SZABOLCS BLAZSEK

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ResearchGate: https://www.researchgate.net/profile/Szabolcs_Blazsek

University website: https://en.ufm.edu/catedraticos/szabolcs-blazsek/

ACADEMIC POSITIONS

2012 – **Professor**, School of Business, **Francisco Marroquin University**, Guatemala and Panama.

2007 – 2012 **Associate Professor**, Department of Business Administration, **University of Navarra**, Pamplona, Spain
Director of the Finance Major, Faculty of Economics and Business, University of Navarra.

2001 – 2007 **Assistant Professor**, Department of Business Administration, **University Carlos III of Madrid**, Spain.

VISITING RESEARCHER POSITIONS

2010 **Visiting Researcher**, Research Department, **Central Bank of Hungary**, Budapest, Hungary

2005 **Visiting Researcher**, Laboratory of Microeconometrics, **CREST-INSEE**, Paris, France

2004 – 2005 **Visiting Researcher**, Laboratory of Finance and Insurance, **CREST-INSEE**, Paris, France

2003 **Visiting Researcher**, **GREQAM**, University of Aix-Marseille, Marseille, France

1999 **Visiting Researcher**, Department of Finance, **Maastricht University**, Maastricht, Netherlands.

EDUCATION

2001 – 2007 **Ph.D. in Economics (Major in Econometrics)**, **University Carlos III of Madrid**, Madrid, Spain. Thesis: "Economic Applications of Conditional Intensity Models". Advisors: Alvaro Escribano and Mikel Tapia.

1995 – 2001 **M.Sc. in Business Administration (Major in Finance)**, **Corvinus University**, Budapest, Hungary. Thesis: "Politics, Disasters and House Prices; 1630-1994". Advisor: Lajos Zelko.

1991 – 1995 **Diploma (Major in Mathematics)**, **Lovassy Laszlo Grammar School**, Veszprem, Hungary.

SELECTED PUBLICATIONS

- Blazsek, S., and Escribano, A. (2010) Knowledge spillovers in U.S. patents: a dynamic patent intensity model with secret common innovation factors. **Journal of Econometrics**.
- Blazsek, S., and Escribano, A. (2016) Patent propensity, R&D and market competition: dynamic spillovers of innovation leaders and followers. **Journal of Econometrics**.
- Blazsek, S., and Escribano, A. (2016) Score-driven dynamic patent count panel data models. **Economics Letters**.
- Blazsek, S., Escribano, A., and Licht, A. (2022) Co-integration with score-driven models: an application to US real GDP growth, US inflation rate, and effective federal funds rate. **Macroeconomic Dynamics**.
- Blazsek, S., Escribano, A., and Licht, A. (2022) Score-driven location plus scale models: asymptotic theory and an application to forecasting Dow Jones volatility. **Studies in Nonlinear Dynamics & Econometrics**.
- Blazsek, S., Ayala, A., and Licht, A. (2022) Signal smoothing for score-driven models: a linear approach. **Communications in Statistics – Simulation and Computation**.
- Blazsek, S., and Escribano, A. (2022) Robust estimation and forecasting of climate change using score-driven ice-age models. **Econometrics (Special Issue: Econometric Analysis of Climate Change)**.

CURRENT RESEARCH WORK

Submitted papers:

- Ayala, A., Blazsek, S., and Licht, A. (2022) Optimal choice of the scaling parameters in score-driven filters.
- Blazsek, S., and Escribano, A. (2022) Score-driven threshold ice-age models: Benchmark models for long-run climate forecasts.
- Ayala, A., Blazsek, S., and Licht, A. (2022) Volatility forecasting using quasi-score-driven models with an application to the coronavirus pandemic.
- Blazsek, S., Escribano, A., and Licht, A. (2022) Robust impulse responses using score-driven conditional moments with an application.
- Ayala, A., Blazsek, S., and Licht, A. (2022) Comparison of score-driven equity-gold portfolios during the COVID-19 pandemic using model confidence sets.
- Blazsek, S., and Bowen, R. (2022) Score-driven cryptocurrency and equity portfolios.

TEACHING

***Francisco Marroquin University*:**

- Forecasting Economic and Business Data (MBA) (2022)
- Econometrics I (undergraduate) (2015)
- Econometrics II (undergraduate) (2018, 2015, 2014)
- Quantitative Methods for Business (MBA) (2019, 2018)
- Forecasting Techniques and Scenario Analysis (MBA) (2018, 2016, 2015, 2014)
- Forecast Pro (MBA) (2018, 2017, 2016, 2015, 2014)
- Financial Econometrics (graduate) (2022)
- Financial Econometrics II (MFIN) (2021, 2020, 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2011)
- Financial Econometrics III (MFIN) (2017)
- Forecasting Volatility and Expected Return (MFIN) (2018)
- Econometrics for Business and Finance (MBA) (2017, 2016, 2015)
- Forecast Pro Training Course (MBA, MFIN) (2019)
- Research Training Course (graduate) (2022, 2021, 2020, 2019, 2018, 2017)
- Prediction of Financial or Macroeconomic Data by Monte Carlo Simulation (MBA) (2017)
- GAUSS Mathematical and Statistical System Training Course (graduate) (2016)
- Mathematics, Statistics and Econometrics Training Course (graduate) (2014, 2013, 2012)
- Statistics Training Course (graduate) (2013)
- Financial Risk Management (MBA, MFIN) (2021)
- Risk Management with Futures and Forwards (MFIN) (2018, 2017)
- Futures and Forwards (MFIN) (2017)
- Financial Derivatives (MFIN) (2021, 2020, 2019, 2018, 2017, 2016, 2015, 2014)
- Options (MFIN) (2016, 2015)
- Futures and Options (MFIN) (2017, 2016, 2013)
- Optimization of Financial Portfolios and Portfolio Management (MFIN) (2017, 2014, 2013, 2012, 2011)
- Speculation and Risk Management with Financial Derivatives (MFIN) (2013)

