# CURRICULUM VITAE

## Personal Information


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| First Name | **Roxana-Mihaela** |
| Surname | **Halbleib** |
| Maiden Name | **Chiriac** |
| Visiting Address | Chair of Statistics and Econometrics, Institute of Economics<br>University of Freiburg, Rempartstr. 16, 79098 Freiburg, Germany |
| Mailing Address | Chair of Statistics and Econometrics, Institute of Economics<br>University of Freiburg, 79085 Freiburg, Germany |
| University Telephone | + 49 (0) 761 203-2332 |
| E-Mail | roxana.halbleib@vwl.uni-freiburg.de |
| Web | https://www.econometrics.uni-freiburg.de/en/staff-members/prof-dr-roxana-halbleib |
| Google Scholar Profile | https://scholar.google.de/citations?user=DisG2hwAAAAJ&hl=en&oi=sra |
| Scopus Profile | https://www.scopus.com/authid/detail.uri?authorId=37115571000 |
| Family Status | Married, two children (born in 2012 and 2015) |
| Citizenship | German, Romanian |


## Academic Positions and Education

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| 2024 | Visiting Professor, York University, Toronto, Canada |
| Since 2020 | W3 Professor of Statistics and Econometrics at University of Freiburg, Germany |
| 2019 – 2025 | Heisenberg Fellow of the German Research Foundation (DFG) |
| 2019 – 2020 | Heisenberg Postdocal Researcher, Department of Economics, University of Konstanz, Germany |
| 2011 – 2019 | Zukunftskolleg and Margarete von Wrangell Fellow at Chair of Economics and Econometrics, Department of Economics, University of Konstanz, Germany |
| 2012 – 2013, 2015 – 2016 | Parental leave (2 years, in total) |
| 2010 – 2011 | Postdoctoral Researcher at the European Center for Advanced Research in Economics and Statistics (ECARES), Université libre de Bruxelles, Belgium |
| 2010 | Ph. D. (Dr. rer. pol.) in Economics (Summa cum Laude), University of Konstanz, Germany<br>Topic: Financial Econometrics<br>Supervisor: Winfried Pohlmeier |
| 2008 – 2010 | Research Fellow at the Centre of Finance and Econometrics (CoFE) and the Chair of Economics and Econometrics, University of Konstanz, Germany |
| 2006 – 2008 | Student Assistant at the Chair of Economics and Econometrics, Department of Economics, University of Konstanz, Germany |

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| 2005 | Master in International Business Economics (Final Grade: Very Good), University of Konstanz, Germany |
| 2002, 2003 | Diploma in Economics, "Alexandru Ioan Cuza" University, Iasi, Romania<br>Major in International Transactions and Major in Company Management (Graduation with Distinction) |

## RESEARCH INTERESTS

Econometrics / Financial Econometrics
Data Science in Finance
Financial Risk Models
High Frequency Financial Data
Intrinsic Time / Stochastic Subordinated Processes
Simulation-based Estimation Methods
High-Dimensional Data Analysis

## PEER-REVIEWED PUBLICATIONS

- ‘Exploiting the Gap Between Implied and Realized Volatility’, Journal of Derivatives, forthcoming, DOI 10.3905/jod.2024.1.202 (with Javdat Umarov and Eva Luetkebohmert)
- ‘Realized Quantiles’, 2022, Journal of Business & Economic Statistics, Volume 40, Issue 3, pages 1346 – 1361 (with Timo Dimitriadis)
- ‘A Latent Factor Model for Forecasting Realized Variances’, 2021, Journal of Financial Econometrics, Volume 19, Issue 5, pages 860 – 909 (with Giorgio Calzolari and Aygul Zagidullina)
- ‘Estimating Stable Latent Factor Models by Indirect Inference’, 2018, Journal of Econometrics, Volume 205, Issue 1, pages 280 – 301 (with Giorgio Calzolari)
- ‘Forecasting Covariance Matrices: A Mixed Approach’, 2016, Journal of Financial Econometrics, Volume 4, Issue 2, pages 383 – 417 (with Valeri Voev)
- ‘Estimating GARCH-type Models with Symmetric Stable Innovations: Indirect Inference versus Maximum Likelihood’, 2014, Computational Statistics and Data Analysis, Volume 76, pages 158 – 171 (with Giorgio Calzolari and Alessandro Parrini)
- ‘Improving the Value at Risk Forecasts: Theory and Evidence from the Financial Crisis’, 2012, Journal of Economic Dynamics and Control, Volume 36, Issue 8, pages 1212 – 1228 (with Winfried Pohlmeier)
- ‘Modelling and Forecasting Multivariate Realized Volatility’, 2011, Journal of Applied Econometrics, Volume 26, pages 922 – 947 (with Valeri Voev)
- ‘Forecasting Multivariate Volatility using the VARFIMA Model on Realized Covariance Cholesky Factors’, 2011, Journal of Economics and Statistics (Jahrbücher für Nationalökonomie und Statistik), Volume 231, Issue 1, pages 134 – 152 (with Valeri Voev)

