Andrii Babii

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Contact information
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Education

Ph.D. Economics, Toulouse School of Economics, 2017. Advisor: Jean-Pierre Florens. Dissertation committee: Timothy Christensen, Jean-Pierre Florens, Eric Gautier, and Ingrid Van Keilegom.

MPhil European Diploma for Advanced Quantitative Economics, 2014.

M.Sc. Economic Theory and Econometrics, Toulouse School of Economics, 2013.

BA International Relations, Kyiv International University, 2010.

Professional Experience

University of North Carolina at Chapel Hill, Assistant Professor, 2017-present.

Awards and Honors

2022 Research Award, Economics Department – UNC Chapel Hill.

2020 SoFiE Summer School Lectures, University of Chicago.

2020 SoFiE Summer School Lectures, NYU Shanghai.

2020 Research Award, Economics Department – UNC Chapel Hill.

2018 Jae-Yeong Song and Chunuk Park Award for Excellence in Graduate Teaching.

2012 Jean-Jacques Laffont Foundation's Scholarship.

2012 Google Summer of Code scholarship.

Publications

1. "Isotonic regression discontinuity designs", with Rohit Kumar, **Journal of Econometrics**, 2022 (forthcoming).
2. "Machine learning panel data regressions with heavy-tailed dependent data: theory and application", with Ryan T. Ball, Eric Ghysels and Jonas Striaukas, **Journal of Econometrics**, 2022 (forthcoming).

3. "High-dimensional Granger causality tests with an application to VIX and news", with Eric Ghysels and Jonas Striaukas, **Journal of Financial Econometrics**, 2022 (forthcoming).

4. "High-dimensional mixed frequency IV regression", **Journal of Business & Economic Statistics**, 2022, 40(4), 1470–1483.

5. "Machine learning time series regressions with an application to nowcasting", with Eric Ghysels and Jonas Striaukas, **Journal of Business & Economic Statistics**, 2022, 40(3), 1094–1106.

6. "Honest confidence sets in nonparametric IV regression and other ill-posed models", **Econometric Theory**, 2020, 36(4), 658–706.

7. "ET inteview: Jean-Pierre Florens", joint with Eric Ghysels, **Econometric Theory**, 2020, 36(3), 369–385.

8. "Commercial and residential mortgage defaults: spatial dependence with frailty", with Xi Chen and Eric Ghysels, **Journal of Econometrics**, 2019, 212(1), 47–77.

Working Papers

1. "Is completeness necessary? Estimation in nonidentified linear models", with Jean-Pierre Florens, 2022 (2nd revision requested).

2. "Are unobservables separable?", with Jean-Pierre Florens, 2022 (resubmitted).

3. "Binary choice with asymmetric loss in a data-rich environment: theory and an application to racial justice", with Xi Chen, Eric Ghysels, and Rohit Kumar, 2022 (submitted).

4. Panel Data Nowcasting in a Data-Rich Environment: The Case of Price-Earnings Ratios, with Ryan T. Ball, Eric Ghysels and Jonas Striaukas, 2022 (revision requested).

Work in Progress

1. "Double/debiased policy learning in data-rich environment", with Rohit Kumar, 2022.

2. "Tensor factor model", with Eric Ghysels and Junsu Pan, 2022.

3. "Forecasting demand for air travel", with Alex Marsh, Garrett Scott, and Jonathan Williams, 2021.

4. "Identification and estimation of factor models through skewness", with Eric Ghysels and Junsu Pan, 2021.

Seminars and Conferences

2023 (scheduled): Université de Montréal, Universidad Carlos III de Madrid, National University of Singapore, Singapore Management University, University of Notre Dame (Econometrics Workshop).

2022: University of Pennsylvania, Brown University, Boston University, University at Albany, 2022 NBER Young Econometricians Conference, AEA/ASSA Annual Meeting (presenter + discussant), UC Riverside, UNC Wilmington, University of Rochester (Conference in Econometrics), Toulouse School of Economics (Conference on Estimation and Inference in Econometric Models).

2021: AEA/ASSA Annual Meeting, Yale University, Humboldt University of Berlin, University of Connecticut, University of Amsterdam (Data Science and Machine Learning workshop), NC State University (Embedding AI in Society Symposium), University of Bristol (Econometrics Study Group), European Commission (Big Data and Economic Forecasting), New York Camp Econometrics XV, 26th International Panel Data Conference, IAAE Annual Conference, SoFiE Machine Learning Virtual Conference, North American Summer Meeting of the Econometric Society, Asian Meeting of the Econometric Society, China Meeting of the Econometric Society, Australasia Meeting of the Econometric Society, 41st International Symposium on Forecasting, EEA-ESEM 2021, CFE-CMStatistics 2021.

