

Date and place of birth: 29 December 1976, Frankfurt/Main  
Family status: married, two children.

Nationality: German

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**RESEARCH FIELDS**

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Economic growth, innovation, digital economy, structural change.

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**PROFESSIONAL EXPERIENCE**

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- Since 09/2017      **Ruhr University Bochum**  
Professor for Innovation Economics and Policy at the Center for Entrepreneurship, Innovation und Transformation (CEIT), Faculty of Management and Economics (W3 position limited to 5 years)
- 04/2014 – 08/2017      **Goethe University Frankfurt**  
Privatdozentin (part-time lecturer)
- 01/2008 – 08/2017      **Centre for European Economic Research (ZEW), Mannheim**  
Senior Researcher at the Research Department Information and Communication Technologies (ICT)  
Responsibilities: Research and policy advice, mentoring of PhD students and postdocs, acquisition of third-party funds, project management, development of the research area
- 11/2005 – 12/2007      **Centre for European Economic Research (ZEW), Mannheim**  
Researcher at the Research Department Information and Communication Technologies (ICT)
- 09/2003 – 03/2004      **Louisiana State University, Baton Rouge (USA)**  
Visiting Research Associate, Host: Professor Chris Papageorgiou
- 01/2001 – 10/2005      **Goethe University Frankfurt**  
Teaching and Research Assistant to Professor Dr. Rainer Klump, Chair of Economic Development and Integration

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**ACADEMIC DEGREES**

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- 07/2014      **Goethe University Frankfurt**  
Habilitation in Economics
- 02/2006      **Goethe University Frankfurt**  
Doctoral Degree in Economics, summa cum laude
- 10/2000      **Goethe University Frankfurt and Paris-Dauphine University**  
Joint Master's Degree in Economics (Programme Double Diplome)

## **PUBLICATIONS**

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### **PUBLICATIONS IN REFEREED JOURNALS**

- Papageorgiou, C., M. Saam and P. Schulte (2017). Substitution Between Clean and Dirty Energy Inputs - A Macroeconomic Perspective, *Review of Economics and Statistics*, 99(2), 281 – 290.
- Niebel, T., M. O'Mahony and M. Saam (2017). The Contribution of Intangible Assets to Sectoral Productivity Growth in the EU, *Review of Income and Wealth*, 63, 49 – 67.
- Kummer, M., M. Saam, I. Halatchliyski and G. Giorgidze (2016), Centrality and Content Creation in Networks - The Case of Economic Topics on German Wikipedia, *Information Economics and Policy*, 36, 36 – 52.
- Chen, W., T. Niebel and M. Saam (2016). Are Intangibles More Productive in ICT Intensive Industries? Evidence for EU Countries, *Telecommunications Policy*, 40(5), 471– 484.
- Niebel, T. and M. Saam (2016). ICT and Growth - The Role of Rates of Return and Capital Prices, *Review of Income and Wealth*, 62(2), 283-310.
- Coneus, K., J. Gernandt and M. Saam (2011). Noncognitive skills, school achievements and educational dropout, *Schmollers Jahrbuch - Journal of Applied Social Science Studies* 131, 1 – 22.
- Papageorgiou, C. and M. Saam (2008). Two-Level CES Production Technology in the Solow and Diamond Growth Models, *Scandinavian Journal of Economics*, 110(1), 119 – 143.
- Klump, R. and M. Saam (2008). Calibration of normalised CES production functions in dynamic models, *Economics Letters*, 99(2), 256 – 259.
- Saam, M. (2008). Openness to Trade as a Determinant of the Macroeconomic Elasticity of Substitution, *Journal of Macroeconomics*, 30, 691 –702.

### **PUBLICATIONS IN NON-REFEREED JOURNALS**

- Weber, E., S. Elstner, C. M. Schmidt, U. Fritsche, P. C. Harms, H. Krämer and M. Saam (2017). Schwaches Produktivitätswachstum – zyklisches oder strukturelles Phänomen? *Wirtschaftsdienst*, 97(2), 83 – 102.

### **WORKING PAPERS**

- Saam, M., L. Weinhardt and L. Trottner (2016). Measurement of ICT-related intangibles in the public sector – A case study based on a German anti-crisis programme, SPINTAN project deliverable.
- Saam, M. (2014). The Identification of Directed Technical Change Revisited, ZEW Discussion Paper 14-127.

