and published on various topics, including (more recently) local projections, predictive regression, discontinuity-based quasi-experimental designs, non-parametric and semi-parametric models of volatility and risk, and (earlier) structure change, continuous-time diffusions, quantile regression, trends, and cointegration. The main theme of his research is to design statistical estimation and inference methods for economic models that accommodate features like endogeneity, nonlinearity, heterogeneity, and persistency, without imposing strong constraints on the data generating process.

Before joining Indiana University Bloomington in 2016, Dr. Xu was Associate Professor of Economics and Rothrock Fellow of Liberal Arts at Texas A&M University in College Station, and Assistant Professor of Finance and Management Science and Pearson Fellow and Canadian Utilities Fellow of School of Business at University of Alberta, Canada. He also held visiting associate professor positions in economics at Yale University and the University of Texas at Austin. Dr. Xu is a Fellow of the *Journal of Econometrics*, a recipient of the Multa Scripsit award from *Econometric Theory*, and an Associate Editor of *Econometric Reviews*. He obtained Ph.D. at Yale University in 2007, and received pre-doctoral education in China, with M.S. and B.S. degrees at the University of Science and Technology of China and Wuhan University.



Program

June 19 / 08:10 – 09:00

08:10 – 08:30 **Registration**

08:30 – 08:40 **Welcome Speech: Prof. Xuhui Wang (DUFU President)**

Chair: Prof. Rong Hu

08:40 – 09:00 **Group Photo**

Location: Room 710, Duxing Building (笃行楼)

Session 1 / June 19 / 09:00 – 10:00

1. 09:00-09:30 **Keynote Speech: Partial Identification of Quantile Selection Models**
Songnian Chen (Zhejiang University)
2. 09:30-10:00 **Keynote Speech: Statistics and calibration for rough volatility: misconceptions and optimal procedures**
Mathieu Rosenbaum (Ecole Polytechnique Paris)

Chair: Yanqin Fan

Location: Room 710, Duxing Building (笃行楼)

Coffee Break / June 19 / 10:00 – 10:15

Location: Hallway

Session 2 / June 19 / 10:15-11:55

3. 10:15-10:40 **Demand Estimation of Potentially Complementary Bundles Based on Copula**
Shuo Jiang (Xiamen University)
4. 10:40-11:05 **Debiased Inference for Dynamic Nonlinear Panels with Multi-dimensional Heterogeneities**
Yutao Sun (Dongbei University of Finance and Economics)

5. 11:05-11:30 **The Trade Game of Thorns: Hierarchical Governments and Heterogeneous Firms**

Dandan Wang (Liaoning University)

6. 11:30 – 11:55 **Identifying Preference from Response Times and a Reference Choice**

O-Chia Chuang (Hubei University of Economics)

Chair: Yutao Sun

Location: Room 710, Duxing Building (笃行楼)

Lunch / June 19 / 11:55 – 13:30

Location: Central Dinning Hall

Session 3 / June 19 / 13:30 – 15:10

7. 13:30 – 13:55 **Thus spoke FOMC: The Fed and Sovereign CDS Spreads**

Mingyu Liu (Dongbei University of Finance and Economics)

8. 13:55 – 14:20 **Testing for Essential Heterogeneity in the Marginal Treatment Effects Model**

Minghai Mao (Liaoning University)

9. 14:20 – 14:45 **The Spatial Quasi-Limited Information Maximum Likelihood Estimation for Spatial Lag Models with Additional Endogenous Variables**

Min Lin (Beijing Normal University)

10. 14:45 – 15:10 **How to select the number of factors in break point estimation of high-dimensional factor models?**

Jingjie Xiang (Central China Normal University)

Chair: Yutao Sun

Location: Room 710, Duxing Building (笃行楼)