2020: International Association for Applied Econometrics Webinar, World Congress of Econometric Society, Computational and Methodological Statistics.

2019: Vanderbilt University, Duke University, University of Chicago (Big Data and Machine Learning in Econometrics, Finance, and Statistics), Toulouse School of Economics (Financial Econometrics Conference), Triangle Econometrics Conference (Durham, NC), AI Innovations Forum (UNC Kenan Institute/SAS), Midwest Econometrics Conference (Columbus, OH), 72nd European Meeting of the Econometric Society (Manchester, UK), Econometric Study Group Annual Conference (Bristol, UK), North American Summer Meeting of the Econometric Society (Seattle, WA).

2018: UNC Kenan-Flagler Business School, Bristol University (Econometric Study Group Annual Conference), Toulouse School of Economics, 4th ISNPS Conference (Salerno, Italy), North American Summer Meeting of the Econometric Society (Davis, CA), 71st European Meetings of Econometric Society (Cologne, Germany), Midwest Econometrics Conference (Madison, WI), Triangle Econometrics Conference (Durham, NC).

2017: Duke University, Université de Montréal, University of North Carolina at Chapel Hill, Toulouse School of Economics, Triangle Econometrics Conference (Durham, NC).

2016: 27th $(EC)^2$ Conference on Big Data (Toulouse, France), European Winter Meeting of the Econometric Society (Edinburgh, UK), 69th Econometric Society European Meetings (Genève, Switzerland), Recent Advances in Econometrics (Toulouse, France), 3rd conference of the International Society for Non-Parametric Statistics (Avignon, France), 48èmes Journées de Statistique de la SFdS (Montpellier, France).

2015: Northwestern University (Conference on Inverse Problems in Econometrics), Tilburg University (ENTER seminar).

2014: Harvard University (SoFiE Financial Econometrics Summer School), Oxford University (SoFiE Financial Econometrics Summer School), 5th Lindau Nobel Laureate Meeting on Economic Sciences.

Teaching Activities

Econ 573: Big Data and Machine Learning in Econometrics (x6, undergraduate), UNC, 2020-2023.

Econ 570: Applied Econometric Analysis (x2, undergraduate), UNC, 2018-2019.

Econ 771: Introduction to Econometric Theory (x6, graduate), UNC, 2018-2023.

Econ 970: Econometrics workshop (graduate), UNC, 2018-2019 and 2022-2023.

TA for Intermediate Econometrics (undergraduate), Econometrics I (x2, graduate), and Econometrics II (graduate), Toulouse School of Economics, 2014-2016.

Dissertation Committees

Co-Advisor

Yi Cui (in progress), Junsu Park (in progress), Jonas Striaukas (Copenhagen Business School, 2022).

Committee Member

Xinglin Li (in progress), Kim Chan (in progress), Tianqi Li (in progress), Yanru Lee (in progress), Adam Haas (in progress), Yiyao Luo (in progress), Dejong Andrew (in progress), Haque Sharjil (Federal Reserve Board, 2022), Steve Raymond (cofounder & CFO Split Technologies, 2020), Anessa Custovic (Cardinal Retirement Planning, 2020), Jay Dennis (Institute for Defense Analyses, 2019), Jose Alfonso Campillo Garcia (Freddie Mac, 2018).

Honors Adviser

Larry Li (2021), Katerina Wu (2020).

Professional Service

Internal

Social Sciences Committee on Undergraduate Data Science, 2021-2022.

Ph.D. Written Examination Committee in Econometrics, 2018-2021.

Econometrics seminar organizer, 2019-2022.

Placement committee, 2017-2018.

Faculty Advisor for Econ Games, 2022.

External

Referring: Econometrica, Journal of Econometrics, Quantitative Economics, Journal of Applied Econometrics, Journal of Business & Economic Statistics, Econometric Theory, Management Science, Journal of Financial Econometrics, International Journal of Forecasting, Journal of Multivariate Analysis, Electronic Journal of Statistics, Journal of Nonparametric Statistics, ERC Grants.

Program committees: Econometric Society World Congress 2020, AI Innovations Forum, joint with Kenan Institute and SAS.

Other Experience

RA to Prof. Eric Gautier, Summer-Fall 2015.

R project for statistical computing, Student Developer, 2012.

Junior Lieutenant, Military Institute of Taras Shevchenko National University of Kyiv, 2011.

Unilever Ukraine, Trainee, Kyiv, Ukraine, 2009.

Institute of Society Transformation, Intern, Kyiv Ukraine, 2008.