**OTHER PUBLICATIONS**

Roxana Halbleib (2017): ‘Messen und Verstehen von Finanzrisiken – Eine Perspektive der Ökonometrie’, in *Messen und Verstehen in der Wissenschaft – Interdisziplinäre Ansätze*, Springer Verlag, pages 135-149 (Eds: M. Schweiker, J. Hass, A. Novokhatko and R. Halbleib).

**SELECTED WORKING PAPERS**

- ‘Efficient Estimation of Realized Variance in Time-Changed Diffusion Process’ (with Timo Dimitriadis, Jeannine Polivka, Jasper Rennspies, Sina Streicher and Axel Friedrich Wolter)
- ‘Sequential Estimation of Multivariate Factor Stochastic Volatility Models’ (with Giorgio Calzolari and Christian Mücher)
- ‘Association between Climate Indicators and Hay Fever in Children and Adolescents in Freiburg, Germany’ (with Trang Dao-Siebel, Jakop Holstiege, Kathrin Graw, Christoph Müller, Andreas Matzarakis and Evelyn Lamy)
- ‘Modelling and Forecasting Covariance Matrices: A Simple Model with Stochastic Volatility Latent Factors’ (with Giorgio Calzolari)
- ‘Bagged Forecast Combination for Tail Risk Measures’ (with Ekaterina Kazak and Winfried Pohlmeier)

**MANUSCRIPTS**

*Financial Econometrics*, Lecture Notes, University of Konstanz, 2012, (with Ingmar Nolte, Winfried Pohlmeier and Valeri Voev)

**GRANTS/PROJECTS**

2023 German Research Foundation (DFG) Research Grant (3 years, approx. 360.000 Euros)

2022 Fritz Thyssen Foundation grant for organizing the Conference on Intrinsic Time in Finance (approx. 18.000 Euros)

2019
- Heisenberg-Programme of the German Research Foundation (approx. 600.000 Euros)
- Franco-German University, grant for co-organizing the International Conference and Spring School Quantitative Finance and Financial Econometrics 2019 (approx. 5.000 Euros)

2018
- Zukunftskolleg, Excellence Initiative, University of Konstanz (approx. 3.000 Euros)
- Graduate School of Decision Sciences, University of Konstanz, grant for co-organizing the International Conference and Summer School Quantitative Finance and Financial Econometrics 2018 (approx. 6.000 Euros)

2017 WIN-Kolleg of the Heidelberg Academy of Sciences and Humanities, Germany, research project *Analyzing, Measuring and Forecasting Financial Risks* (approx. 100.000 Euros)

2016 Internationalization Fund, Excellence Initiative, University of Konstanz, guest lectureship for Professor Giorgio Calzolari from University of Florence, Italy in Winter Term 2016/2017 (approx. 3.000 Euros)

2014 WIN-Kolleg of the Heidelberg Academy of Sciences and Humanities, research project *Analyzing, Measuring and Forecasting*