Coffee Break / June 19 / 15:10 – 15:25

Location: Hallway

Session 4 / June 19 / 15:25 – 17:30

11. 15:25 – 15:50 **Fixed Effects Nonlinear Panel Models with Heterogeneous Slopes: Identification and Consistency**
Ao Wang (University of Warwick and CAGE Research Centre)
12. 15:50 – 16:15 **Internal Drive or External Push? A Study on the Driving Forces of the Evolution of the Intermediate Goods Trade Dependence Networks in Manufacturing**
Yu Du (Southwestern University of Finance and Economics)
13. 16:15 – 16:40 **Universal Inference for Incomplete Models**
Yi Zhang (Jinan University)
14. 16:40 – 17:05 **Matrix-Valued Spatial Autoregressions with Time-Varying Heterogeneous Spatial Dynamics**
Shiqi Ye (Chinese Academy of Sciences)
15. 17:05 – 17:30 **Financial Credit Risk Prediction Based on SHAP-XGBoost**
Shenmiao Yang (Shandong Normal University)
16. 17:30 – 17:55 **Identification of Dynamic Discrete Choice Models with Hyperbolic Discounting Using a Terminating Action**
Chao Wang (Dongbei University of Finance and Economics)

Chair: Yiu Lim Lui

Location: Room 710, Duxing Building (笃行楼)

Session 5 / June 20 / 08:30 – 09:30

17. 08:30 – 09:00 **Keynote Speech: Partial Identification in Moment Models with Incomplete Data via Optimal Transport**
Xuetao Shi (The University of Sydney)
18. 09:00 – 09:30 **Keynote Speech: Impulse Responses, VARs and Local Projections**
Ke-Li Xu (Indiana University Bloomington)

Chair: Jun Yu

Location: Room 710, Duxing Building (笃行楼)

Coffee Break / June 20 / 09:30 – 09:45

Location: Hallway

Session 6 / June 20 / 09:45 – 11:55

19. 09:45 – 10:10 **Testing Predictability in the Presence of Mildly Stationary Errors**

Yijie Fei (Hunan University)

20. 10:10 – 10:35 **Escaping Short-Term Pressures: How CEO Awards Reshape Corporate Risk-Taking**

Wenbo Li (Zhengzhou University)

21. 10:35 – 11:00 **Distortion Surrogate Indices: Estimating Long-Term Treatment Effects More Robustly**

Hyeonseok Park (Dongbei University of Finance and Economics)

22. 11:00 – 11:25 **Modeling and Estimating Two-Layer Network Interactions with Unknown Heteroskedasticity**

Yang Yang (Tianjin University)

23. 11:25 – 11:55 **Causal Inference with Social Interactions: A Structural Break Viewpoint**

Xingyu Li (Peking University)

Chair: Hyeonseok Park

Location: Room 710, Duxing Building (笃行楼)

June 20 / 11:55 – 12:00

11:55 – 12:00 **Closing Speech: Prof. Weiguo Wang (Director of College of Statistics, former DUFE Vice President)**

Chair: Prof. Rong Hu

Location: Room 710, Duxing Building (笃行楼)

List of Abstracts

In order of presentations

1. **Partial Identification of Quantile Selection Models**

Songnian Chen

Arellano and Bonhomme (2017) and Chen, Feng, and Zhang (2024) considered semiparametric estimation of a binary quantile selection model. Both articles impose a parametric structure on the copula function that characterizes the extent of sample selection bias. However, misspecification of the parametric copula function is likely to result in biased estimates and misleading inference. In this article, we study partial identification and estimation of the model without imposing any parametric structure on the copula function. We also propose inference procedures, and all of our methods can be implemented in a straightforward manner. Numerical experiments show that our procedures work well. In addition, we also study partial identification and estimation of a quantile regression model subject to a censored selection without imposing any parametric structure on the copula function. As in the case of binary selection, our estimation and inference procedures for the censored selection case are easy to implement.

2. **Statistics and Calibration for Rough Volatility: Misconceptions and Optimal Procedures**

Mathieu Rosenbaum

Rough volatility models have gained very large interest in the financial engineering community in the recent years. The goal of this talk is to provide an accurate statistical analysis of such models, with minimax speeds of convergence, optimal procedures and central limit theorems. This enables us to study financial data properly in the rough volatility paradigm, with a rigorous statistician's perspective.

3. **Demand Estimation of Potentially Complementary Bundles Based on Copula**

Shuo Jiang

Product bundling is a prevalent marketing strategy, yet conventional models typically assume implicit substitutability between goods. This study makes methodological advances by: (1) developing a flexible framework that accommodates both substitutive and complementary relationships among bundled products, while capturing error term dependence via copula functions; (2) proposing a novel two-step estimator that resolves the non-separability of utility and copula parameters when accounting for diverse product relationships, substantially reducing computational complexity. We validate our approach through Monte Carlo simulations and empirical application using dairy product data from Zhejiang supermarkets. The model's practical utility is demonstrated through counterfactual analysis to derive profit-maximizing bundle pricing strategies.

