

# Tibor Pál

Department of Economics and Statistics (DISES)  
University of Salerno  
tpal@unisa.it  
tibor-pal.github.io

## Research Interests

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Score-Driven Time-Varying Parameter Models;  
State-Space Models and Kalman Filtering;  
Semi-Parametric Volatility Models with High-Frequency Data;  
Latent Macroeconomic Variables (Natural Rate of Interest, Output Gap, Risk Attitude);  
Macro-Financial Interactions; Speculative Dynamics in Asset Markets;  
Structural VAR Models; Monetary Policy Transmission;  
Dynamic Multiple-Quantile Models; Inflation Distribution Dynamics; Phillips Curve

## Education

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2022–2026	Ph.D. in Statistical Methods – Economics and Policy Analysis of Markets and Firms University of Salerno ( <i>expected completion: 2026</i> ) <i>Thesis: Essays on the Development and Application of Score-Driven Models in Finance and Macroeconomics</i> <i>Research focus: Score-Driven Models, State-Space Models, Volatility Modeling, Dynamic Multiple Quantile Models</i>
2024–2025	Visiting Ph.D. Student at University of Malaya, <i>Research focus: Semi-Parametric Volatility Modeling</i>
2019–2022	Ph.D. in Economics ( <i>program not completed; transferred to University of Salerno</i> ), University of Valladolid <i>Research focus: Macroeconometrics, Monetary GE Models</i>
2021–2022	Visiting Ph.D. Student at University of Verona, <i>Completed Ph.D. coursework</i>
2011–2015	M.A. in International Business (English), Krakow University of Economics <i>Thesis: The Evolvement of the Spanish Housing Boom in the Context of EMU Membership</i>
2005–2010	B.A. in Finance and Economics, Károly Róbert College <i>Thesis: The U.S. Subprime Crisis and Its Aftermath</i>
2009	Erasmus Exchange (English Program), University of Economics, Bydgoszcz, Poland

## Awards and Grants

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2022–2025	PhD Scholarship, University of Salerno, Italy
2021	Short-term Research Grant, Spain
2019	Erasmus+ Traineeship Grant
2009	Erasmus+ Study Mobility Grant

## Research Projects

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- 1 **Estimating the R-Star in the US: A Score-Driven State-Space Model with Time-Varying Volatility Persistence**  
with Giuseppe Storti (University of Salerno), *Working paper*  
*Keywords:* R-Star, State-Space Models, Kalman filter, Score-Driven Models
- 2 **The Realized Dynamic Score Exponential GARCH**  
with Giuseppe Storti (University of Salerno) and Ng Kok Haur (University of Malaya)  
*Keywords:* realized EGARCH, Score-driven model, Component models, Value-at-Risk, Expected Shortfall
- 3 **Multiple Quantile Dynamics of the US Phillips Curve with Time-Varying Parameters**  
*Keywords:* Dynamic multiple quantile model, Phillips curve, Inflation Dynamics
- 4 **Nonlinear Phillips Curve Dynamics in Japan: Evidence from a Multiple Quantile Approach**  
*Keywords:* Dynamic multiple quantile model, Phillips curve, Inflation Dynamics

## Publications and Working Papers

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- 2025 Pál, Tibor and Storti, Giuseppe *Estimating the R-Star in the US: A Score-Driven State-Space Model with Time-Varying Volatility Persistence*, Working paper, July
- 2023 Gutiérrez-Díez, Pedro J. and Pál, Tibor *Monetary Policy Models: Lessons from the Eurozone Crisis* Humanities and Social Sciences Communications (Nature), October
- 2018 Pál, Tibor *The Effects of Monetary Policy on House Prices in Spain: The Role of Economic and Monetary Union Membership in the Housing Bubble* Central European Review of Economics and Management, June

## Teaching Experience

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- 2023 Econometrics (MSc) – University of Verona (English)
- 2022 Macroeconomics (BSc) – AGH University of Krakow (English)

## Presentations

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- 2025 *Estimating the R-Star in the US: A Score-Driven State-Space Model with Time-Varying Volatility Persistence*  
December: World Finance Banking Symposium, Brno  
November: Warsaw Economic Seminars, Warsaw  
July: Int. Society for the Advancement of Financial Economics (ISAFE), Beijing  
May: Seminar at the University of Malaya, Kuala Lumpur
- 2024 *Estimating the Natural Rate of Interest in the US: An Accelerating Score-Driven State-Space Model*  
August: 7th International Conference on Econometrics and Statistics (EcoSta), Beijing  
July: Int. Society for the Advancement of Financial Economics (ISAFE), Pattaya
- 2022 *The Real Effect of the (De)Leverage Pressure* Brownbag Seminar, University of Verona
- 2022 *Rethinking Monetary Policy Models: Lessons from the 2008–2018 Crisis in the Eurozone* Seminar at the University of Windsor (online)

- 2019** *A Debt Deflation Stylized Model: The Effects of Deleveraging in the Eurozone* 2nd International Conference on Modern Tendency in Social Science, Singapore
- 2018** *The Real Effects of Deleveraging in the Eurozone* 32nd Conference of International Applied Economics, Huelva
- 2018** *The Credit View on the Output Gap and the Concept of the Non-Accelerating Inflation Rate of Credit Expansion (NAIRCE)* 15th International Conference on Developments in Economic Theory and Policy, Bilbao
- 2017** *The Effects of Monetary Policy on House Prices in Spain: The Role of the European Economic and Monetary Union Membership in the Latest Housing Bubble* Fifth International Conference, WSB University, Wrocław

## **Additional Training**

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- 2023** Methods in Time Series Econometrics, Bertinoro *Summer school by Francesco Bianchi and Karel Mertens*
- 2023** Financial Time Series and High-Frequency Econometrics, Perugia *Postgraduate course by Massimiliano Caporin, Walter Distaso, among others*
- 2023** Financial Time Series and Tail Risk Forecasting with Python, University of Salerno *Workshop by Richard Gerlach*
- 2022** Padova Macro Talks, University of Padova *Workshop organized by Efreem Castelnuovo*

## **Work Experience**

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- 2018–2024** Omni Calculator (part-time) *Financial Specialist, Reviewer, and Advisor*
- 2014–2017** Shell BSC *Financial Analyst*
- 2010–2014** IBM BTO *GL Accountant*

## **Skills**

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**Technical:** MATLAB, R, Stata, Python, JavaScript

**Languages:** English (C2), Spanish (B1), Italian (A1), Polish (A1), Chinese (A1), Hungarian (native)