CURRICULUM VITAE

5th October 2022

Personal Details

Name:	Michael Scholz
Date and Place of Birth:	27th January 1977 in Leisnig, Germany
Civil Status:	Married + two children (4.8 and 7.3 years)
Postal Address:	Department of Economics, University of Klagenfurt, Universitätsstraße 65–67, A–9020 Klagenfurt, Austria
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Professional Education and Experience

Oct 2021 – Sep 2027	PostDoc, Department of Economics, University of Klagenfurt, Austria
Jan 2018 – Mar 2018	Lecturer, Faculty of Statistics, TU Dortmund University, Germany
Oct 2017 – Sep 2021	PostDoc, Institute of Economics, University of Graz, Austria
Apr 2017 – Sep 2017	Visiting Associate Professor (Interim Chair), Institute for Business and Social Statistics, TU Dortmund University, Germany
Dec 2013	Visiting Professor, UQ School of Economics, University of Queensland, Australia
Nov 2011 – Mar 2017	PostDoc, Institute of Economics, University of Graz, Austria
Apr 2006 – Sep 2011	Research and Teaching Assistant, Institute for Statistics and Econometrics, University of Göttingen, Germany
May 2005 – Oct 2005	Research Assistant, Spectos, Dresden, Germany
Jun 2001 – Mar 2006	Student and Research Assistant, ISBA Informatik Service-GmbH, Hamburg/Dresden, Germany
Oct 1999 – Feb 2003	Student Assistant, Faculty of Science, TU Dresden, Germany

Qualifications

Feb 2005	Graduate Mathematician, TU Dresden Diploma Thesis: *Verteilungskonvergenz von V- und U- Statistiken basierend auf multiplen stochastischen Integralen vom Wienertyp* supervised by Prof. D. Ferger (very good)
May 2011	Ph.D. in Economics, University of Göttingen Ph.D. Thesis: *Semiparametric Structure Guided by Prior Knowledge with Applications in Economics* supervised by Prof. S. Sperlich (summa cum laude)

Main Research Fields

Semi- and Nonparametric Methods, Time-Series Econometrics, Computational Statistics, Hedonic Regression Methods Particularly with Application to Housing, Estimation of Consumer Demand, Market Timing, Comparisons of Living Standards Across Countries, Machine Learning, Big-Data, Scanner Data

Publications

1. Budini, Labanca, Scholz, and Macaluso (2022), Tremor, Finger and Hand Dexterity and Force Steadiness, Do Not Change After Mental Fatigue in Healthy Humans, *PloS ONE*, 17(8): e027203.

2. Scholz (2022), Forecast Combinations for Benchmarks of Long-Term Stock Returns Using Machine Learning Methods, *Annals of Operations Research*, online first.

3. Hill, Scholz, Shimizu, and Steurer (2022), The Rolling Time Dummy Method for Computing House Price Indexes: Window Length, Linking and Options for Dealing with Low Transaction Volume, *Journal of Official Statistics*, 38(1), 127–151.

4. Kyriakou, Mousavi, Nielsen, and Scholz (2021), Short-Term Exuberance and Long-Term Stability: A Simultaneous Optimisation of Stock Return Predictions for Short and Long Horizons, *Mathematics*, 9(6), 620, 1–19.

5. Kyriakou, Mousavi, Nielsen, and Scholz (2021), Forecasting Benchmarks of Long-Term Stock Returns via Machine Learning, *Annals of Operations Research*, 297, 221–240.

6. Hill, Rambaldi, and Scholz (2021) Weekly Hedonic House Price Indexes: An Imputation Approach with Geospatial Splines and Kalman Filters, *Empirical Economics*, 61, 417–441.

7. De Haan, Hendriks, and Scholz (2021), Price Measurement Using Scanner Data: Time-Product Dummy Versus Time Dummy Hedonic Indexes, *Review of Income and Wealth*, 67(2), 394–417.

8. Kyriakou, Mousavi, Nielsen, and Scholz (2020), Longer-Term Forecasting of Excess Stock Returns– The Five-Year Case, *Mathematics*, 8(6), 927, 1–20.

9. Mammen, Nielsen, Scholz, and Sperlich (2019), Conditional Variance Forecasts for Long-Term Stock Returns, *Risks*, 7(4), 1–22.

10. Hill, Scholz, Shimizu, and Steurer (2018), An Evaluation of the Hedonic Methods Used by European National Statistical Institutes to Compute their Official House Price Indices, *Economie et Statistique*, 500-501-502, 221–238.