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| | *Financial Risks by means of High-Frequency Data* (approx. 170.000 Euros) |
| 2013 | - Zukunftskolleg, Excellence Initiative, University of Konstanz, research project *Modeling, Estimating and Forecasting Risks* (approx. 135.000 Euros)<br>- Volkswagen Foundation, grant for organizing the *Conference on Indirect Estimation Methods in Finance and Economics* (approx. 25.000 Euros) |
| 2012 | - Research Grant, Elite Program for Postdoctoral Researchers, Baden-Württemberg Foundation, Germany, project *Estimation and Inference with Simulation-based Techniques: Theory and Application* (approx. 40.000 Euros)<br>- Research Grant, Young Scholar Fund, Excellence Initiative, University of Konstanz, project *Measuring High Dimensional Financial Risks by means of High Frequency Data* (approx. 17.000 Euros) |
| 2011 | Margarete von Wrangell Habilitation Program, Ministry of Science and Arts of Baden-Württemberg, research project *Measuring, Modelling and Forecasting Financial Risks by means of High Frequency Data* (approx. 260.000 Euros) |

## HONOURS, AWARDS AND SCHOLARSHIPS

| | |
|---|---|
| 2021 | Teaching Prize, Institute of Economics, University of Freiburg |
| Since 2021 | Member of Econometrics Committee (Ausschuss für Ökonometrie) of the German Economic Association (VfS) |
| 2019 | Heisenberg Fellow of the German Research Foundation |
| 2017 | - Wolfgang-Wetzel-Award 2017 of the German Statistical Society<br>- Invitation to attend the 6th Lindau Nobel Laureate Meeting on Economic Sciences |
| 2016 | Teaching Prize for Junior Scientists, Department of Economics, University of Konstanz |
| 2015 | Baden-Württemberg-Zertifikat für Hochschuldidaktik |
| Since 2014 | WIN Fellow of the Heidelberg Academy of Sciences and Humanities |
| 2013 – 2019 | Zukunftskolleg Fellowship, University of Konstanz |
| 2011 – 2016 | Margarete von Wrangell Fellowship from the Ministry of Science and Arts of Baden-Württemberg |
| 2011 | EADS Dornier Dissertation Award for Outstanding Doctoral Thesis |
| 2005 – 2008 | Doctoral Scholarship from the German Federal State of Baden-Württemberg (Promotionsstipendium nach dem Landes-graduiertenförderungsgesetz) |
| 2005 | VEUK Award for Outstanding Foreign Graduation at University of Konstanz |
| 2004 – 2005 | DAAD Scholarship for studying at University of Konstanz |

## TEACHING

**Lectures**

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|---|---|
| Winter Term 2020/2021, | Ökonometrie, Bachelor level, University of Freiburg |

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| 2021/2022, 2022/2023, 2023/2024 | |
| Winter Term 2020/2021, 2021/2022, 2022/2023 | Financial Econometrics, Master level, University of Freiburg |
| Winter Term 2020/2021, 2021/2022 | Advanced Topics in Econometrics, Master level, University of Freiburg |
| Summer Term 2020, 2021, 2022, 2023 | Intermediate Econometrics, Master level, University of Freiburg |
| Summer Term 2020, 2021, 2022<br>Winter Term 2023/2024 | Time Series Analysis, Master level, University of Freiburg |
| Winter Term 2018/2019, 2017/2018, 2016/2017, 2014/2015, 2013/2014, 2011/2012 | Financial Econometrics, Master level, University of Konstanz |
| Summer Term 2017, 2016 | Microeconometrics, Master and Doctoral level, University of Konstanz |
| Winter Term 2016/2017 | Advanced Econometrics, Master level, University of Konstanz |
| Winter Term 2014/2015, 2013/2014, 2011/2012 | Applied Econometrics, Bachelor level, University of Konstanz |
| August 2012 | New Methods in Volatility Measurement and Econometric Approaches to Multivariate Volatility, Doctoral level, Summer School on Quantitative Risk Management, University of Konstanz |
| Summer Term 2012 | Econometrics 1, Bachelor level, University of Konstanz |
| January 2012 | Research Methods in Finance, Master level, "Alexandru Ioan Cuza" University |

**Seminars**

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|---|---|
| Winter Term 2020/2021, 2021/2022, 2022/2023 | Advances in Empirical Finance, Master level, University of Freiburg |
| Winter Term 2017/2018, Summer Term 2016 | Big Data in Economics and Finance, Master level, University of Konstanz |
| Winter Term 2016/2017 | Seminar Advances in Empirical Finance, Master level, University of Konstanz |
| Winter Term 2014/2015 | Seminar in Empirical Finance, Master level, University of Konstanz |
| Summer Term 2014 | Applied Econometrics Project, Master level, University of Konstanz |
| Winter Term 2014/2015, 2011/2012, Summer Term 2014 | Applied Econometrics, Bachelor level, University of Konstanz |
| Winter Term 2013/2014 | Research Methods in Empirical Economics, Master level, University of Konstanz |