4. **Debiased Inference for Dynamic Nonlinear Panels with Multi-dimensional Heterogeneities**

Yutao Sun

We introduce a generic class of dynamic nonlinear heterogeneous parameter models that incorporate individual and time fixed effects in both the intercept and slope. These models are subject to the incidental parameter problem, in that the limiting distribution of the point estimator is not centered at zero, and that test statistics do not follow their standard asymptotic distributions as in the absence of the fixed effects. To address the problem, we develop an analytical bias correction procedure to construct a bias-corrected likelihood. The resulting estimator follows an asymptotic normal distribution with mean zero. Moreover, likelihood-based tests statistics---including likelihood-ratio, Lagrange-multiplier, and Wald tests---follow the limiting chi-squared distribution under the null hypothesis. Simulations demonstrate the effectiveness of the proposed correction method, and an empirical application on the labor force participation of single mothers underscores its practical importance.

5. The Trade Game of Thorns: Hierarchical Governments and Heterogeneous Firms

Dandan Wang

This paper develops a theoretical framework to analyze the interplay of multi-level government policies and firm heterogeneity in shaping international trade outcomes. We model a two-country world where an export country features a central government and multiple local governments providing production and consumption subsidies, while an import country imposes tariffs. Firms, heterogeneous in productivity, optimize pricing, capacity utilization, and location choices within a multi-region setting. We derive a unique equilibrium under general conditions, demonstrating that the distribution of authority between central and local governments influences subsidy levels, regional price dispersion, and firm sorting patterns. Greater centralization reduces subsidy variance and price heterogeneity but facilitates firm collusion, while decentralization amplifies spatial sorting of productive firms toward high-subsidy regions. Welfare analysis reveals an interior optimal degree of centralization, increasing with substitution elasticity and trade costs, yet decreasing with productivity dispersion. To complement the analytical results, we implement a multi-agent reinforcement learning (MARL) framework, integrating advanced algorithms to simulate adaptive government and firm behavior. Simulations validate theoretical predictions, showing convergence to equilibrium subsidies and location elasticities consistent with productivity-contingent responses, while offering dynamic insights into policy competition and stability. The combined approach highlights strategic compensation, firm sorting, and market structure effects as key mechanisms linking institutional design to trade dynamics, with implications for policy coordination in heterogeneous economies.

6. Identifying Preference from Response Times and a Reference Choice

O-Chia Chuang

The present study employs econometric theories and empirical applications to investigate the relationship between decision-makers' response times and their underlying preferences. Our focus is on binary choices with a single reference option, with the objective of inferring the decision-makers' preferences from their

response times. To this end, we construct tests targeting the inequality condition proposed by Al'os-Ferrer, Fehr, and Netzer (2021), and the tests are pivotal to the unknown dependence structure of estimation effects. Our empirical study demonstrates that the adjustment of the significance level has a direct impact on the identification of preference relationships. When α is set to 0.05, only 10.37% of the total binary choices can be predicted, with a high prediction accuracy of 80.75%. By increasing α to 0.5, all binary choices can be predicted, but the accuracy drops significantly to 64.42%. Consequently, the optimal significance level is contingent upon the specific circumstances. Our tests demonstrate that response time data can be employed more extensively and rigorously to infer decision-makers' preferences.

7. Thus spoke FOMC: The Fed and Sovereign CDS Spreads

Mingyu Liu

We study how sovereign credit default swaps (SCDS) respond to central bank communications. Employing a GPT-based NLP communication measure, we find that dramatic changes in the Federal Open Market Committee's (FOMC) stance, as conveyed through the Fed members' speeches, have provided useful information, influencing the trajectory of SCDS spreads. When the FOMC is already in an extremely hawkish or dovish position, the market overreacts and requires time to absorb the information and take appropriate actions. Asymmetries exist in the tone direction of central bank communications. The hawkish shifts provide signals, meanwhile, the dovish switches dampen price informativeness. Our findings highlight the significance of the application of large language models and provide implications for improving the effectiveness of central bank guidance.