11. Hill and Scholz (2018), Can Geospatial Data Improve House Price Indexes? A Hedonic Imputation Approach with Splines, *Review of Income and Wealth*, 64(4), 737–756.

12. Guevara, Hill, and Scholz (2017), Hedonic Indexes for Public and Private Housing in Costa Rica: Prices, Quality and Government Policy, *International Journal of Housing Markets and Analysis*, 10 (1), 140–155.

13. Scholz, Sperlich, and Nielsen (2016), Nonparametric Long-Term Prediction of Stock Returns With Generated Bond Yields, *Insurance: Mathematics and Economics*, 69, 82–96.

14. Scholz, Nielsen, and Sperlich (2015), Nonparametric Prediction of Stock Returns Based on Yearly Data. The Long Term View, *Insurance: Mathematics and Economics*, 65, 143–155.

15. Hill and Scholz (2015), What Does "Location, Location, Location" Mean In The Context Of House Price Indexes, Proceedings of the OeNB Workshop Nr. 19

16. Ferger and Scholz (2011), Limit Distributions of V- and U- Statistics in Terms of Multiple Stochastic Wiener-Type Integrals, *Journal of Multivariate Analysis*, 102(2), 306-314.

17. Pendakur, Scholz, and Sperlich (2010), Semiparametric Indirect Utility and Consumer Demand, *Computational Statistics and Data Analysis*, 54, 2763-2775.

Working Papers/ Work in Progress

1. (With G. Cattani and S. Sperlich) *Interpretable Local Machine Learning for Huge and Distributed Data* (submitted).

2. (With M. Wagner) *Large Initial Values and Time Series Tests of the Convergence Hypothesis* (working paper).

3. (With R. J. Hill, D. Melser, and A. Rambaldi) *Combining House Price Indices in Temporal Hierarchies* (working paper).

4. *Price-Rent Ratios and Expected Capital Gains – A Hedonic Spatio-Temporal Approach* (working paper).

5. (With M. Marchese, M. D. Martinez-Miranda and J. P. Nielsen) *Robustifying and Simplifying High-Dimensional Regression: With an Application to Long-Term Stock Returns* (working paper).

6. (With M. Guillen, J. P. Nielsen, and P. Roszkowska) *Practical Optimizing of Pensions* (working paper).

7. (With M. Wagner and Seung Hyun Hong) *Fully Modified Estimation of Seemingly Unrelated Nonlinear Cointegration Models*.

8. (With A. Hansak , I. Kyriakou, G. Sermpinis) *Nonparametric Predictive Regression for the Equity Risk Premium with Technical Indicators*.

9. *A Nonparametrically Improved Sharpe Ratio Guided by Prior Knowledge*.

10. *A local-polynomial Chow-type test*.

11. *Bias Reduction in Nonparametric Estimation in Presence of both Categorical and Continuous Data*.

12. *A Note on: "The Millenium Peak in Club Convergence: A New Look at Distributional Changes in the Wealth of Nations" by Krause (2016, J. Appl. Econ.)*

Conference Talks/Posters and Seminar Presentations

2022	DAGStat (talklet, Hamburg), Ottawa Group Meeting (invited, Rome), ISNPS (invited, Paphos)
2021	ERES (online), IARIW (online), AWG Workshop (Graz), ML for Finance Workshop (invited, online), CFE-ERCIM (invited, London)
2020	Bank of Slovenia (invited, online), AWG Workshop (online), ML for Finance Workshop (invited, online)
2019	Real-Estate Statistics (poster, Luxembourg), ISWG-Workshop (invited, Graz), ML for Finance Workshop (invited, Venice), IWH-CIREQ-GW Workshop (poster, Halle), FASI Seminar (invited, London), CFE-ERCIM (invited, London)
2018	ISNPS (invited, Salerno), Statistische Woche (Linz), CFE-ERCIM (invited, Pisa)
2017	Ottawa Group Meeting (invited, Eltville), FASI Seminar (invited, London), SFB823-Seminar (invited, Dortmund)
2016	DAGStat (Göttingen), ISNPS (Avignon), IARIW (Dresden), CFE-ERCIM (invited, Sevilla)
2015	Society for Economic Measurement (invited, Paris), Statistische Woche (Hamburg), AWG Workshop (Graz), CFE-ERCIM (invited, London)
2014	Society for Economic Measurement (invited, Chicago), NOeG (Wien), Statistische Woche (Hannover), CFE-ERCIM (Pisa), OeNB workshop (invited, Wien)
2013	FASI Seminar (invited, London), DAGStat (poster, Freiburg), Statistische Woche (Berlin), Housing workshops (Sydney+Brisbane), CFE-ERCIM (London), GSC workshop (Graz)
2012	CFE-ERCIM (Oviedo), Research Seminar (Graz), GEABA (Graz)
2011	DIW (Berlin)
2010	Institute for Statistics (Hannover)
2009	CFE-ERCIM (Limassol)
2008	IWH-CIREQ Workshop (Halle)

