

## CURRICULUM VITAE

### 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 Portefeuilleentscheidungen mit mehrperiodigem Planungszeitraum“  
Advisors: PD Dr. Jan Wenzelburger, Prof. Volker Böhm, Ph.D.
- 1997-1999 Pre-Diploma in Economics (Vordiplom), University of Münster, Germany

### Academic Employment

- 04/2016-09/2016 Chair in Financial Economics (Temporary position, W3-Vertretungsprofessur),  
Gutenberg University Mainz
- 10/2015-03/2016 Chair in Macroeconomics (Temporary position, W3-Vertretungsprofessur),  
Gutenberg University Mainz
- 10/2008 -09/2015 Assistant Professor (W1-Juniorprofessor) for Macroeconomic Theory, Department of  
Economics and Business Engineering, Karlsruhe Institute of Technology
- 04/2008-09/2008 DFG Scholarship for Research Project “Social Security and the Demographic Challenge“
- 01/2007-03/2008 Research Associate (Postdoc), Chair Prof. Volker Böhm, Department of Economics,  
Bielefeld University
- 09/2006-12/2006 Research Assistant, Chair Prof. Volker Böhm, Department of Economics, Bielefeld University
- 08/2004-07/2006 Ph.D.-Scholarship from the Peter Gläsel Stiftung(former Weidmüller Stiftung)
- 10/2003-07/2004 Research Assistant, Chair Prof. Volker Böhm, Department of Economics, Bielefeld University
- 04/2001-06/2003 Teaching Assistant/Student Assistant, Department of Economics, Bielefeld University

### Membership in Scientific Organizations

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

## RESEARCH INTERESTS AND PROJECTS

- Dynamic General Equilibrium Theory
- Financial Markets and the Macroeconomy
- Social Security and Demographic Change
- Macroeconomics, Energy and the Environment

### Dynamic General Equilibrium Theory

In this research project I study 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. One central goal of my ongoing 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.

### Financial Markets and the Macroeconomy

Recent economic crises showed the importance of financial markets for the macroeconomy. The common theme of my research in this field 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 existing research studies 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 ongoing 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.

### Macroeconomics, Energy, and the Environment

This is a long term research project joint with the EEFA Research Institute ([www.eefa.de](http://www.eefa.de)). Its general objective is to develop and apply a model infrastructure suitable to provide guidance to political institutions on all macroeconomic issues related to energy, natural resources, and the environment. Specific topics include the macroeconomic effects of climate change, the transition towards a clean energy mix, and an evaluation of political measures aiming to reduce greenhouse gas emissions. For some of these research projects we plan to apply for external funding from public and semi-public institutions. The long term strategy of the project is to establish a network of international research collaborators with particular emphasis on interdisciplinary cooperations, e.g., with climate researchers and policy experts. A close cooperation with the Centre on Asia and Globalisation at the National University of Singapore ([lkyspp.nus.edu.sg/cag/](http://lkyspp.nus.edu.sg/cag/)) has already been confirmed.

## PUBLICATIONS AND RESEARCH PAPERS

### Refereed Journals

- “Bubbles and Crowding-in of Capital via a Savings Glut” (joint with Tomoo Kikuchi and Masaya Sakuragawa), accepted for publication in: **Macroeconomic Dynamics**
- “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

- “Optimal Climate Policies in a Dynamic Multi-Country Equilibrium-Model“ (joint with Elmar Hillebrand), status: to be submitted
- “Bubbly Markov Equilibria” (joint with Martin Barbie), status: submitted to Economic Theory
- “Existence of Bubbly Equilibria in Overlapping Generations Models with Stochastic Production”, KIT Working Paper 57, status: to be submitted
- “Governmental Debt, Sustainability, and Optimality”, KIT Working Paper 14, status: revised version available shortly