## INVITED TALKS

| | |
|---|---|
| 2023 | IAAE Conference, Oslo, Norway |
| | 64th ISI World Statistics Congress, Ottawa, Canada |
| | Faculty’s Research Seminar, University of Gießen, Germany |
| | Research Seminar, University College Dublin, Ireland |

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| | Research Seminar, University of Giessen, Germany |
| 2022 | Faculty's Research Seminar, University of Basel, Switzerland |
| 2019 | Econometric Seminar, Tinbergen Institute Amsterdam, The Netherlands<br>Keynote session, Workshop on Modelling Economic and Financial Time Series, University of Carlos III de Madrid, Spain<br>11th Computational Social Science Workshop, ETH Zürich, Switzerland<br>2nd International Conference on Economics and Social Sciences, Bucharest University of Economic Studies, Romania<br>Research Colloquium, Leibniz University Hannover, Germany |
| 2018 | Special Invited Session at the 12th International Conference on Computational and Financial Econometrics, Pisa, Italy<br>Frontiers in High-Frequency Financial Econometrics, Pisa, Italy |
| 2017 | 11th International Conference on Computational and Financial Econometrics, London, United Kingdom<br>Workshop on Challenges of Modern Economics and Finance: Taking Theory to Data, University of Konstanz<br>6th Workshop on Computational Social Science Konstanz - St. Gallen, Konstanz<br>10th Annual Society for Financial Econometrics (SoFiE) Conference at NYU Stern School of Business, USA |
| 2016 | 10th International Conference on Computational and Financial Econometrics, Seville, Spain<br>Computational Methods in Econometrics: A Workshop in Honour of Giorgio Calzolari, University of Florence, Italy<br>Workshop on Applied Statistics, Dresden University of Technology, Germany |
| 2015 | 9th International Conference on Computational and Financial Econometrics, London, United Kingdom (presentation by co-author) |
| 2014 | 8th International Conference on Computational and Financial Econometrics, Pisa, Italy |
| 2012 | 6th International Conference on Computational and Financial Econometrics, Oviendo, Spain (presentation by co-author)<br>Econometrics Seminar, University of Augsburg, Germany |
| 2011 | 5th International Conference on Computational and Financial Econometrics, London, United Kingdom<br>Macro and Financial Econometrics Conference, Heidelberg University, Germany<br>WBS Frontiers of Finance 2011, Warwick Business School, United Kingdom<br>International Symposium on Forecasting, Prague, Czech Republic<br>Econometrics Seminar, Università degli Studi di Salerno, Italy<br>Econometrics Seminar, CORE, Université Catholique de Louvain, Belgium |
| 2010 | 4th International Conference on Computational and Financial Econometrics, London, United Kingdom |

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| | Conference on Quantifying and Understanding Dysfunctions in Financial Markets, Leuven, Belgium |
| | Research Seminar, Center for Research in Econometric Analysis of Time Series (CREATES), Aarhus University, Denmark |
| 2009 | Research Seminar, University of Navarra, Pamplona, Spain |