- Volatility (MFIN) (2013)
- Value-at-Risk (VaR) (MFIN) (2017, 2013)
- Cointegration-Based Optimization of Financial Portfolios (MBA, MFIN) (2013, 2012)
- A Practical Course in Option Pricing (MBA) (2012)
- Fixed Income Securities (MBA, MFIN) (2018)
- MiKTeX Training Course (graduate) (2015)
- Solar Panels in Guatemala (undergraduate) (2022)

***University of Navarra*:**

- Financial Investments (undergraduate) (2012, 2011, 2010, 2009)
- Financial Derivatives (undergraduate) (2012)
- Financial Investments (MEF) (2011, 2010)
- Corporate Finance (undergraduate) (2010)
- Fundamentals of Finance (undergraduate) (2010, 2009)
- Accounting (undergraduate) (2009, 2008, 2007).

University Carlos III of Madrid:

- Financial Management (undergraduate) (2007, 2005, 2004)
- Financial Derivatives (undergraduate) (2005, 2004)
- Marketing Research (undergraduate) (2005)
- Financial Risk Management (MFIN) (2005, 2004)
- Financial Markets (undergraduate) (2005, 2004)
- Accounting (undergraduate) (2003)
- Accounting Analysis (undergraduate) (2003)
- Management Accounting (undergraduate) (2002).

JOURNAL ARTICLES

- (P41) Ayala, A., Blazsek, S., and Escribano, A. (2022) Anticipating extreme losses using score-driven shape filters. **Studies in Nonlinear Dynamics & Econometrics**, accepted.
- (P40) Blazsek, S., and Haddad, M. (2022) Non-path-dependent score-driven multi-regime Markov-switching EGARCH: empirical evidence. **Studies in Nonlinear Dynamics & Econometrics.** https://doi.org/10.1515/snde-2021-0101
- (P39) Blazsek, S., and Escribano, A. (2022) Robust estimation and forecasting of climate change using score-driven ice-age models. **Econometrics (Special Issue: Econometric Analysis of Climate Change)** 10(1). https://doi.org/10.3390/econometrics10010009
- (P38) Blazsek, S., Escribano, A., and Licht, A. (2022) Score-driven location plus scale models: asymptotic theory and an application to forecasting Dow Jones volatility. **Studies in Nonlinear Dynamics & Econometrics**. https://doi.org/10.1515/snde-2021-0083. Supplementary Material is available at the same website.
- (P37) Aycinena, D., Blazsek, S., Rentschler, L., and Sprenger, C. (2022) Intertemporal choice experiments and large-stakes behavior. **Journal of Economic Behavior and Organization** 196: 484–500. https://doi.org/10.1016/j.jebo.2022.02.011. Supplementary Material is available at the same website.

- (P36) Blazsek, S., Blazsek, V., and Kobor, A. (2022) Conservatorship, quantitative easing, and mortgage spreads: a new multi-equation score-driven model of policy actions. **Studies in Nonlinear Dynamics & Econometrics**. http://doi.org/10.1515/snde-2021-0066.
- (P35) Blazsek, S., Ayala, A., and Licht, A. (2022) Signal smoothing for score-driven models: a linear approach. **Communications in Statistics – Simulation and Computation**. https://doi.org/10.1080/03610918.2022.2032165
- (P34) Ayala, A., Blazsek, S., and Licht, A. (2022) Score-driven stochastic seasonality of the Russian rouble: an application case study for the period of 1999 to 2020. **Empirical Economics** 62: 2179–2203. https://doi.org/10.1007/s00181-021-02103-6
- (P33) Blazsek, S., Escribano, A., and Licht, A. (2022) Co-integration with score-driven models: an application to US real GDP growth, US inflation rate, and effective federal funds rate. **Macroeconomic Dynamics**. https://doi.org/10.1017/S1365100521000365
- (P32) Blazsek, S., Escribano, A., and Licht, A. (2022) Multivariate Markov-switching score-driven models: an application to the global crude oil market. **Studies in Nonlinear Dynamics & Econometrics**. 26 (3): 313–335. https://doi.org/10.1515/snde-2020-0099
- (P31) Blazsek, S., and Licht, A. (2022) Prediction accuracy of volatility using the score-driven Meixner distribution: an application to the Dow Jones. **Applied Economics Letters** 29(2): 111–117. https://doi.org/10.1080/13504851.2020.1859445
- (P30) Ayala, A., and Blazsek, S. (2021) Score-driven panel data models of the capital structure of US firms. **Applied Economics Letters** 28(19): 1666-1670. https://doi.org/10.1080/13504851.2020.1845293
- (P29) Blazsek, S., Escribano, A, and Licht, A. (2020) Identification of seasonal effects in impulse responses using score-driven multivariate location models. **Journal of Econometric Methods** 10(1): 53-66. https://doi.org/10.1515/jem-2020-0003
- (P28) Blazsek, S., and Licht, A. (2020) Dynamic conditional score models: a review of their applications. **Applied Economics** 52(11): 1181–1199. https://doi.org/10.1080/00036846.2019.1659498
- (P27) Aycinena, D., Blazsek, S., Rentschler, L., and Sandoval, B. (2019) Smoothing, discounting and demand for intra-household control for recipients of conditional cash transfers. **Journal of Applied Economics** 22(1): 218–241. https://doi.org/10.1080/15140326.2019.1596641 Online Appendix: https://www.tandfonline.com/doi/suppl/10.1080/15140326.2019.1596641/suppl_file/recs_a_1596641_sm8444.pdf
- (P26) Ayala, A., and Blazsek, S. (2019) Score-driven models of stochastic seasonality in location and scale: An application case study of the Indian rupee to USD exchange rate. **Applied Economics** 51(37): 4083–4103. https://doi.org/10.1080/00036846.2019.1588952
- (P25) Ayala, A., and Blazsek, S. (2019) Score-driven currency exchange rate seasonality as applied to the Guatemalan Quetzal/US Dollar. **SERIEs** 10 (1): 65–92. https://doi.org/10.1007/s13209-018-0186-0
- (P24) Blazsek, S., and Licht, A. (2018) Robustness of score-driven location and scale models to extreme observations: an application to the Chinese stock market. **Financial Statistical Journal** 1 (2): 507–516. http://dx.doi.org/10.24294/fsj.v1i2.699
- (P23) Blazsek, S., Ho, H.-C., and Liu, S.-P. (2018) Score-driven Markov-switching EGARCH models: an application to systematic risk analysis. **Applied Economics** 50 (56): 6047–6060. https://doi.org/10.1080/00036846.2018.1488073
- (P22) Ayala, A., and Blazsek, S. (2018) Score-driven copula models for portfolios of two risky assets. **The European Journal of Finance** 24 (18): 1861–1884. Paper: https://doi.org/10.1080/1351847X.2018.1464488; Separate Appendix: https://www.tandfonline.com/doi/suppl/10.1080/1351847X.2018.1464488/suppl_file/rejf_a_1464488_sm6922.pdf
- (P21) Ayala, A., and Blazsek, S. (2018) Equity market neutral hedge funds and the stock market: an application of score-driven copula models. **Applied Economics** 50 (37): 4005–4023. https://doi.org/10.1080/00036846.2018.1440062