8. Testing for Essential Heterogeneity in the Marginal Treatment Effects Model

Minghai Mao

We propose a simple and easy-to-implement multiplier bootstrap test for essential heterogeneity based on a recently developed Gaussian Process (GP) approach. To relax the shape restrictions on the marginal treatment effects (MTE), we reformulate the testing problem as a linear specification test against a partial linear model that allows for nonparametric components involving both covariates and the propensity score. This more flexible and realistic specification introduces

challenges in high-dimensional settings. The advantages of our procedure are that it is less sensitive to the dimensionality of covariates and does not require re-estimation of nuisance parameters in each bootstrap replication. Monte Carlo simulations demonstrate that the proposed test exhibits greater power across a broader class of alternatives.

9. The Spatial Quasi-Limited Information Maximum Likelihood Estimation for Spatial Lag Models with Additional Endogenous Variables

Min Lin

This paper presents a spatial quasi-limited information maximum likelihood (SQLIML) estimation method of a cross-sectional spatial lag model with additional endogenous variables. We provide conditions for the consistency and asymptotic normality of the SQLIML estimator and propose a test for the exogeneity of regressors in a model. We compare the finite sample properties of the S2SLS estimator and the SQLIML estimator via the Monte Carlo simulation. The Monte Carlo simulation results show that our proposed SQLIML estimator outperforms the S2SLS estimator in models with strong endogeneity and weak instruments. The utility of our proposed SQLIML estimation is demonstrated by an empirical application to revisit the driving under the influence (DUI) arrest rate model by Drukker et al. (2013).

10. How to select the number of factors in break point estimation of high-dimensional factor models?

Jingjie Xiang

Predetermining the number of factors is required in break point estimation of high-dimensional factor models. In a model with $r_a(r_b)$ pre-break (post-break) factors, this paper shows the consistency of least squares (LS) break fraction estimator when the number of pre-break (post-break) factors is arbitrarily set to a value between $r_a(r_b)$ and the total number of pseudo factors minus one. Monte Carlo evidence suggests that break date estimation based on the number of pseudo factors enjoys higher accuracy than that based on the true numbers of pre-and post-break factors. This advantage becomes more obvious as the gap between r_a and r_b widens. Thus, break date estimation based on the number of pseudo factors remains a good choice when the numbers of pre- and post break factors are different.

11. Fixed Effects Nonlinear Panel Models with Heterogeneous Slopes: Identification and Consistency

Ao Wang

We study a class of two-way fixed effects index function models with a nonparametric link function and individual- (or time-) specific slopes. Our model alleviates potential misspecification errors due to the common practice of specifying a known link function such as Gaussian and its tail behavior. It also enables to incorporate richer unobserved heterogeneity in the marginal effects of covariates via heterogeneous slopes across individuals. We show the identification of the link function as well as the slopes and fixed effects parameters when both individual and time dimensions are large. We propose a nonparametric consistency result for the fixed effects sieve maximum likelihood estimators. Finally, we apply our method to the study of establishing exportation and illustrate the consequences of imposing Gaussian link function and homogeneity on the slope of distance.

12. Internal Drive or External Push? A Study on the Driving Forces of the Evolution of the Intermediate Goods Trade Dependence Networks in Manufacturing

Yu Du

The structure of intermediate goods trade relations shapes both supply chain efficiency and the depth of global value chain integration. Understanding the structure and evolution of intermediate goods trade dependence is essential for assessing national vulnerability, strategic autonomy, and manufacturing resilience. This paper constructs the intermediate goods trade dependence networks in manufacturing (IGTDNs-M) based on Inter-Country Input-Output tables and investigates the core drivers of the dynamic evolution through Temporal Exponential Random Graph Model. Simulation results indicate that the network endogenous structure significantly influences the evolution of IGTDNs-M, outweighing the impact of exogenous factors. Specifically, reciprocity, triad closure, preferential attachment, and path dependence exert a notable and positive impact on evolution IGTDNs-M. Among these factors, path dependence consistently

exerts the strongest influence, followed by reciprocity and triad closure, underscoring relational inertia and structural closure as the primary mechanisms shaping the core of IGTDNs-M. This research offers empirical evidence to guide countries in promoting trade diversification, stabilizing intermediate goods trade, and fostering potential trading partnerships.

