

CURRICULUM VITAE

(APRIL 2023)

Contact details

Department of Economic Theory
Institute of Economics
University of Freiburg

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Academic Employment

since 2020	Chair of of Economic Theory, especially Macroeconomics at Albert-Ludwigs University of Freiburg (Visiting Professor 2020-2022, Full Professor (W3, tenured) since 04/2022)
2017-2020	Visiting Professor, Resarch group “Money and Macroeconomics”, Goethe University Frankfurt
2017	Chair of Economic Theory (Temporary position, Vertretungsprofessur), University of Konstanz
2015-2017	Chairs of Macroeconomics, Financial Economics (Temporary position, Vertretungsprofessur), Gutenberg University Mainz
2008 -2015	Assistant Professor (W1-Juniorprofessor) for Macroeconomic Theory, Department of Economics and Business Engineering, Karlsruhe Institute of Technology
2008	DFG Scholarship for Research Project “Social Security and the Demographic Challenge“
2007-2008	Research Associate (Postdoc), Chair Prof. Volker Böhm, Department of Economics, Bielefeld University
2006	Research Assistant, Chair Prof. Volker Böhm, Department of Economics, Bielefeld University
2004-2006	Ph.D.-Scholarship from the Peter Gläsel Stiftung(former Weidmüller Stiftung)
2003-2004	Research Assistant, Chair Prof. Volker Böhm, Department of Economics, Bielefeld University
2001-2003	Teaching Assistant/Student Assistant, Department of Economics, Bielefeld University

Academic Education

2003-2006	Ph.D. in Economics, Bielefeld Graduate School of Economics and Management (BiGSEM, Bielefeld University) (grade: “Summa cum laude”) Ph.D. Thesis: “Pension Systems, Demographic Change, and the Stock Market” Advisors: Prof. Volker Böhm, Ph.D., PD Dr. Jan Wenzelburger
1999-2003	Diploma in Economics (Diplom-Volkswirt), Bielefeld University (grade: 1.0) Thesis: „Sequentielle Portefeulleentscheidungen mit mehrperiodigem Planungszeitraum“ Advisors: PD Dr. Jan Wenzelburger, Prof. Volker Böhm, Ph.D.
1997-1999	Pre-Diploma in Economics (Vordiplom), University of Münster, Germany

Membership in Scientific Organizations

- Econometric Society
- Verein für Socialpolitik
- Society for the Advancement of Economic Theory

RESEARCH PROFILE

- Dynamic General Equilibrium Theory
- Macroeconomic Models of Climate Change
- Financial Markets and the Macroeconomy
- Social Security and Demographic Change

Dynamic General Equilibrium Theory

This research project studies the existence and properties of two important classes of dynamic equilibria. First, recursive equilibria on a minimal state space (Markov equilibria), which play an important role in both the theory and the computation of dynamic equilibrium. Second, equilibria along which an asset bubble occurs (bubbly equilibria), which are important for understanding when and why bubbles emerge on financial markets. Bubbly equilibria have important policy applications such as the sustainability and optimal risk structure of governmental debt. My existing research studies these issues within a large class of stylized OLG models with stochastic production. A central goal of future research is to extend the results to OLG economies with multiperiod-lived consumers for which very few theoretical results exist in the literature. Such an extension also allows for a finer time-scale of these models which greatly enhances their applicability.

Macroeconomic Models of Climate Change

Climate change is a global threat requiring a coordinated effort of all nations to significantly and permanently reduce their emissions. My research studies this problem based on the dynamic general equilibrium paradigm in a framework with multiple countries or regions. Such a multi-region model permits to incorporate various important sources of regional heterogeneity into the analysis which is required to understand the incentives for different regions to implement alternative climate policies. A first set of papers in this project developed a theoretical framework with these features to analyze the existence and properties of (first-best) optimal climate policies. My current research aims to extend these results to non-cooperative situations using game-theoretic methods and to study the existence and form of optimal climate policies in the absence of global cooperation and their consequences for the economy and the environment.

Financial Markets and the Macroeconomy

The recent financial crises emphasized the importance of financial markets for the macroeconomy. The common theme of my research in this project is to obtain a better understanding of the behavior of financial markets and their interactions with the real economy. My earlier contributions analyze the dynamics of asset markets with heterogeneous consumers who differ with respect to their expectations and/or the length of their planning horizons. In more recent papers, I study the interactions between housing prices and the credit market and the conditions under which asset bubbles can cause an investment boom in the economy. One aim of my ongoing research in this field is to incorporate a banking sector and various types of frictions in the analysis which played a major role in past financial crises.