- (P20) Blazsek, S., Carrizo, D., Eskildsen, R., and Gonzalez, H. (2018) Forecasting rate of return after extreme values when using AR-*t*-GARCH and QAR-Beta-*t*-EGARCH. **Finance Research Letters** 24: 193–198. https://doi.org/10.1016/j.frl.2017.09.006
- (P19) Blazsek, S., and Hernandez, H. (2018) Analysis of electricity prices for Central American countries using dynamic conditional score models. **Empirical Economics** 55 (4): 1807–1848. http://dx.doi.org/10.1007/s00181-017-1341-3
- (P18) Blazsek, S., and Monteros, L. A. (2017) Dynamic conditional score models of degrees of freedom: filtering with score-driven heavy tails. **Applied Economics** 49 (53): 5426–5440. http://dx.doi.org/10.1080/00036846.2017.1307935
- (P17) Blazsek, S., and Ho, H.-C. (2017) Markov regime-switching Beta-*t*-EGARCH. **Applied Economics** 49 (47): 4793–4805. http://dx.doi.org/10.1080/00036846.2017.1293794
- (P16) Blazsek, S., and Monteros, L. A. (2017) Event-study analysis by using dynamic conditional score models. **Applied Economics** 49 (45): 4530–4541. http://dx.doi.org/10.1080/00036846.2017.1284996
- (P15) Blazsek, S., and Escribano, A. (2016) Score-driven dynamic patent count panel data models. **Economics Letters** 149 (C): 116–119. http://dx.doi.org/10.1016/j.econlet.2016.10.026
- (P14) Blazsek, S., Chavez, H., and Mendez, C. (2016) Model stability and forecast performance of Beta-*t*-EGARCH. **Applied Economics Letters** 23 (17): 1219–1223. http://dx.doi.org/10.1080/13504851.2016.1145343
- (P13) Ayala, A., Blazsek, S., Cuñado, J., and Gil-Alana, L. A. (2016) Regime-switching purchasing power parity in Latin America: Monte Carlo unit root tests with dynamic conditional score. **Applied Economics** 48 (29): 2675–2696. http://dx.doi.org/10.1080/00036846.2015.1128076
- (P12) Blazsek, S., and Escribano, A. (2016) Patent propensity, R&D and market competition: dynamic spillovers of innovation leaders and followers. **Journal of Econometrics** 191 (1): 145–163. http://dx.doi.org/10.1016/j.jeconom.2015.10.005
- (P11) Blazsek, S., and Mendoza, V. (2016) QARMA-Beta-*t*-EGARCH versus ARMA-GARCH: an application to S&P 500. **Applied Economics** 48 (12): 1119–1129. http://dx.doi.org/10.1080/00036846.2015.1093086
- (P10) Blazsek, S., and Villatoro, M. (2015) Is Beta-*t*-EGARCH(1,1) superior to GARCH(1,1)? **Applied Economics** 47 (17): 1764–1774. http://dx.doi.org/10.1080/00036846.2014.1000536
- (P9) Ayala, A., and Blazsek, S. (2014) Fiscal sustainability of Eurozone governments: an empirical review of the past decade. **Review of European Studies** 6 (1): 143–150. http://dx.doi.org/10.5539/res.v6n1p143
- (P8) Ayala, A., and Blazsek, S. (2014) Contagion of sovereign debt in the Eurozone. **Theoretical Economics Letters** 4 (1): 98–109. http://dx.doi.org/10.4236/tel.2014.41016
- (P7) Mateo, R., Hernandez, J. R., Jaca, C., and Blazsek, S. (2013) Effects of tidy/messy work environment in human accuracy. **Management Decision** 51 (9): 1861–1877. http://dx.doi.org/10.1108/MD-02-2013-0084
- (P6) Ayala, A., and Blazsek, S. (2013) Structural breaks in public finances in Central and Eastern European countries. **Economic Systems** 37 (1): 45–60. http://dx.doi.org/10.1016/j.ecosys.2012.06.004
- (P5) Blazsek, S., and Downarowicz, A. (2013) Forecasting hedge funds volatility: a Markov regime-switching approach. **The European Journal of Finance** 19 (3–4): 243–275. http://dx.doi.org/10.1080/1351847X.2011.653576 Separate Appendix available from the corresponding author: sblazsek@ufm.edu (Szabolcs Blazsek).
- (P4) Ayari, N., Blazsek, S., and Mendi, P. (2012) Renewable energy innovations in Europe: a dynamic panel data approach. **Applied Economics** 44 (24): 3135–3147. http://dx.doi.org/10.1080/00036846.2011.570720
- (P3) Ayala, A., and Blazsek, S. (2012) How has the financial crisis affected the fiscal convergence of Central and Eastern Europe to the Eurozone? **Applied Economics Letters** 19 (5): 471–476. http://dx.doi.org/10.1080/13504851.2011.583212
- (P2) Vandenbussche, J., Blazsek, S., and Watt, S. (2012) The liquidity and liquidity distribution effects in emerging markets: evidence from Jordan. **Applied Financial Economics** 22 (3): 231–242. http://dx.doi.org/10.1080/09603107.2011.610740