### Older Working Papers

- “Multiperiod Consumption and Investment Decisions Revisited” (joint with Jan Wenzelburger) Discussion Paper No. 567, Bielefeld University
- “On the Inefficiency of Pay-As-You-Go Pension Systems in Stochastic Economies with Assets” (joint with Volker Böhm), Discussion Paper No. 565, Bielefeld University
- “The Role of Pension Systems and Demographic Change for Asset Prices and Capital Formation”, Discussion Paper No. 560, Bielefeld University

### Refereeing

- Journal of Economic Dynamics and Control
- Journal of Economic Growth
- Journal of Economics
- Journal of Economics and Statistics
- Macroeconomic Dynamics
- Zentralblatt MATH

## EXTERNAL FUNDING (DRITTMITTEL)

### Scholarships

- Research Scholarship from the Deutsche Forschungsgemeinschaft (DFG) for project “Social Security and the Demographic Challenge” (03/2008-09/2008) - Amount: 16.500 €
- Ph.D.-Scholarship from the Peter Gläsel Stiftung (08/2004-07/2006) - Amount: 24.000 €

### Grants

- Teaching Grant from the MWK (Ministerium für Wissenschaft, Forschung und Kunst, Baden-Württemberg, Germany) (2014) - Amount: 10.000 €
- DFG Travel Grant to attend the European Meeting of the Econometric Society in Budapest, Hungary (2007) - Amount: 1.000 €

## AWARDS

- 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)

## RESEARCH TALKS

### Conference and Workshop Presentations

- 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
- 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
- 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
- 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
- 04/2008 Macro Workshop, Arizona State University, US
- 10/2007 Annual Meeting of the Verein für Socialpolitik, Ludwig Maximilian University, Munich, Germany
- 08/2007 European Meeting of the Econometric Society, Budapest, Hungary
- 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

## RESEARCH TALKS

### Invited Talks

- 11/2015 Brownbag Seminar, Gutenberg University Mainz, Germany
- 12/2014 Research Talk, University of Leipzig, Germany
- 11/2014 Research Talk, University of Hohenheim, Germany
- 03/2013 Macro Reading Group, National University of Singapore (NUS), Singapore
- 03/2012 Nanyang Technological University (NTU), Singapore
- 03/2012 Singapore Management University (SMU), Singapore
- 03/2012 National University of Singapore (NUS), Singapore
- 12/2011 Symposium - 10 years of BiGSEM, Bielefeld University, Germany
- 03/2011 National University of Singapore (NUS), Singapore
- 03/2011 Nanyang Technological University (NTU), Singapore
- 12/2008 Research Talk, University of Zurich, Switzerland
- 07/2008 Baglunch Seminar, Minneapolis Federal Reserve Bank, US
- 01/2008 Economic Workshop, University of Würzburg, Germany
- 11/2007 Research Talk, University of Karlsruhe, Germany
- 11/2007 Theory Workshop, University of Mannheim, Germany
- 04/2007 Deutsche Bundesbank, Frankfurt, Germany

### Further Events

- 12/2015 Chair Research Day, Chair in Macroeconomics, Gutenberg University Mainz
- 06/2015 Chair Research Day, Chair in Macroeconomics, Gutenberg University Mainz (presenter)
- 12/2014 21st Annual Meeting of the German Finance Association (DGF)/ 13th Symposium on Finance, Banking, and Insurance, KIT, Karlsruhe (discussant)
- 03/2012 AEI-FOUR Joint Workshop on Current Issues in Economic Theory, National University of Singapore, Singapore (participation)
- 09/2010 New Challenges for Public Debt in Advanced Economies, Workshop, organized by the Banque de France and BETA, Université de Strasbourg, France (participation)
- 07/2008 Minnesota Macro Workshop, University of Minnesota, US (participation)
- 05/2007 Verein für Socialpolitik, Theoretischer Ausschuss, Günzburg, Germany (guest)
- 11/2006 “Fifth MEA Annual Conference”, Schwetzingen, Germany (participation)
- 08/2006 “Second Meeting of Winners of the Bank of Sweden Prize in Economic Sciences in Memory of Alfred Nobel”, Lindau, Germany (participation)