Research Projects, Grants and Travel Funds

2017–2020	Price Indices and Imputed Prices for Austrian Residential Real Estate – Hedonic Models based on Micro-Level Data. Institution: FFG, Austria; Chair: R. J. Hill
2016–2020	Minimizing longevity and investment risk while optimizing future pension plans. Institution: Institute and Faculty of Actuaries, UK; Chairs: J. P. Nielsen, C. Donnelly, and T. Carstensen.
2012–2016	Forecasting Asset Prices Using General Structural Nonlinear (GSN) Models: Applications to the Housing and Stock Market Using Microdata and Prior Information. Institution: Austrian National Bank - Jubiläumsfondprojekt 14947; Chair: R. J. Hill
08/2022	300 EUR funding for participation in the Summer School on Modern Topics in Time Series from the Wiwi-Verein Klagenfurt
03/2020	1000 EUR initiation financing from the University of Graz
03/2020	850 EUR travel funds from the ARQUS Alliance (research stay in Granada, Spain)
05/2017	500 EUR travel funds from TU Dortmund University (Ottawa Group Meeting, Deutsche Bundesbank, Germany)
12/2016	1000 EUR travel funds from the University of Graz (CFE conference Sevilla, Spain)
05/2016	600 EUR travel funds from the University of Heidelberg (research stay in Heidelberg, Germany)
12/2013	3 000 EUR travel funds from the University of Graz (research stay in Sydney, Australia)
12/2013	800 AUD travel funds from the University of Queensland (research stay in Brisbane, Australia)
09/2013	300 EUR travel funds from the University of Graz (research stay in London, UK)

Teaching Experience and Supervision of BA/MA theses

1. Lecturer: Empirical Methods for International Business and Economics (2×), Practice Session for Macroeconomics (5×) (all BA level, University of Klagenfurt), Statistics IV (1×), Statistics for Spatial Planning (1×), Statistical Visualization (1×) (all BA level, TU Dortmund), Econometrics I (5×), Econometrics II (3×), Applied Econometrics (4×), Seminar in Econometrics (2×), Microeconomics (3×), Macroeconomics (7×), Inflation and Business Cycles (1×) (all BA level), Mathematics (9×), Macroeconometrics (1×) (all MA-level, University of Graz), Introduction to LATEX and R (3×), Seminar "Elements of Statistical Consulting, Bad Data, Good Estimates?" (MA, University of Göttingen)

2. Teaching Assistant: Mathematics, Econometrics I (BA), Further Mathematics, Econometrics II (MA+PhD, University of Göttingen), Mathematics for Economists (BA, TU Dresden)

3. Supervision of theses: 8 (BA) + 5 (MA) + 1 (Dipl., 2nd supervisor) + 1 (PhD, 2nd supervisor)

Consulting

1. Member of the UN Task Team on Scanner Data (since Jul 2020)

2. Development of an Automated Valuation Method for Rents and Prices of Apartments in Germany, bulwiengesa AG (Apr 2018 – Oct 2020)

3. Report on the ICP 2011, Technical Advisory Group Meeting of the International Comparisons Program, World Bank (Oct 2013– Jun 2014)

4. Report for Eurostat: Measuring the Growth Rate of World GDP (Mar 2013)

Referee for

Annals of Operations Research, Axioms, Biometrika, Computational Statistics and Data Analysis, Econometrics and Statistics, Economics Bulletin, Economies, Empirica, Empirical Economics, Entropy, Financial Innovation, Information Systems and Operational Research, International Journal of Financial Studies, International Journal of Forecasting, International Journal of Official Statistics, International Review of Economics and Finance, Journal of Econometrics, Journal of Financial Stability, Journal of Real Estate Finance and Economics, Journal of Risk and Financial Management, Mathematics, Mathematical Reviews, Metroeconomica, OeAD (Ernst Mach, Marietta Blau), Plos One, Regional Studies, Review of Income and Wealth

Award

Kendrick Prize Award for the best paper published in the *Review of Income and Wealth* in 2018.

Language and Computer Skills

German (native), Italian, English (fluent), Russian, Czech, Hungarian (basic)

Fortran, R, LATEX (expert), STATA, Gretl, Ox, GAMS, Matlab, Java, HTML, AWK (intermediate)