- (P1) Blazsek, S., and Escribano, A. (2010) Knowledge spillovers in U.S. patents: a dynamic patent intensity model with secret common innovation factors. **Journal of Econometrics** 159 (1): 14–32. http://dx.doi.org/10.1016/j.jeconom.2010.04.004

BOOKS, BOOK CHAPTERS

- (C2) Ayala, A., Blazsek, S., and Gonzalez, R. B. (2015). Default risk of sovereign debt in Central America. In: Nigel Finch (Ed.), Emerging Markets and Sovereign Risk (pp. 18–44). ISBN 978-1-137-45065-4, **Palgrave Macmillan UK**.
- (C1) Blazsek, S. (2013). Forecasting funds of hedge funds performance: a Markov regime-switching approach. In: Greg N. Gregoriou (Ed.), Reconsidering Funds of Hedge Funds: The Financial Crisis and Best Practices in UCITS, Tail Risk, Performance, and Due Diligence (pp. 229–259). **Elsevier**. http://dx.doi.org/10.1016/B978-0-12-401699-6.00015-0
- (B1) Blazsek, S. (2011) Economic Applications of Conditional Intensity Models. ISBN 978-3-8465-4770-0, **Lambert Academic Publishing**, Saarbrucken, Germany.

WORKING PAPERS

- Blazsek, S., and Escribano, A. (2022) Score-driven threshold ice-age models: Benchmark models for long-run climate forecasts. Working Paper 2022-05, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/34757
- Ayala, A., Blazsek, S., and Licht A. (2022) Optimal choice of the scaling parameters in score-driven filters. Discussion Paper 4/2022, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/gesg/discussion-papers/
- Ayala, A., Blazsek, S., and Licht A. (2022) A short note on the scaling parameter in score-driven filters. Discussion Paper 3/2022, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/gesg/discussion-papers/
- Blazsek, S., and Bowen, R. (2022) Score-driven cryptocurrency and equity portfolios. Discussion Paper 2/2022, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/gesg/discussion-papers/
- Ayala, A., Blazsek, S., and Licht A. (2022) Score-driven equity plus gold portfolios before and during the COVID-19 pandemic. Discussion Paper 1/2022, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/gesg/discussion-papers/
- (P39) Blazsek, S., and Escribano, A. (2021) Robust estimation and forecasting of climate change using score-driven ice-age models. Working Paper 2021-12, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/33453
- (P36) Blazsek, S., Blazsek, V., and Kobor, A. (2021) Conservatorship, quantitative easing, and mortgage spreads: A new multi-equation score-driven model of policy actions. Discussion Paper 3/2021, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/gesg/discussion-papers/
- Ayala, A., Blazsek, S., and Licht A. (2021) Volatility forecasting for the coronavirus pandemic using quasi-score-driven models. Discussion Paper 2/2021, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/gesg/discussion-papers/
- (P37) Aycinena, D., Blazsek, S., Rentschler, L., and Sprenger, C. (2020) Intertemporal choice experiments and large-stakes behavior. **Chapman University**, Economic Science Institute, ESI Working Paper 20-36. https://digitalcommons.chapman.edu/esi_working_papers/331/
- (P35) Ayala, A., Blazsek, S., and Licht A. (2020) Optimal signal extraction for score-driven models. Discussion Paper 5/2020, **Francisco Marroquin University**, School of Business, 2020. https://en.ufm.edu/gesg/discussion-papers/