Social Security and Demographic Change

The accelerating demographic change poses a challenge for the existing Social Security systems in most industrialized countries. My previous research in this field studied the optimal size of Social Security systems and their impact on growth, employment, asset prices, and consumer welfare. Different welfare concepts that incorporate the trade-off between the interests of different generations have been developed and applied to stylized OLG economies where optimal Social Security policies can be computed explicitly. Extending earlier findings from my dissertation, one goal of my future research is to broaden these concepts and apply them to large-scale OLG models with calibrated parameters and realistic demographic changes in order to provide policy guidance how the consequences of demographic change can be attenuated.

PUBLICATIONS AND RESEARCH PAPERS

Refereed Journals

- “Optimal Climate Policies in a Dynamic Multi-Country Equilibrium Model“ (joint with Elmar Hillebrand), published in: **Journal of Economic Theory**, 2019, Volume 179 (1), Pages 200-239
- “Bubbly Markov Equilibria” (joint with Martin Barbie), published in: **Economic Theory**, 2018, Volume 66, Issue 3, pages 627-679
- “Bubbles and Crowding-in of Capital via a Savings Glut” (joint with Tomoo Kikuchi and Masaya Sakuragawa), published in: **Macroeconomic Dynamics**, 2018, Vol. 22, Pages 1238-1266
- “A Mechanism for Booms and Busts in Housing Prices” (joint with Tomoo Kikuchi), published in: **Journal of Economic Dynamics and Control**, 2015, Volume 51, Pages 204–217
- “Uniqueness of Markov Equilibrium in Stochastic OLG Models with Nonclassical Production” in: **Economics Letters**, 2014, Volume 123, Issue 2, Pages 171–176
- “On the Optimal Size of Social Security in the Presence of a Stock Market” in: **Journal of Mathematical Economics** 2012, Volume 48, Pages 26-38
- “On the Role of Labor Supply for the Optimal Size of Social Security” in: **Journal of Economic Dynamics and Control** 2011, Volume 35, Pages 1091-1105
- “The Impact of Multiperiod Planning Horizons on Portfolios and Asset Prices in a Dynamic CAPM” (joint with Jan Wenzelburger), in: **Journal of Mathematical Economics** 2006, 42, 565-593
- “On the Dynamics of Asset Prices and Portfolios in a Multiperiod CAPM” (joint with Jan Wenzelburger), in: **Chaos, Solitons & Fractals** 2006, 29 (3), 578-594

Monographs

- “Pension Systems, Demographic Change, and the Stock Market”
Lecture Notes in Economics and Mathematical Systems, Volume 610, Springer Verlag, 2008, Berlin a.o.

Current Working Papers

- “Who Pays the Bill? Climate Change, Taxes, and Transfers in a Multi-Region Growth Model“ (joint with Elmar Hillebrand), status: submitted
- “Win as a Team or Fail as Individuals: Cooperation and Non-Cooperation in the Climate Tax Game“ (joint with Elmar Hillebrand), status: submitted
- “Does Idealistic Investment Behavior Foster Green Growth?” (joint with Klaus Wälde), status: 80% complete
- “On the Irrelevance of Idealistic Behavior in General Equilibrium”, status: 80% complete
- “Existence of Bubbly Equilibria in Overlapping Generations Models with Stochastic Production”, KIT Working Paper 57, status: to be submitted

All working papers can be downloaded at www.macro.uni-freiburg.de.

REFEREEING

- Journal of Economic Dynamics and Control
- Journal of Economics and Statistics
- Journal of Economic Growth
- Journal of Economics
- European Economic Review
- Economic Modelling
- Energy and Resource Economics
- Journal of Economic Theory
- Journal of Mathematical Economics
- Macroeconomic Dynamics
- Economic Modelling
- Journal of Asian Economics
- Bulletin of Economic Research

SCHOLARSHIPS AND GRANTS

- Teaching Grant from the MWK (Ministerium für Wissenschaft, Forschung und Kunst, Baden-Württemberg, Germany) (2014) - Amount: 10.000 €
- Research Scholarship from the Deutsche Forschungsgemeinschaft (DFG) for project “Social Security and the Demographic Challenge” (03/2008-09/2008) - Amount: 16.500 €
- DFG Travel Grant to attend the European Meeting of the Econometric Society in Budapest, Hungary (2007) - Amount: 1.000 €
- Ph.D.-Scholarship from the Peter Gläsel Stiftung (08/2004-07/2006) - Amount: 24.000 €