13. **Universal Inference for Incomplete Models**

Yi Zhang

A growing number of empirical models exhibit set-valued predictions. Such models are attractive because they can avoid ad-hoc assumptions on model components that are not understood by the analyst. This paper develops a tractable inference method with finite-sample validity for models with set-valued predictions. The method is designed to construct confidence intervals for counterfactual objects and other functionals of the underlying parameter. It can accommodate model incompleteness, discrete and continuous covariates, and nuisance parameters. The proposed procedure utilizes a robust version of the universal inference framework by Wasserman et al. (2020). Unlike existing inference methods based on moment restrictions, it avoids the use of resampling or simulation.

14. **Matrix-Valued Spatial Autoregressions with Time-Varying Heterogeneous Spatial Dynamics**

Shiqi Ye

We propose a novel matrix-valued spatial autoregressive model with time-varying parameters (TVP-SMAR). The model integrates matrix-valued time series, heterogeneous spatial spillover effects, and time-varying parameters into one unified framework. Separate heterogeneous spillover effects are allowed between the row and column dimensions of the matrix observations. Robustness is introduced via a matrix valued Student's t-distribution with conditional heteroskedasticity for the error terms. The new TVP-SMAR model encompasses many existing spatial autoregressive models with time-varying parameters, yet remains easy to estimate with standard maximum likelihood methods. We formulate conditions for stationarity, ergodicity, and invertibility of the model and consistency and asymptotic normality of the corresponding estimators. validate the finite sample properties of the proposed model. Simulations support the feasibility

and properties of the model in finite samples. Finally, we examine two applications. The first, based on international trade data, demonstrates the value of incorporating both dynamic and heterogeneous spatial spillover effects in analyzing country-level trade relationships. The second application, using global stock market data for portfolio selection, highlights the out-of-sample advantages of the proposed model over the latest matrix-based GARCH-type models. Supplementary materials, including standardized instructions for reproducing the results, are available online.

15. Financial Credit Risk Prediction Based on SHAP-XGBoost

Shenmiao Yang

The development of digital finance not only brings us convenience, but also brings financial credit risk problems. Therefore, it is of great significance to construct a reasonable credit risk prediction model. However, existing studies only focus on the predictive effect of the model and lack the discussion of model interpretability. In order to explore the prediction process behind the machine learning 'black box', this paper proposes the SHAP-XGBoost method using the dataset 'Credit Risk Dataset'. Firstly, through model comparison, the XGBoost model is chosen to predict financial credit risk with an accuracy of 94.6%. Secondly, We performed cross-validation and found that the proposed model has good stability. Then, the feature analysis is combined with the SHAP interpretation method, and the four features and their SHAP values that have the most important impact on the model results are: 'person_emp_length' (1.3), 'loan_percent_income' (1.21), 'person_income' (1.01), 'loan_int_rate' (0.74). Finally, we also analyse the interaction between the features to further enhance model interpretability.

16. Identification of Dynamic Discrete Choice Models with Hyperbolic Discounting Using a Terminating Action

Chao Wang

We study the identification of dynamic discrete choice models with hyperbolic discounting using a terminating action. We provide novel identification results for both sophisticated and naive agents' discount factors and their utilities in a finite horizon framework under the assumption of a stationary flow utility. In contrast to existing identification strategies we do not require to observe the final period for the sophisticated agent. Moreover, we avoid normalizing the flow utility of a reference action for both the sophisticated and the naive agent. We propose two

simple estimators: one that estimates the two discount factors without specifying the flow utilities, and another that jointly estimates both the discount factors and the flow utilities. We show that both estimators perform well in simulations.

17. Partial Identification in Moment Models with Incomplete Data via Optimal Transport

Xuetao Shi

In this paper, we develop a unified approach to study partial identification of a finite-dimensional parameter defined by a moment equality model with incomplete data. We establish a novel characterization of the identified set for the true parameter in terms of a continuum of inequalities defined by optimal transport costs. For a special class of moment functions, we show that the identified set is convex, and its support function can be easily computed by solving an optimal transport problem. We demonstrate the generality and effectiveness of our approach through several running examples, including the linear projection model and two algorithmic fairness measures.