- (P38) Blazsek, S., Escribano, A., and Licht A. (2020) Prediction accuracy of bivariate score-driven risk premium and volatility filters: an illustration for the Dow Jones. Working Paper 2020-10, **University Carlos III of Madrid**, Department of Economics. http://hdl.handle.net/10016/31339
- (P34) Blazsek, S., and Licht, A. (2020) Robust score-driven inference of stochastic seasonality of the Russian rouble for different currency exchange rate regimes from 1999 to 2020. Discussion Paper 4/2020, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/gesg/discussion-papers/
- (P30) Blazsek, S., and Ayala, A. (2020) Dynamic analysis of the capital structure of S&P 500 firms under unconventional monetary policy using score-driven panel data models. Discussion Paper 3/2020, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/gesg/discussion-papers/
- Blazsek, S., Escribano, A., and Licht, A. (2020) Dynamic stochastic general equilibrium inference using a score-driven approach. Working Paper 20-05, **University Carlos III of Madrid**, Department of Economics. http://hdl.handle.net/10016/30347
- (P32) Blazsek, S., Escribano, A., and Licht, A. (2020) Nonlinear common trends for the global crude oil market: Markov-switching score-driven models of the multivariate *t*-distribution. Working Paper 20-04, **University Carlos III of Madrid**, Department of Economics. http://hdl.handle.net/10016/30346
- (P31) Blazsek, S., and Licht, A. (2020) Score-driven QAR-EGARCH-M model of risk premium and volatility for the Meixner probability distribution. Discussion Paper 2/2020, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/gesg/discussion-papers/
- (P40) Blazsek, S., and Haddad, M. (2020) Estimation and statistical performance of Markov-switching score-driven volatility models: the case of G20 stock markets. Discussion Paper 1/2020, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/gesg/discussion-papers/
- (P32) Blazsek, S., Escribano, A., and Licht, A. (2019) Markov-switching score-driven multivariate models: outlier-robust measurement of the relationships between world crude oil production and US industrial production. Working Paper 19-16, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/29030
- (P41) Ayala, A., Blazsek, S., and Escribano, A. (2019) Maximum likelihood estimation of score-driven models with dynamic shape parameters: an application to Monte Carlo value-at-risk. Working Paper 19-12, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/28638
- (P33) Blazsek, S., Escribano, A., and Licht, A. (2019) Co-integration and common trends analysis with score-driven models: an application to the Federal Funds effective rate and the US inflation rate. Working Paper 19-08, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/bitstream/handle/10016/28451/we1908.pdf
- (P24) Blazsek, S., and Licht, A. (2019) Robustness of score-driven location and scale models to extreme observations: an application to the Chinese stock market. Discussion Paper 1/2019, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/wp-content/uploads/2017/04/BLAZSEK-LICHT-2019_1.pdf
- (P28) Blazsek, S., and Licht, A. (2019) Dynamic conditional score models: a review. Discussion Paper 2/2019, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/wp-content/uploads/2017/04/BLAZSEK-LICHT-2019_2.pdf
- (P41) Ayala, A., Blazsek, S., and Escribano, A. (2019) Score-driven time series models with dynamic shape: an application to the Standard & Poor's 500 index. Working Paper 19-05, **University Carlos III of Madrid**, Department of Economics. http://hdl.handle.net/10016/28133
- (P29) Blazsek, S., Escribano, A., and Licht, A. (2018) Seasonality detection in small samples using score-driven nonlinear multivariate dynamic location models. Working Paper 18-09, **University Carlos III of Madrid**, Department of Economics. http://hdl.handle.net/10016/27483

- (P32) Blazsek, S., Escribano, A., and Licht, A. (2018) Seasonal quasi-vector autoregressive models with an application to crude oil production and economic activity in the United States and Canada. Working Paper 18-10, **University Carlos III of Madrid**, Department of Economics. http://hdl.handle.net/10016/27484
- (P26) Blazsek, S., and Ayala, A. (2018) Score-driven models of local level, seasonality and volatility: an application to the currency exchange rate of Indian rupee to USD. Guatemalan Econometric Study Group Discussion Paper 1/2018, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/gesg/discussion-papers/
- (P32) Blazsek, S., Escribano, A., and Licht, A. (2018) Seasonal quasi-vector autoregressive models for macroeconomic data. Working Paper 18-03, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/26316
- (P25) Blazsek, S., and Ayala, A. (2017) New score-driven models for trimming and Winsorizing: an application for Guatemalan Quetzal to US Dollar. Guatemalan Econometric Study Group Discussion Paper 2/2017, **Francisco Marroquin University**, School of Business. https://en.ufm.edu/wp-content/uploads/2017/04/AYALA-BLAZSEK-2017-UFM-WP.pdf
- (P33) Blazsek, S., Escribano, A., and Licht, A. (2017) Score-driven nonlinear multivariate dynamic location models. Working Paper 17-14, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/25739
- (P41) Ayala, A., Blazsek, S., and Escribano, A. (2017) Dynamic conditional score models with time-varying location, scale and shape parameters. Working Paper 17-08, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/25043
- (P15) Blazsek, S., and Escribano, A. (2017) Score-driven dynamic patent count panel data models. Working Paper 16-10, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/23458
- (P15) Blazsek, S., and Escribano, A. (2015) Dynamic conditional score patent count panel data models. Working Paper 15-10, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/22040
- (P12) Blazsek, S., and Escribano, A. (2014) Propensity to patent, R&D and market competition: dynamic spillovers of innovation leaders and followers. Working Paper 14-12, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/19006
- (P12) Blazsek, S., and Escribano, A. (2012) Patents, secret innovations and firm's rate of return: differential effects of the innovation leader. Working Paper 12-02, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/13284
- (P5) Blazsek, S., and Downarowicz, A. (2011) Forecasting hedge funds volatility: a Markov regime-switching approach, **SSRN Working Paper**. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1768864
- (P1) Blazsek, S., and Escribano, A. (2009) Knowledge spillovers in U.S. patents: a dynamic patent intensity model with secret common innovation factors. Working Paper 09-89, **University Carlos III of Madrid**, Department of Economics. https://e-archivo.uc3m.es/handle/10016/6122
- (P4) Ayari, N., Blazsek, S., and Mendi, P. (2009) Dynamic panel data models of renewable energy innovations. Working Paper 11/09, **University of Navarra**. http://dspace.unav.es/bitstream/10171/7155/1/11.AYARI_BLAZSEK_MENDI.pdf
- (P2) Vandenbussche, J., Blazsek, S., and Watt, S. (2009) Measuring the liquidity and liquidity distribution effects in emerging markets: the case of Jordan's overnight market. **International Monetary Fund** Working Paper, WP/09/228. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.572.5034&rep=rep1&type=pdf
- (P5) Blazsek, S., and Downarowicz, A. (2008) Regime switching models of hedge fund returns. Working Paper 12/08, **University of Navarra**. http://dadun.unav.edu/handle/10171/7140