AWARDS

- Teaching Award for “Makroökonomik 2” as best compulsory lecture in the Bachelor of Economics program at University of Freiburg (2022)
- Teaching Award for “Advanced Macroeconomics 2” as best compulsory lecture in the Master of Economics program at University of Freiburg (2021)
- JEDC Outstanding Referee Award, Journal of Economic Dynamics and Control (2010)
- Teaching Award for the lecture “Macroeconomic Theory I: Theory of Business Cycles”, Department of Economics and Business Engineering, Karlsruhe Institute of Technology (2010)
- Teaching Award for the lecture “Theory of Economic Growth”, Department of Economics and Business Administration, Karlsruhe Institute of Technology (2009)
- Dissertation Prize of the Westfälisch-Lippische Universitätsgesellschaft (2008)
- Second Prize Deutsches Aktieninstitut Academic Awards 2003 for the Diploma thesis (2003)

INVITED RESEARCH VISITS

Long-Term Research Visits

- National University of Singapore, Singapore (02-03/2011, 02-03/2012, 09-10/2012)
- Federal Reserve Bank of Minneapolis, US (07/2008)
- W.P. Carey School of Business, Arizona State University, US (03-09/2008)

Short-Term Research Visits

- Center for Macroeconomic Research, University of Cologne, Germany (05/2012, 02/2013)
- National University of Singapore, Singapore (03/2013)
- Swiss Banking Institute, University of Zurich, Switzerland (07/2007)

CONFERENCE PRESENTATIONS AND INVITED TALKS

07/2023	22nd SAET Conference on Current Trends in Economics, Society for the Advancement of Economic Theory (SAET), Paris, France (scheduled)
05/2023	Research talk, University of Hohenheim, Germany (scheduled)
12/2022	3rd HeiTueHo Workshop on International Financial Markets (discussant), University of Hohenheim, Germany
10/2022	Research talk (online), Shandong University, China
06/2022	International Conference on Public Economic Theory (PET) in Marseille, France
03/2019	Chair Research Day, Chair in Macroeconomics, Gutenberg University Mainz
12/2018	ifo-Workshop on Heterogeneous Agents and the Macroeconomics of Climate Change, ifo-Institute. Munich
12/2017	Chair Research Day, Chair in Macroeconomics, Gutenberg University Mainz
08/2017	70th European Meeting of the Econometric Society, Lisbon, Portugal
06/2017	17th SAET Conference on Current Trends in Economics, Society for the Advancement of Economic Theory (SAET), Faro, Portugal
12/2016	Chair Research Day, Chair in Macroeconomics, Gutenberg University Mainz
09/2016	Annual Meeting of the Verein für Socialpolitik, University of Augsburg, Germany
12/2015	Chair Research Day, Chair in Macroeconomics, Gutenberg University Mainz
11/2015	Research talk, Brownbag Seminar, Gutenberg University Mainz, Germany
06/2015	Chair Research Day, Chair in Macroeconomics, Gutenberg University Mainz
12/2014	21st Annual Meeting of the German Finance Association (DGF)/ 13th Symposium on Finance, Banking, and Insurance, KIT, Karlsruhe (discussant)
12/2014	Research talk, University of Leipzig, Germany
11/2014	Research talk, University of Hohenheim, Germany
09/2014	Annual Meeting of the Verein für Socialpolitik, Session “Integration, Financial Frictions, and Economic Growth” organized jointly with Ingrid Ott (KIT) and Maik Heinemann (University of Potsdam), Helmut-Schmidt-University, Hamburg, Germany