18. Impulse Responses, VARs and Local Projections

Ke-Li Xu

This paper provides the uniform asymptotic theory for local projection (LP) regression when the true lag order of the model is unknown, possibly infinity. The theory allows for various persistence levels of the data, growing response horizons, and general conditionally heteroskedastic martingale-difference shocks. Based on the theory, we make two contributions. First, we show that LPs can be semiparametrically efficient under classical assumptions on data and horizons if the controlled lag order diverges. Thus, the commonly perceived efficiency loss of running LPs can be asymptotically negligible with many controls. Second, we propose LP-based inferences for (level and cumulated) impulse responses with robustness properties not shared by other existing methods. Inference methods using two different standard errors are considered, and neither involves HAR-type correction. The uniform validity for the first method depends on a zero fourth-order cumulant condition on shocks, while the validity for the second holds more generally for martingale-difference heteroskedastic shocks.

19. Testing Predictability in the Presence of Mildly Stationary Errors

Yijie Fei

This paper examines predictability testing in predictive regression models with mildly stationary errors. We first derive the limiting distributions of the ordinary least squares (OLS) estimator and the corresponding Wald statistic, revealing a transition from super-consistent estimation under correct specification to inconsistency in spurious regressions. We then demonstrate that the IVX-Wald test proposed by Kostakis et al. (2015), whether re-centered or not, exhibits severe size distortion in the presence of mildly stationary innovations. To address this, we propose a robust modification of the IVX-AR method introduced by Yang et al. (2020). Theoretical and simulation results show that our inference procedure remains uniformly valid across a broad range of empirically relevant scenarios. Applying this test, we reexamine the predictive power of various economic variables for U.S. housing market growth, highlighting the practical usefulness of our approach.

20. Escaping Short-Term Pressures: How CEO Awards Reshape Corporate Risk-Taking

Wenbo Li

Combining reputation theory with stakeholder agency theory, this study explores how award-winning CEOs consider personal interests and balance short-term performance goals and the enterprise's long-term interests when making risk decisions and venture investments. Using the Propensity Score Matching-Difference in Differences (PSM-DID) model, we find that after CEOs receive awards from well-known media, they will reduce the pursuit of short-term performance goals (evidenced by diminished pay-performance sensitivity), thereby making more venture investments and risk decisions and increasing corporate risk-taking. In addition, we also explored the role of reputation constraints in changing award-winning CEOs' decisions regarding venture investments. When the salience of reputation constraints is low, the behavior of award-winning CEOs to raise the corporate risk-taking is more significant. However, when the salience of reputation constraints is high, this effect will be

suppressed. The research findings advance the understanding of media-conferred social awards in corporate governance and provide critical insights for optimizing executive incentive mechanisms while balancing oversight with long-term strategic risk-taking in corporate practices.

21. Distortion Surrogate Indices: Estimating Long-Term Treatment Effects More Robustly

Hyeonseok Park

This paper establishes partial identification and inference for long-term treatment effects without the surrogacy assumption in Athey et al. [2024]. We model the dependence between treatment assignment and the long-term outcome via a copula, conditional on baseline covariates and short-term outcomes. While the copula serves as a functional tool, the essential dependence is captured by Kendall's tau. We show that the long-term ATE is partially identified, with sharp bounds given by Frechet–Hoeffding copulas, and conduct sensitivity analysis by varying the copula parameter. We develop orthogonal moment conditions for debiased estimation under known copulas and for worst-case bounds. Using data from a poverty alleviation program in Pakistan, we demonstrate that relaxing the surrogacy assumption can substantially alter conclusions—often reversing the estimated treatment effect—highlighting the importance of such robustness checks in this data fusion setting.