CONFERENCES, WORKSHOPS, SEMINARS

- (P41) Anticipating extreme losses using score-driven shape filters (with A. Ayala and A Escribano), Summer Workshop in Economics of the **Hungarian Academy of Sciences**, August 2022 (online).
- (P38) Score-driven location plus scale models: asymptotic theory and an application to forecasting Dow Jones volatility (with A. Escribano and A. Licht), Society of Financial Econometrics, 14th annual meeting, **University of Cambridge (UK)**, June 2022.
- (P39) Robust estimation and forecasting of climate change using score-driven ice-age models (with A. Escribano), **Hungarian Economic Society Annual Conference**, Budapest, December 2021 (online).
- Volatility forecasting for the coronavirus pandemic using quasi-score-driven models (with A. Ayala and A. Licht), **World Finance Banking Symposium**, Budapest, December 2021 (online).
- Volatility forecasting for the coronavirus pandemic using quasi-score-driven models (with A. Ayala and A. Licht), **2021 Vietnam Symposium in Banking and Finance**, Hanoi, October 2021 (online).
- Volatility forecasting for the coronavirus pandemic using quasi-score-driven models (with A. Ayala and A. Licht), **24th Dynamic Econometrics Conference**, Timberlake, September 2021 (online).
- Score-driven ABC(D) of dynamic stochastic general equilibrium (with A. Escribano and A. Licht), Summer Workshop in Economics of the **Hungarian Academy of Sciences**, August 2021 (online).
- (P35) Optimal signal extraction for score-driven models (with A. Ayala and A. Licht), **23rd Dynamic Econometrics Conference**, Timberlake, March 2021 (online).
- Dynamic stochastic general equilibrium inference using a score-driven approach (with A. Escribano and A. Licht), Annual Economic Research Conference (SIEG) (online), **Bank of Guatemala**, Guatemala City, January 2021.
- (P38) Prediction accuracy of bivariate score-driven risk premium and volatility filters: an illustration for the Dow Jones (with Alvaro Escribano and Adrian Licht), **Hungarian Economic Society Annual Conference** (online), December 2020.
- (P32) Markov-switching score-driven multivariate models: outlier-robust measurement of the relationships between world crude oil production and US industrial production (with A. Escribano and A. Licht), **Guatemalan Econometric Research Group Seminar**, October 2019.
- (P25, P26) Score-driven models with stochastic seasonality for currency exchange rates (with A. Ayala), Research Seminar, **University of Istmo**, Guatemala City, July 2019.
- (P33) Co-integration and common trends analysis with score-driven models: an application to U.S. macroeconomic data (with A. Licht, A. Escribano), **Guatemalan Econometric Research Group Seminar**, June 2019.
- (P41) Score-driven time series models with dynamic shape: an application to the Standard & Poor's 500 index (with A. Ayala), **Guatemalan Econometric Research Group Seminar**, March 2019.
- (P21, P22) Score-driven copula models for financial portfolios (with A. Ayala), Research Seminar, **University of Istmo**, Guatemala City, November 2018.
- (P25) New score-driven models for trimming and Winsorizing: An application for Guatemalan Quetzal to US Dollar (with A. Ayala), Annual Economic Research Conference (SIEG), **Bank of Guatemala**, Guatemala City, October 2018.
- (P26) Score-driven models of local level, seasonality and volatility: an application to the currency exchange rate of Indian rupee to USD (with A. Ayala), **Guatemalan Econometric Research Group Seminar**, June 2018.
- (P24) Robustness of score-driven location and scale models to extreme observations: an application to the Chinese stock market (with A. Licht), **Guatemalan Econometric Research Group Seminar**, June 2018.
- (P28) Dynamic conditional score models: a review (with A. Licht), **Guatemalan Econometric Research Group Seminar**, May 2018.

- (P29) Seasonal quasi-vector autoregressive models for macroeconomic data (with A. Licht, A. Escribano), **Guatemalan Econometric Research Group Seminar**, December 2017.
- (P33) Score-driven non-linear multivariate dynamic location models (with A. Licht, A. Escribano), **Guatemalan Econometric Research Group Seminar**, November 2017.
- (P23) Score-driven Markov-switching EGARCH models (with H.-C. Ho, S.-P. Lui), **Guatemalan Econometric Research Group Seminar**, September 2017.
- (P25) New score-driven models for trimming and Winsorizing: an application for Guatemalan Quetzal to US Dollar (with A. Ayala), **Guatemalan Econometric Research Group Seminar**, September 2017.
- (P21) Equity market neutral hedge funds and the stock market: an application of score-driven copula models (with A. Ayala), **Guatemalan Econometric Research Group Seminar**, August 2017.
- (P18) Dynamic conditional score models of degrees of freedom: filtering with score-driven heavy tails (with L. A. Monteros), **Guatemalan Econometric Research Group Seminar**, July 2016.
- (P19) Prediction of electricity prices for Central American countries using dynamic conditional score models (with H. Hernandez), Department of Statistics Research Seminar, **University Carlos III of Madrid**, Madrid, June 2016.
- (P15) Dynamic conditional score patent count panel data models (with A. Escribano), Workshop "New Strategies for Innovation", Department of Business Administration, **University Carlos III of Madrid**, Madrid, June 2016.
- (P22) Forecast performance of dynamic conditional score copula models (with A. Ayala), **Guatemalan Econometric Research Group Seminar**, June 2016.
- (P19) Prediction of electricity prices for Central American countries using dynamic conditional score models (with H. Hernandez), **Guatemalan Econometric Research Group Seminar**, May 2016.
- (P14) Model stability and forecast performance of Beta-*t*-EGARCH (with H. Chavez, C. Mendez), **Guatemalan Econometric Research Group Seminar**, April 2016.
- (P15) Dynamic conditional score patent count panel data models (with A. Escribano), **Guatemalan Econometric Research Group Seminar**, February 2016.
- (P13) Regime-switching purchasing power parity in Latin America: Monte Carlo unit root tests with dynamic conditional score (with A. Ayala), **Guatemalan Econometric Research Group Seminar**, January 2016.
- (P11) QARMA-Beta-*t*-EGARCH versus ARMA-GARCH: an application to S&P 500 (with V. Mendoza), **Hungarian Economic Society Annual Conference, Budapest**, December 2015.
- (P17) Outlier-robust identification of switching regimes: an application to the S&P 500 (with H.-C. Ho), **Guatemalan Econometric Research Group Seminar**, October 2015.
- (P27) Control of household finances, risk and discounting for recipients of conditional cash transfers (with D. Aycinena, L. Rentschler and B. Sandoval), 3rd Antigua Experimental Economics Workshop & Conference; **Vernon Smith Center of Experimental Economics**, **Francisco Marroquin University**, Antigua, February 2015.
- Dynamic conditional score volatility models, **Guatemalan Econometric Research Group Seminar**, January 2015.
- (P10) Is Beta-*t*-EGARCH(1,1) superior to GARCH(1,1)? (with M. Villatoro), **Hungarian Economic Society Annual Conference, Budapest**, December 2014.
- (C2) Default risk of sovereign debt in Central America (with A. Ayala), **Guatemalan Econometric Research Group Seminar**, November 2014.