### **PROJECT REPORTS**

- Niebel, T., M. Saam and P. Schulte (2018), *The Sectoral Impact of the Digitisation of the Economy*, European Commission, Directorate-General of Communications Networks, Content & Technology, Brussels.
- Peters, B., P. Mohnen, M. Saam, F. Blandinieres, M. Hud, B. Krieger and T. Niebel (2018), *Innovationsaktivitäten als Ursache des Productivity Slowdowns? Eine Literaturstudie*, Studien zum deutschen Innovationssystem Nr. 10-2018, Berlin.
- Saam, M., S. Viete and S. Schiel, Digitalisierung im Mittelstand, Status Quo, aktuelle Entwicklungen und Herausforderungen, report commissioned by the KfW Bankengruppe.
- Bertschek, I., A. Heinzl, T. Niebel, M. Nöhren, J. Ohnemus, M. Saam, K. Schleife, P. Schulte, A. Stiehler, E. Dubiel, T. Ortwein (2013), Produktivität IT-basierter Dienstleistungen (ProdIT), Zweiter Meilensteinbericht.

Bertschek, I., T. Niebel, J. Ohnemus, M. Saam, P. Schulte, K. Schleife, A. Stiehler, A. Heinzl, M. Nöhren (2012), Produktivität IT-basierter Dienstleistungen (ProdIT) – eine Bestandsaufnahme.

## BOOK CHAPTERS

Slivko, O., M. Kummer and M. Saam (2016). Identification of Causal Effects in the Context of Mass Collaboration, in: Cress, U., J. Moskaliuk and H. Jeong, *Mass Collaboration and Education*, Springer Computer-Supported Collaborative Learning Series Bd. 16, 391-411.

## WORK IN PROGRESS

Liu, C., Saam, M., and Schulte, P., Preference Function Estimation and Structural Change - A Cross Country Analysis.

Chen, W., Liu, C. and Saam, M., ICT and Consumption – A Growth Accounting Analysis.

## SCIENTIFIC AND ACADEMIC ACTIVITIES

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### TEACHING

2018/19	Bachelor course “The Economics of Digitalization”, Bachelor Seminar on Growth and Technological Change, Master courses “The Productivity Slowdown” and “Industrial and Innovation Policy”, Ruhr University
2018	Bachelor course “GDP and Beyond”, Bachelor seminar “Firm Dynamics and Innovation”, Master courses “Structural Change and Global Value Chains”, “Ökonomische Politikberatung in der Praxis”, Ruhr University
2017/18	Bachelor course “The Economics of Digitalization”, Master course “The Productivity Slowdown”, Ruhr University
2017	Summer School Industry 4.0, Ruhr University
2016	Seminar “The Future of Economic Growth”, Master International Economics and Economic Policy, Goethe University Frankfurt
2015	Seminar “GDP and Beyond”, Master International Economics and Economic Policy, Goethe University Frankfurt
2015	Two five-weeks intensive courses in Macroeconomics, Bachelor in Management, SRH University of Applied Sciences Heidelberg
2014 – 2016	Four two-day ZEW Expert Seminars “Econometrics – A Practical Introduction” for professionals, jointly with Benjamin Engelstätter, Paul Hünermund and Patrick Schulte
2014	Lecture “The Economics of Technical Change”, Master of Economics, University of Mannheim
2011 – 2014	Lecture “The Economics of Technical Change”, Master International Economics and Economic Policy, Goethe University Frankfurt (each winter semester)
Winter 2005/2006	Pre-course Mathematics for First-Year Economics Students, Goethe University Frankfurt (Coordinator: Heinrich Rommelfanger)
2001 – 2005	Various seminars on growth, innovation, and economic policy at the Bachelor and Master level, jointly with Rainer Klump, Goethe University Frankfurt

2001 – 2006	Tutorial in Business Cycles, Growth and Technical Change I+II, Master level (several times)
1998 – 1999	Tutorial in Statistics I+II, Bachelor in Economics and Management, Goethe University Frankfurt

## **MENTORING**

Supervision of three ongoing Ph.D. theses (Anh Duc Le, Chuan Liu and Martin Queißner, Ruhr University Bochum)

Co-supervision of two Ph.D. theses written at the Goethe University Frankfurt by ZEW junior staff members (Thomas Niebel, 2014; Patrick Schulte, 2016)

## **PRESENTATIONS SINCE 2010**

2018: RWI Essen.

2017: Ruhr University, European Commission.

2016: RWTH Aachen, University of Bremen, German Ministry of Economic Affairs (Berlin), Kühne Logistics University (Hamburg), Wirtschaftsvereinigung Graftschaft Bentheim, Wirtschaftspaten e. V. Hanau.

2015: Conference “Economics of innovation, diffusion, growth and the environment” (London), SPINTAN Mid-term Conference (Valencia), KfW Bankengruppe (Frankfurt).

2014: Annual Conference of the German Economic Association (Hamburg), E-Frame Final Conference “GDP and Beyond: Measurement, Policy Use, and Moving Forward” (Amsterdam).