## SELECTED PRESENTATIONS

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|---|---|
| 2022 | Annual Meeting of the German Economic Association, Basel, Switzerland |
| | 16th International Conference on Computational and Financial Econometrics, London, UK |
| 2020 | Seminar in Econometrics, ETH, Switzerland |
| 2019 | 12th Annual Society for Financial Econometrics (SoFiE) Conference at Fudan University, Shanghai, China (Presentation and Poster Session) |
| 2018 | 9th CEQURA Conference on Advances in Financial and Insurance Risk Management, Munich, Germany |
| | Conference on Decision Sciences, Konstanz, Germany |
| | Financial Econometrics Conference: Market Microstructure, Limit Order Books and Derivative Markets, Lancaster, UK |
| | German Statistical Week, Linz, Austria |
| | Annual Meeting of the German Economic Association, University of Freiburg, Germany |
| | 11th Annual Society for Financial Econometrics (SoFiE) Conference at University of Lugano, Switzerland (Presentation and Poster Session) |
| | Quantitative Finance and Financial Econometrics, Marseille, France |
| 2017 | German Statistical Week, Rostock, Germany |
| 2016 | German Statistical Week, Augsburg, Germany |
| 2014 | Conference on Indirect Estimation Methods in Finance and Economics, Hegne, Lake Constance, Germany |
| 2012 | Rimini Quantitative Finance Workshop, The Rimini Centre for Econometric Analysis, Rimini, Italy |
| | DFH Workshop Applied Econometrics, Königsfeld, Germany |
| 2011 | Interdisciplinary workshop on "Econometric and statistical modelling of multivariate time series", Center for Operations Research and Econometrics (CORE), Université Catholique de Louvain, Belgium (Poster Session) |
| | 2nd Humboldt-Copenhagen Conference in Financial Econometrics, Copenhagen, Denmark |
| | 7th International Symposium on Econometric Theory and Applications (SETA), Melbourne, Australia |
| | One day Conference on Latest Developments in Financial Econometrics, Brussels, Belgium |
| 2010 | First DEXIA & SBS-EM Workshop in Quantitative Finance, ECARES, Université libre de Bruxelles, Belgium |
| 2009 | Society of Financial Econometrics (SoFiE) Conference, Geneva, Switzerland (Poster Session) |
| | Pentecost Meeting of the German Statistical Society, Merseburg, Germany |

Recent Developments in Financial Econometrics, Humboldt-Copenhagen Conference, Berlin (Poster Session)

2008 International Conference on Price, Liquidity and Credit Risks, Konstanz, Germany

European Meeting of the Econometric Society and Annual Congress of the European Economic Association (ESEM-EEA), Milan, Italy

2007 Multivariate Volatility Models Conference, Faro, Portugal

European Meeting of the Econometric Society and Annual Congress of the European Economic Association (ESEM-EEA), Budapest, Hungary

2006 Multivariate Modelling in Finance and Risk Management, Sandbjerg, Denmark

International Conference of High Frequency Finance, Konstanz, Germany (Poster Session)

## REFEREEING

Advances in Statistical Analysis (AStA), Bulletin of Economic Research, Computational Statistics and Data Analysis, Econometrics, Econometrics and Statistics, European Journal of Finance, German Research Foundation (DFG), International Journal of Forecasting, Journal of the American Statistical Association, Journal of Applied Econometrics, Journal of Applied Statistics, Journal of Business & Economic Statistics, Journal of Econometrics, Journal of Economic Dynamics and Control, Journal of Empirical Finance, Journal of Financial Econometrics, Journal of Risk, Journal of Statistical Computation and Simulation, Mathematics and Computers in Simulation, Quantitative Finance, Research Foundation Luxemburg, Research Grants Council of Hong Kong, Statistical Papers, Statistics

## EDITORIAL ACTIVITIES

2024 Guest co-editor of the Themed Issue with the title ‘New Perspectives in High-Frequency Financial Econometrics’ in the *Journal of Econometrics* (with I. Nolte, C. Gourieroux, G. Tauchen, T. Andersen, and V. Todorov)

2023 – Associate Editor of *Journal of Economics and Statistics* (*Jahrbücher für Nationalökonomie und Statistik*)

2021 – Associate Editor of *AStA Advances in Statistical Analysis*

2018 Guest co-editor of the Special Issue with the title ‘Indirect Estimation Methods in Finance and Economics’ in the *Journal of Econometrics* (with D. Kristensen, E. Renault and D. Veredas)

2017 Co-editor of the anthology *Messen und Verstehen in der Wissenschaft – Interdisziplinäre Ansätze* (in English: *Measuring and Understanding in Science – Interdisciplinary Approaches*), Springer Verlag (with M. Schweiker, J. Hass and A. Novokhatko)

## ORGANIZATION

2024 - Invited session “New developments in financial econometrics” at the 18th International Conference on Computational and Financial Econometrics, London, United Kingdom