- (P12) Propensity to patent, R&D and market competition: dynamic spillovers of innovation leaders and followers (with A. Escribano), **Guatemalan Econometric Research Group Seminar**, October 2014.
- (P6) Structural breaks in public finances in Central and Eastern European countries (with A. Ayala), **Guatemalan Econometric Research Group Seminar**, June 2014.
- (P27) Time preferences and intra-household control: field experiments in Guatemala (with D. Aycinena and L. Rentschler), 2nd Antigua Experimental Economics Workshop & Conference, **Vernon Smith Center of Experimental Economics**, **Francisco Marroquin University**, Antigua, February 2014.
- Endogenous switching vector autoregression: stock market and economic growth dynamics in China (with A. Ayala and F. Perez de Gracia), Financial Forecasting, **Oxford-Man Institute - Society for Financial Econometrics** (OMI-SoFiE) Financial Econometrics Summer School, **University of Oxford**, Oxford, July 2013.
- (P8) A dynamic latent-factor panel data model for public debt in the Eurozone (with A. Ayala), **Hungarian Economic Society Annual Conference, Budapest**, December 2011.
- (P8) A dynamic latent-factor panel data model for public debt in the Eurozone (with A. Ayala), Macro-Finance Workshop, **University of Navarra, Pamplona**, November 2011.
- (P4) Dynamic panel data models of renewable energy innovations (with N. Ayari and P. Mendi), **Hungarian Economic Society Annual Conference, Budapest**, December 2010.
- (P12) Innovations and market value of firms: differential effects of leaders and followers (with A. Escribano), Summer Workshop in Economics of the **Hungarian Academy of Sciences, Budapest**, July 2010.
- (P12) Innovations and market value of firms: differential effects of leaders and followers (with A. Escribano), **Econometric Time Series European Research Network** (**ETSERN) Pamplona Meeting**, Pamplona, June 2010.
- (P1) Knowledge spillovers in U.S. patents: a dynamic patent intensity model with secret common innovation factors (with A. Escribano), **Hungarian Economic Society Annual Conference, Budapest**, December 2009.
- (P4) Dynamic panel data models of renewable energy innovations (with N. Ayari and P. Mendi), **XXXIV Symposium of the Spanish Economic Association**, **Valencia**, December 2009.
- (P5) Regime switching models of hedge fund returns (with A. Downarowicz), **Monetary Economics, Banking and Finance Conference, Orleans**, June 2009.
- (P5) Regime switching models of hedge fund returns (with A. Downarowicz), **Forecasting Financial Markets Conference, Luxembourg**, May 2009.
- Liquidity and volatility of electricity derivatives (with T. Kamionka), **International Conference on Price, Liquidity and Credit Risks, Konstanz**, October 2008.
- (P1) Knowledge spillovers in U.S. patents: a latent-factor intensity model (with A. Escribano), **European Economic Association – Econometric Society European Meeting (EEA-ESEM) Annual Congress, Budapest**, August 2007.
- Liquidity and volatility of the electricity market: a multivariate latent-factor intensity model (with T. Kamionka), The Econometrics of Financial and Insurance Risk, **EC-squared conference, Istanbul**, December 2005 (poster).
- Liquidity and volatility of the electricity market: a multivariate latent-factor intensity model (with T. Kamionka), **Microstructure of Financial Markets in Europe (MICFINMA) Workshop**, Madrid, March 2005.
- (P1) Dynamic latent-factor intensity models of knowledge spillovers (with A. Escribano), The Econometrics of the Industrial Organization, **EC-squared conference, Marseille**, December 2004 (poster).

ADVISOR, PUBLICATIONS WITH STUDENTS

2019	Betzy Sandoval (**M.Sc. in Economics**) (P27)
2018-2021	Adrian Licht (**Ph.D. in Economics**) (P24, P28, P29, P31, P32, P33, P34, P35, P38)
2018	Daniela Carrizo, Ricardo Eskildsen, and Humberto Gonzalez (**Master of Finance**) (P20)
2018	Hector Hernandez (**MBA**) (P19)
2017	Luis Antonio Monteros (**MBA**) (P18, P16)
2016	Vicente Mendoza (**M.Sc. in Economics**) (P11)
2015	Marco Villatoro (**MBA**) (P10)
2013	Jose Roberto Hernandez (**Ph.D. in Government and Culture of Organizations**) (P7)
2012	Nadia Ayari (**Ph.D. in Business Administration and Management**) (P4).