22. Modeling and Estimating Two-Layer Network Interactions with Unknown Heteroskedasticity

Yang Yang

The paper introduces a model featuring two hierarchically structured layers of spatial or social networks in a cross-sectional setting. Individuals interact within groups, while groups also interact with one another, generating network dependence at both the individual and group levels. The network structures can be flexibly specified using general measures of proximity. The model accommodates individual random effects with heteroskedasticity, as well as unobserved random group effects. Given the complex error structure, we consider a Generalized Method of Moments (GMM) approach for estimation. The linear

moment conditions exploit exogenous variations in individual and group characteristics to identify the network parameters at both levels. To enhance identification when linear moments are weak, we also propose a new set of quadratic moments that are robust to heteroskedasticity. Building on the method of Lin and Lee (2010), we can consistently estimate the variance-covariance (VC) matrix of these heteroskedasticity-robust moments, enabling the construction of a GMM estimator with optimally weighted moments. The asymptotic properties of both a generic and the “optimal” GMM estimator are derived. Monte Carlo simulations demonstrate that the proposed estimators perform well in finite samples. The model is applicable to a variety of social and economic contexts where network effects at two distinct levels are of particular interest, with peer effects among students within the same class and spillovers between classes serving as a leading example.

23. Causal Inference with Social Interactions: A Structural Break Viewpoint

Xingyu Li

This article studies causal inference with social interactions in a non-experimental setting with a non-staggered binary treatment. We characterise the potential outcomes by a factor model that allows for interference between any two units. Under this specification, the observed outcomes can be represented by a structural break model and the treatment effects are exactly the outcome changes induced by this break. Since the structural break literature has not yet provided any estimator for such an estimand, we propose an innovative estimation procedure for treatment effects. Under standard assumptions, the estimator of every individual and time specific treatment effect is proved to be consistent and asymptotically normal as the numbers of units, pre-treatment and post-treatment times go to infinity. We find consistent estimators for the asymptotic variances, which enables asymptotically pivotal inference on treatment effects. As a by-product of causal inference, we contribute to the structural break literature by providing a valid approach to the estimation and inference of outcomes changes induced by a structural break. Furthermore, we extend our method to models with covariates. Finally, we investigate the performances of the proposed method in finite samples by Monte Carlo experiments and an empirical application with real data.

List of Speakers

In order of presentations

Songnian Chen	Zhejiang University
Mathieu Rosenbaum	Ecole Polytechnique Paris
Shuo Jiang	Xiamen University
Yutao Sun	Dongbei University of Finance and Economics
Dandan Wang	Liaoning University
O-Chia Chuang	Hubei University of Economics
Mingyu Liu	Dongbei University of Finance and Economics
Minghai Mao	Liaoning University
Min Lin	Beijing Normal University
Jingjie Xiang	Central China Normal University
Ao Wang	University of Warwick and CAGE Research Centre
Yu Du	Southwestern University of Finance and Economics
Yi Zhang	Jinan University
Shiqi Ye	Chinese Academy of Sciences
Shenmiao Yang	Shandong Normal University
Chao Wang	Dongbei University of Finance and Economics
Xuetao Shi	The University of Sydney
Ke-Li Xu	Indiana University Bloomington
Yijie Fei	Hunan University
Wenbo Li	Zhengzhou university
Hyeonseok Park	Dongbei University of Finance and Economics
Yang Yang	Tianjin University
Xingyu Li	Peking University

Scientific Committee

In Alphabetical Order

Yanqin Fan	University of Washington
Weiguo Wang	Dongbei University of Finance and Economics
Jun Yu	University of Macau

Local Committee

In Alphabetical Order

Rong Hu	Dongbei University of Finance and Economics
Yu Li	Dongbei University of Finance and Economics
Yiu Lim Lui	Dongbei University of Finance and Economics
Hyeonseok Park	Dongbei University of Finance and Economics
Yutao Sun	Dongbei University of Finance and Economics
Tongbin Zhang	Dongbei University of Finance and Economics
Xueren Zhou	Dongbei University of Finance and Economics



Conference Guide

Venue

Conference Room:	Room 710, Duxing Building (笃行楼) (elevator in <u>left wing</u>)
Registration:	Hallway next to conference room
Coffee Break:	Hallway next to conference room
Lunch:	Central Dining Hall (中心食堂)

There is a map on the next page for your reference.

Meal

A buffet lunch (on the 19th only) is provided at the Central Dining Hall. **Please show your conference badge to the staff at the entrance.**

Note: There is no dinner on the 19th nor lunch on the 20th.

Contact

If you need any assistance, please contact the local organizer:

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Map