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| | - Organised session ‘Financial Econometrics’ at 26th International Conference on Computational Statistics, Giessen, Germany |
| 2022 | - Invited session “Latest developments in financial econometrics” at the 16th International Conference on Computational and Financial Econometrics, London, United Kingdom |
| | - Conference Advances in Theoretical and Applied Econometrics, Konstanz, Germany |
| | - Conference on Intrinsic Time in Finance, Allensbach, Germany, https://www.wiwi.uni-konstanz.de/pohlmeier/conferencesworkshops/conference-on-intrinsic-time-in-finance/ (with W. Pohlmeier |
| | - Young Researcher Workshop *Big and Smart Data Analysis in Finance*, German Statistical Society, Buchenbach, Germany |
| 2021 | Invited session “Latest developments in financial econometrics” at the 15th International Conference on Computational and Financial Econometrics, London, United Kingdom |
| 2019 | - Co-chair of the 13th International Conference on Computational and Financial Econometrics, London, UK |
| SINCE 2018 | - Yearly International Conference and Spring School: “Quantitative Finance and Financial Econometrics”, Marseille, France (with L. Bauwens, E. Girardin, C. Hurlin and S. Laurent) |
| 2018 | - Invited session “Advances in Time Series and Financial Econometrics” at the 12th International Conference on Computational and Financial Econometrics, Pisa, Italy |
| 2017 | Invited session “Latest developments in risk modeling and forecasting” at the 11th International Conference on Computational and Financial Econometrics, London, United Kingdom |
| 2014 | Conference on Indirect Estimation Methods in Finance and Economics, Allensbach, Germany. https://www.uni-konstanz.de/conference-indirect-methods/ (with D. Veredas) |

## COMMITTEE MEMBER

**University Committee**

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| 2023 – | Deputy of the Equal Opportunities Officer of the University of Freiburg, Germany |
| 2022 – | Member of the Institutsrat, Department of Economics, University of Freiburg |
| 2020 – | Member of the Master Examination Board, University of Freiburg, Germany |

**Referee Committee**

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| 2023 – | Referee for the German Academic Exchange Service (DAAD) |

**Board Committee**

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| 2023 – | Vice-Chairperson of the Statistics in Finance Committee of the German Statistical Society |
| 2020 – 2023 | Chairperson of the Statistics in Finance Committee of the German Statistical Society |

### Program Committee

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| 2023 | Annual Meeting of the German Economic Association (VfS), Regensburg |
| 2019 | 12th Annual Society for Financial Econometrics (SoFiE) Conference at Fudan University, Shanghai, China |
| 2018 | 11th Annual Society for Financial Econometrics (SoFiE) Conference at University of Lugano, Switzerland |
| 2017 | 10th Annual Society for Financial Econometrics (SoFiE) Conference at NYU Stern School of Business, USA |

### Selection Committee

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| 2023 – | German Academic Exchange Service, DAAD |
| 2015, 2016 | Zukunftskolleg and Marie Curie Fellowship Programms, University of Konstanz |

### Hiring Committee

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| 2024 | W3 Professorship for Taxation, Department of Economics, University of Freiburg, Germany |
| 2023 | W3 Professorship for Microeconomics, Department of Economics, University of Freiburg, Germany |
| | W3 Professorship for Evaluation, Department of Psychology, University of Freiburg, Germany |
| | Alexander-von-Humboldt W3 Professorship for Sustainable Food Economics, University of Freiburg, Germany |
| | Midterm Review of the Tenure Track Assistant Professorship of Finance at the Department of Economics at the University in Copenhagen, Danmark |
| 2022 | W1 Professorship for Stochastics, Department of Mathematics, University of Freiburg, Germany |
| 2021 | W1 with Tenure Track Professorship for Financial Accounting and Auditing, Institute of Economics, University of Freiburg, Germany |
| | W1 with Tenure Track Professorship for Public Finance, Institute of Economics, University of Freiburg, Germany |
| 2017 | W1 Professorship for Labor Economics, Department of Economics, University of Konstanz, Germany |
| 2012 | W1 Professorship for Political Economy, Department of Economics University of Konstanz, Germany |
| 2010 | W3 Professorship for International and Monetary Economics, Department of Economics University of Konstanz, Germany |

## MEMBERSHIP

German Statistical Society, German Economic Association (VfS), WIN-Kolleg of the Heidelberg Academy of Sciences and Humanities, Graduate School of Decision Sciences at University of Konstanz, Centre of Finance and Econometrics (CoFE) at University of Konstanz

## DOCTORAL SUPERVISION

Timo Dimitriadis (2019), Christian Mücher (2023)