BUSINESS EXPERIENCE

2008	Volkswagen Navarra (Workspace Management)
2001	OTP Securities Investment Bank, Hungary (Equity Research, Broker Budapest Commodity Exchange)
2001	Philips, Lviv, Ukraine (Marketing Research)
2000	Philips, Eindhoven, Netherlands (Project Management)
1998 – 1999	Debenham Zadelhoff (Cushman & Wakefield), Budapest, Hungary (Real Estate Valuation)

REVIEWING ACTIVITY

- *Reviews for academic journals:* Journal of Econometrics; Macroeconomic Dynamics; Empirical Economics; International Journal of Forecasting; Applied Economics; Applied Financial Economics; Applied Economics Letters; The European Journal of Finance; Journal of Applied Economics; Economic Modelling; Studies in Nonlinear Dynamics & Econometrics; Energy Economics; Quantitative Finance; SERIES: Journal of the Spanish Economic Association; Management Decision; Applied Economics and Finance; European Economic Review; PLoS ONE; Scientometrics; British Journal of Economics, Management & Trade; International Journal of Economics and Finance; International Journal of Financial Research; Journal of Contemporary Management; Review of European Studies; Review of Economics & Finance; Journal of Management Studies; Emerging Markets Finance and Trade; Resources, Conservation & Recycling; Journal of Finance and Economics; Open Journal of Economics and Commerce; Economies; Current Analysis on Economics and Finance; MethodsX; Sustainaility; Mathematical Methods in Engineering; International Journal of Mathematics and Mathematical Sciences; Financial Statistical Journal; International Journal of Finance and Economics; Journal of Computational and Applied Mathematics; Economics and Business Letters; Symmetry; Hacettepe Journal of Mathematics and Statistics; Journal of Global Economics, Management and Business Research; Journal of Engineering and Technology Management; Journal of Behavioral and Experimental Finance; Academia Letters; PLOS Global Public Health; Journal of Probability and Statistics; Cogent Economics & Finance; Journal of Money, Credit, and Banking; BMC Psychology.
- Reviewer of research project proposals to the *Czech Science Foundation*.
- Reviewer of M.Sc. in Business Administration (major in finance) thesis works for *Corvinus University, Budapest*.
- Member of master's thesis evaluation committees at *Universidad de Navarra* and *Universidad Francisco Marroquin*.
- *Associate Editor:* Applied Economics and Finance
- *Editorial Board Memberships:* Open Journal of Economics and Commerce; Current Analysis on Economics & Finance; Financial Statistical Journal; Journal of New Finance.

TRAINING COURSES

- "Macroeconomic Density Forecasting and Nowcasting". New York, 2016, lecturer: **Andrea Carriero**.
- "Time Series Analysis and Modelling". University of Cambridge, 2015, lecturer: **Andrew Harvey**.
- "Stata Training Course". Francisco Marroquin University, Guatemala, 2015, lecturer: **Diego Aycinena**.
- "Dynamic Models for Volatility & Heavy Tails". Cass Business School, London, 2014, lecturer: **Andrew Harvey**.
- "Financial Forecasting". OMI-SoFiE Financial Econometrics Summer School, University of Oxford, 2013, lecturers: **Allan Timmermann** and **Andrew Patton**.
- "2013 Summer School at the University of Cambridge". University of Cambridge, 2013, lecturers: **Andrew Harvey**, **Sean Holly**, and **Melvyn Weeks.**

RESEARCH PROJECT POSITIONS

- Researcher, "Spillover Effects of COVID-19 Pandemic in G20 Countries". Financing organization: **Wenzhou Kean University**. Duration: September 2022 to August 2024. Main researcher: Su-Ping Liu.
- (P10), (P11) Researcher, "The Last Financial Crisis: A Financial and Accounting Approach". Financing organization: **University of Navarra**. Duration: from 1st September 2011 to 1st September 2012. Main researcher: Silviu Glavan.
- (P7) Researcher, "Workplace Characteristics that Influence Employee Conscientiousness and the Continuous Improvement of Organizations". Financing organization: **Volkswagen Navarra**. Duration: from 1st January 2011 to 31st December 2013. Main researcher: Ricardo Mateo.
- (P3), (P6), (P8), (P9) Researcher, "Financial Risk and Investor Behavior". Financing organization: **University of Navarra**. Duration: from 1st September 2007 to 1st September 2010. Main researcher: German Lopez Espinosa.
- (B1) Researcher, "Microstructure of Financial Markets in Europe" (MICFINMA, contract: HPRN-CT-2002-00232). Financing organization: **European Commission**. Duration: from 1st January 2002 to 31st December 2006. Main researcher in Spain: Alvaro Escribano. Main coordinator of the research network: Winfried Polhmeier.

ASSOCIATION MEMBERSHIPS

- American Economic Association (2021-present) (https://www.aeaweb.org/)
- Guatemalan Econometric Study Group (2014-present) (https://en.ufm.edu/gesg/)
- Hungarian Society of Economics (2009-present) (http://www.mktudegy.hu/)
- *Past memberships:* Society of Financial Econometrics; Royal Economic Society.

RESEARCH PRIZES

- Research Prize, School of Economics and Business Administration, **University of Navarra**, 2010
- REI/Consolider Research Prize, CSD2006-00016 Mas-Colell, **Pompeu Fabra University**, 2011.

SOFTWARE

- Gauss, Stata, R, Gretl

LANGUAGES

- **English** (full professional proficiency)
- **Spanish** (full professional proficiency)
- **Russian** (professional working proficiency)
- **Hungarian** (native proficiency).

PERSONAL INFORMATION

- Nationality: Hungarian
- Place and date of birth: Veszprem (Hungary), March 1, 1977
- Married.