CONFERENCE PRESENTATIONS AND INVITED TALKS

- 06/2014 20th International Conference on Computing in Economics and Finance, Society for Computational Economics (SCE), BI Norwegian Business School, Oslo, Norway
- 07/2013 13th SAET Conference on Current Trends in Economics, Society for the Advancement of Economic Theory (SAET), MINES ParisTech, Paris, France
- 06/2013 BETA-KIT Workshop, University of Strasbourg and KIT, Strasbourg, France
- 03/2013 Research talk, Macro Reading Group, National University of Singapore (NUS), Singapore
- 09/2012 Annual Meeting of the Verein für Socialpolitik, University of Göttingen, Germany
- 06/2012 18th International Conference on Computing in Economics and Finance, Society for Computational Economics (SCE), Diplomat Hotel Prague, Czech Republic
- 03/2012 Research talk, Nanyang Technological University (NTU), Singapore
- 03/2012 Research talk, Singapore Management University (SMU), Singapore
- 03/2012 Research talk, National University of Singapore (NUS), Singapore
- 12/2011 Keynote, Symposium - 10 years of BiGSEM, Bielefeld University, Germany
- 03/2011 Research talk, National University of Singapore (NUS), Singapore
- 03/2011 Research talk, Nanyang Technological University (NTU), Singapore
- 09/2010 Cologne Macro Workshop, University of Cologne, Germany
- 09/2010 Annual Meeting of the Verein für Socialpolitik, University of Kiel, Germany
- 07/2010 16th International Conference on Computing in Economics and Finance, Society for Computational Economics (SCE), City University of London, UK
- 08/2009 Workshop on Macroeconomic Dynamics, National University of Singapore, Singapore
- 12/2008 Research talk, University of Zurich, Switzerland
- 07/2008 Research talk, Baglunch Seminar, Minneapolis Federal Reserve Bank, US
- 04/2008 Research talk, Macro Workshop, Arizona State University, US
- 01/2008 Research talk, Economic Workshop, University of Würzburg, Germany
- 11/2007 Research talk, University of Karlsruhe, Germany
- 11/2007 Research talk, Theory Workshop, University of Mannheim, Germany
- 10/2007 Annual Meeting of the Verein für Socialpolitik, Ludwig Maximilian University, Munich, Germany
- 08/2007 European Meeting of the Econometric Society, Budapest, Hungary
- 04/2007 Research talk, Deutsche Bundesbank, Frankfurt, Germany
- 07/2006 Vigoni Workshop Milano, Università Cattolica, Milan, Italy
- 03/2006 EBIM Workshop Paris, Université Paris 1 – Panthéon Sorbonne, France
- 12/2005 Vigoni Workshop Milano, Università Cattolica, Milan, Italy
- 06/2005 Vigoni Workshop Bielefeld, Bielefeld University, Germany
- 03/2005 CREDS 2005 - International Workshop on Complexity and Randomness in Economic Dynamical Systems, Bielefeld University, Germany
- 07/2004 10th International Conference on Computing in Economics and Finance, Society for Computational Economics, Universiteit van Amsterdam, The Netherlands

TEACHING

Albert-Ludwigs University Freiburg

2022/23	Lecture “Makroökonomik 1” (Bachelor, in German)
2022/23	Lecture “Advanced Macroeconomics 1” (Master, in English)
2022/23	Lecture “Germany’s Next Climate Model” (Master, in English)
2022	Lecture “Makroökonomik 2” (Bachelor, in German)
2022	Lecture “Advanced Macroeconomics 2” (Master, in English)
2022	Seminar “Challenges in Monetary Economics” (Master, in English)
2021/22	Lecture “Makroökonomik 1” (Bachelor, in German)
2021/22	Lecture “Advanced Macroeconomics 1” (Master, in English)
2021/22	Seminar “Macroeconomic Models of Climate Change” (Master, in English)
2021	Lecture “Makroökonomik 2” (Bachelor, in German)
2021	Lecture “Advanced Macroeconomics 2” (Master, in English)
2020/21	Lecture “Makroökonomik 1” (Bachelor, in German)
2020/21	Lecture “Advanced Macroeconomics 1” (Master, in English)
2020/21	Seminar “Macroeconomics of Inequality” (Master, in English)
2020	Lecture “Makroökonomik 2” (Bachelor, in German)
2020	Lecture “Advanced Macroeconomics 2” (Master, in English)
2020	Seminar “Macroeconomics Models of Climate Change” (Master, in English)

Goethe University Frankfurt

2019/20	Lecture “Introduction to Macroeconomic Models of Asset Pricing” (Bachelor, in English)
2019/20	Lecture “Fundamentals of Macroeconomics” (Master, in English)
2019/20	Seminar “Topics in Monetary and Financial Economics” (Master, in English)
2019	Lecture “Monetary Policy, Inflation, and the Business Cycle” (Master, in English)
2019	Lecture “Macroeconomic Models of Climate Change” (Bachelor, in English)
2019	Seminar on “Monetary Economics: Theory and Policy” (Bachelor, in English)
2018/19	Lecture “Advanced Methods in Dynamic Macroeconomics” (Master, in English)
2018/19	Lecture “Introduction to Macroeconomic Models of Asset Pricing” (Bachelor, in English)
2018/19	Seminar “Economic Models of Climate Change” (Bachelor, in English)
2018	Lecture “Macroeconomics and Asset Pricing” (Master, in English)
2018	Lecture “Macroeconomic Models of Climate Change” (Bachelor, in English)
2018	Seminar “Monetary Models of Inflation, Employment and Welfare” (Master, in English)
2017/18	Lecture “Fundamentals of Macroeconomics” (Master, in English)
2017/18	Lecture “Monetary Policy, Inflation, and the Business Cycle” (Master, in English)
2017/18	Seminar “Asset Bubbles and the Macroeconomy” (Master, in English)