## TEACHING

### Teaching at Gutenberg University Mainz/ GSEFM Goethe University Frankfurt

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)

### Teaching at KIT

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 at 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)

## TEACHING

### Teaching Evaluations (KIT)\*

Semester	Course	Grade	TQI**
2014/15	Theory of Business Cycles/ Konjunkturtheorie	1,5	100 %
2014	Advanced Topics in Economic Theory	2,0	100 %
2014	Theory of Economic Growth/ Wachstumstheorie	-	-
2013/14	Theory of Business Cycles/ Konjunkturtheorie	1,7	95,5 %
2013	Theory of Economic Growth/ Wachstumstheorie	1,8	100 %
2012/13	Theory of Business Cycles/ Konjunkturtheorie	1,8	100 %
2012	Theory of Economic Growth/ Wachstumstheorie	1,9	100 %
2011/12	Theory of Business Cycles/ Konjunkturtheorie	1,8	100 %
2011	Advanced Topics in Economic Theory	1,9	100 %
2011	Theory of Economic Growth/ Wachstumstheorie	2,1	100 %
2010/11	Theory of Business Cycles/ Konjunkturtheorie	-	-
2010	Advanced Topics in Economic Theory	2,9	-
2010	Theory of Economic Growth/ Wachstumstheorie	2,2	-
2009/10	Theory of Business Cycles/ Konjunkturtheorie	1,7	-
2009	Theory of Economic Growth/ Wachstumstheorie	1,6	-
2008/09	Makroökonomische Theorie	2,0	-

\* summary statistics, detailed information available upon request \*\* Teaching Quality Index, available since summer term 2011

### Advisor of Ph.D. Theses

- Oliver Saffran: “Sudden Stops in Emerging Economies” (second advisor, University of Göttingen, work in progress)
- Caren Söhner: “Overlapping Generations Models with Multiperiod Lived Consumers: Theory and Applications” (first advisor, KIT, February 2016)
- Tim Deeken: “Spatial Interaction and Economic Growth” (second advisor, KIT, November 2015)
- Florian Kreuchauff: „Fraktale Doppel-Boom-Zyklen und Querschnittstechnologien: Theorie, Empirie und Politikimplikationen am Beispiel der Nanotechnologie“ (second advisor, KIT, April 2015)

### Advisor of Master/Diploma Theses

- Leonhard Bock: “The Equity Premium Puzzle in Exchange Economies” (December 2011)
- Matthias Hölzlein: “Labor Market Fluctuations in Real Business Cycle Models” (August 2010)
- Jochen Grünbacher: “Concepts of Efficiency and Optimality in Stochastic OLG Models” (December 2010)
- Lisa Jeuter: “Economic Growth and Income Distribution in the Models of Kaldor and Pasinetti” (December 2009).
- Robert Eickhoff: “Theory and Empirical Investigation of Business Cycles” (August 2009)



## TEACHING

### Advisor of Bachelor Theses

- Daniel Kashyap: “A New Keynesian Model of the Business Cycle” (August 2013)
- Lisa Schmittecker: “Fiscal Uncertainty in a New Keynesian Model of the Business Cycle” (October 2013)
- Martin Ziegler: “Money and the Business Cycle: A Model-based Analysis” (May 2013)
- Louisa Hellmann: “Search-and Matching in the Labor Market and Real Business Cycle Theory” (May 2012)
- Clemens Lechleiter: “Monetary and Fiscal Policy in a Monetary Union: A Model-based Analysis” (May 2012)
- Jiang Gong: “The Search-and Matching Model” (February 2012)

## FURTHER ACTIVITIES

### Workshop Organization

- Workshop on Economics and Finance, Karlsruhe Institute of Technology (2009-2010)
- Vigoni Workshop, University of Bielefeld (2005, 2006)

### Administrative Work

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