2013: International Economic Policy Research Seminar, Goethe-Universität (Frankfurt), E-Frame Workshop “Measurement of Intangible Assets”, (ZEW), 3<sup>rd</sup> SEEK Conference (ZEW), Workshop “ICT and Intangible Capital: Strategic Sources of Growth” (Rom), SERVICEGAP Final Conference (ZEW).

2012: Workshop “The Macroeconomic Substitution Between Clean and Dirty Production” (ZEW), 2<sup>nd</sup> SEEK Conference (ZEW), SERVICEGAP Midterm Conference (Dublin).

2011: Conference on Dynamics, Economic Growth, and International Trade – DEGIT XVI (St.Petersburg).

2010: 8<sup>th</sup> ZEW Conference: The Economics of Information and Communication Technologies (Discussant).

## **ACQUISITION OF THIRD-PARTY FINANCED PROJECTS**

“Different Concepts of R&D Productivity in the Analysis of Economic Growth”, Mercator Research Center Ruhr, 2019, project lead.

“Digitalization of SMEs in Saxony”, Saxonian Ministry for Economic Affairs, Work and Transport, 2017, project lead.

“Incentives for the Investment in Digitalization of SMEs”. Federal Ministry of Economic Affairs and Energy (BMWi), Berlin, coordinator: Karsten Reuss (VDI/VDE-TZ), 2017, project lead at ZEW.

“Growth Potential of the Digital Transformation”, Hans-Boeckler-Foudation, 2017 – 2018, acquired jointly with Thomas Niebel.

“The Sectoral Impact of the Digitisation of the Economy”, EU Commission, DG Connect, 2017, project lead.

“The Opportunities and Challenges of the Digitalization of the Economy for SMEs”, project lead, in cooperation with infas – Institute for Applied Social Sciences, KfW, 2015 – 2016, project lead.

“Smart Public Intangibles (SPINTAN)“, coordinator: Matilde Mas (IVIE), , 7<sup>th</sup> EU Framework Programme, 2012 – 2016, ZEW lead scientist in the consortium.

ScienceCampus Tübingen „Informational Environments“, project “Peer productivity in Web 2.0 Environments”, 2013 – 2016, Leibniz-Association and Land Baden-Württemberg, coordinator: Friedrich Hesse, project lead cluster no. 2.3

## **ORGANISATION OF SCIENTIFIC WORKSHOPS**

Workshop “Measurement of Intangible Assets“ within the e-Frame project, funded by 7<sup>th</sup> EU Framework Programme, jointly with Marcus Kappler (ZEW) and Jan Hogrefe (ZEW), Mannheim, May 2013

“Productivity in the Service Sector – Challenges of Measurement“ (ProdIT), Mannheim, 2012

“Macroeconomic Substitution between Clean and Dirty Production“, jointly with Chris Papageorgiou (IMF), Mannheim, 2012

“The Economics of Green IT“, jointly with Irene Bertschek (ZEW) and Andreas Löschel (ZEW), Mannheim, 2010

“The Potential of Social Software for Knowledge Creation and Economic Performance“, jointly with Andrea Mühlenweg (ZEW) and Katrin Wodzicki (Knowledge Research Media Center, Tübingen), Mannheim, 2009

“9th ZEW Summer Workshop for Young Economists“, jointly with Irene Bertschek (ZEW), funded by the Fritz Thyssen Foundation, Mannheim, 2007

## **REFEREEING**

American Economic Review, American Journal of Economics – Macroeconomics, Economics Letters, Bosch Foundation, European Commission, European Economic Review, Information Economics and Policy, Jahrbücher für Nationalökonomie und Statistik, Journal of Applied Econometrics, Journal of Economic Dynamics and Control, Journal of Macroeconomics, Journal of Productivity Analysis, Oxford Bulletin of Economics and Statistics, Oxford Economic Papers, Review of World Economics, Scandinavian Journal of Economics, Southern Economic Journal, Telecommunications Policy, Web Sci’ 16, Zeitschrift für Betriebswirtschaft

## **ACADEMIC AND INSTITUTIONAL SERVICE**

External member of a board of review for faculty recruitment, 2018

Participation as lead author in the International Panel for Social Progress

Steering Committee, ScienceCampus Tübingen “Informational Environments“, 2010 – 2012

Competence Team Education Research at ZEW, 2007

Member of the women’s council and of different boards of review for faculty recruitment, Goethe University Frankfurt, 2001 – 2005

## **TRAINING IN SOFT SKILLS AND LANGUAGE SKILLS**

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Scientific presentations, moderation, media training, conflict management (all seminars at ZEW), certificate in teaching methods (21 ECVET points, Goethe University Frankfurt)

Languages: German (mother tongue), English (fluent, European level C2), French (fluent, level C2), Russian (intermediate, level B1)

## REFERENCES

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