TEACHING

University of Konstanz

- 2017 Lecture “Advanced Macroeconomics II” (Graduate/Ph.D. level, in English)
- 2017 Lecture “Monetary Policy, Inflation, and Business Cycles” (Graduate level, in English)
- 2017 Seminar “Economic Models of Climate Change” (Undergraduate level, in German)

Gutenberg University Mainz/ GSEFM Goethe University Frankfurt

- 2016/17 Lecture “Financial Economics II: Asset Pricing” (Graduate level, in English)
- 2016/17 Seminar on „Financial Economics: Monetary Economics” (Graduate level, in English)
- 2016/17 Seminar “Theories of Growth and Business Cycles” (Undergraduate level, in German)
- 2016 Lecture “Skills & Tools” (Undergraduate level, in German)
- 2016 Lecture “Monetary Policy, Inflation, and Business Cycles” (Graduate level, in English)
- 2016 Seminar on “Banking and the Macroeconomy” (Graduate level, in English)
- 2016 Seminar on “Empirical Economics” (Undergraduate level, in German)
- 2015/2016 Lecture “Macroeconomics I” (Undergraduate level, in German)
- 2015/2016 Lecture “Advanced Macroeconomics” (Graduate level, in English)
- 2015/2016 Lecture “Mathematical Methods” (Ph.D. level, in English)

Karlsruhe Institute of Technology

- 2009-2015 Lecture “Theory of Business Cycles” (Graduate level, in English)
- 2009-2014 Lecture “Theory of Economic Growth” (Graduate level, in English)
- 2013/2014 Seminar on “Topics in Economic Theory” (Graduate level, joint with Veronica Block)
- 2013 Seminar on “Models of the Business Cycle” (Graduate level, joint with Caren Söhner)
- 2012/2013 Seminar on “Macroeconomics and Asset Pricing” (Graduate level, joint with Caren Söhner)
- 2011, 2014 Lecture “Advanced Topics in Economic Theory” (Ph.D. level, in English, joint with Kay Mitusch)
- 2011 Seminar on “Models of the Business Cycle” (Graduate level, joint with Caren Söhner),
- 2010 Lecture “Advanced Topics in Economic Theory” (Graduate Level, in English, joint with Clemens Puppe and Kay Mitusch)
- 2009 Seminar on “Modern Business Cycle Theory” (Graduate Level)
- 2008/2009 Lecture “Macroeconomic Theory” (Graduate Level)

TEACHING

Bielefeld University

2007/2008	Lecture “Banking and Finance” (Undergraduate Level, in English)
2007/2008	Seminar on “Microeconomics” (joint with Volker Böhm, Graduate Level)
2007	Seminar on “Financial Markets” (joint with Volker Böhm, Graduate Level)
2007	Reading Course on “The Theory of Dynamical Systems” (joint with Thorsten Pampel, Ph.D. Level)
2006/2007	Seminar on “Topics in Macroeconomics” (joint with Volker Böhm, Graduate Level)
2006/2007	Reading Course on “Methods in Microeconomics” (Ph.D. Level)
2004	Seminar on “Financial Markets” (joint with Jan Wenzelburger, Graduate Level)
2003/2004	Reading Course on “Economic Growth” (Ph.D. Level)

SERVICE

- Member of a hiring committee (Berufungskommission) for a W3-Professorship in “Econometrics” at Karlsruhe Institute of Technology (2011, 2013)
- Member of a hiring committee (Berufungskommission) for a W3-Professorship in “Industrial Organization” at Karlsruhe Institute of Technology (2010)
- Election Supervisor (Abstimmungsausschuss-Vorsitzender) of Department Council elections (Fakultätsratswahlen) at Karlsruhe Institute of Technology (2010)
- Organization of the Workshop on Economics and Finance, Karlsruhe Institute of Technology (2009-2010)
- External expert member of a hiring committee (Berufungskommission) for a W1-Professorship in “Macroeconomics” at the University of Konstanz (2009)
- Organization of the Vigoni Workshop, University of Bielefeld (2005, 2006)