

Curriculum Vitae

Bernhard Rengs

Personal Details

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Education

2007	Ph.D. (Dr.rer.soc.oec.) with honors in Social Sciences and Economics Specialization: Economics and Computer Science at Technische Universität Wien Thesis title: <i>Visualisierung dynamischer makroökonomischer Modelle</i> (<i>Visualization of dynamic macroeconomic models</i>)
2002 – 2008	Further master-level courses in Computer Science (Software Engineering & Internet Computing) at Technische Universität Wien
2000	Master Degree (Mag.rer.soc.oec) in Economics and Computer Science at Technische Universität Wien and University of Vienna Specialization areas: Applied Game Theory and Artificial Intelligence Thesis title: <i>Ökonomische Paradoxa aus spieltheoretischer Sicht</i> (<i>Gametheoretic approaches to Economic Paradoxa</i>)

Scientific Work Experience

2025-2026	Guest Researcher at Vienna University of Economics and Business
2021 –	Academy Scientist at the Vienna Institute of Demography of the Austrian Academy of Sciences
2025 – 2021-2024	Guest Researcher at International Institute for Applied Systems Analysis (IIASA)

2021	Researcher at the Department of Demography, University of Vienna
2018 – 2015 – 2017	Lecturer at Technische Universität Wien (part time)
2014 – 2020	Senior researcher at the Vienna Institute of Demography, Austrian Academy of Sciences
2016, 2018	Lecturer at Vienna University of Economics and Business (part time)
2004 – 2014	Assistant Professor at the Institute for Mathematical Methods in Economics, Research Group Economics, Technische Universität Wien
2003	Assistant Professor at the Institute of Economics (Institut für Volkswirtschaftslehre und Wirtschaftsinformatik), Technische Universität Wien
2001 – 2003	Pre-doc at the Institute of Economics (Institut für Volkswirtschaftslehre und Wirtschaftsinformatik), Technische Universität Wien (part time)

Research Interests

- Demography of Migration, Forced Migration, Human capital of Migrants
- Information Visualization, Visual Data Analytics
- Application of machine learning methods in Demography
- Computational Social Simulation
- Agent-Based Computational Simulation

Major Scientific Research Projects

2024 – 2025	participation in the Federal Ministry for Social Affairs, Health, Care and Consumer Protection / OiiP research project: 'Migrationshintergrund im Alter: Lebensrealitäten, Bedürfnisse und Ressourcen von Senior:innen mit Migrationsgeschichte in Österreich'
2024 – 2025	participation in the AMS Österreich / OiiP research project: 'Recent Arrivals in Austria: Neue Geflüchtete aus Syrien und weiteren Drittstaaten am österreichischen Arbeitsmarkt'
2021	participation in the Austrian FWF research project (P31171): 'Later fertility in Europe'
2018 – 2022	participation in the Volkswagenstiftung / WU Wien research project: 'Society after money – a simulation' ('Die Gesellschaft nach dem Geld - Eine Simulation')
2020 – 2021	participation in the Federal Ministry for Social Affairs, Health, Care and Consumer Protection / WU Wien research project: 'COVID-19 and Migration: Accessibility, Cooperation and Socioeconomic Challenges of

- Migrants and Refugees in Austria' ('COVID-19 und Migrationshintergrund: Erreichbarkeit, Umgang mit Maßnahmen und sozioökonomische Herausforderungen von Migrant/inn/en und Geflüchteten')
- 2019 – 2021 participation in the AMS Österreich / WU Wien research project: 'Women's Integration Survey: Inklusion, Teilhabe und Enablement geflüchteter Frauen in Österreich'
- 2017 – 2019 participation in the WU Wien research project: 'Refugee Health and Integration Survey: Mental health and health access of refugees in Austria.' funded by the Federal Ministry of Education, Science and Research, the Federal Ministry of Labour, Social Affairs, Health and Consumer Protection, the Fonds Soziales Wien, and the Common Health Goals of the "Rahmen-Pharmavertrag", a cooperation between the Austrian pharmaceutical industry and the Austrian social insurance
- 2016 – 2018 participation in the ERC-FP7 research project (613247): 'Ageing Europe: An application of National Transfer Accounts (NTA) for explaining and projecting trends in public finances
- 2014 – 2016 participation in the ERC-FP7 research project (320116): 'Families and Societies'
- 2013 – 2016 participation in the 'OeNB Jubiläumsfonds' project (15299): 'Eine Untersuchung von institutionellen Komponenten der Banken-Makro Vernetzung'
- 2013 – 2014 participation in the ERC-FP7 research project (290647): 'W/W/WforEurope — Welfare, Wealth and Work for Europe' (Area 2) in Collaboration with WU-Wien (Vienna University of Economics and Business) and UAB Barcelona (Universitat Autònoma de Barcelona)
- 2011 – 2013 participation in the 'OeNB Jubiläumsfonds' project (14261): 'Wirtschaftliche Perspektiven Europas als Teil der Weltwirtschaft auf Basis von Simulationsszenarien'
- 2009 participation in the EU COST project (Cost action IS0902) 'Systemic Risks, Financial Crisis and Credit - the roots, dynamics and consequences of the Subprime Crisis', proposal writing, organization of and participation in workshops held in the course of the COST project
- 2007 – 2008 participation in the project: 'Ageing Society' at the TU Wien, subproject of the interuniversity Research Project 'Altern in der Stadt' conducted by WU-Wien, TU Wien, KMU Forschung Austria and ARC Vienna
- 2001 – 2004 participation in the 'OeNB Jubiläumsfonds' project (8656): 'Gesamtwirtschaftliche Metamodellierung: Komplexe Dynamiken und deren Visualisierung' (Macroeconomic Metamodeling: Complex Dynamics and Visualisation)

Teaching

2022 –	TU Wien: master-level compulsory introductory courses in computational social simulation – mainly on agent-based computational simulation
2018 – 2021	TU Wien: introductory and elective specialization courses in computational social simulation – mainly on agent-based computational simulation
2018 – 2019	TU Wien: bachelor-level compulsory introductory course in micro-economics
2018	European Doctoral School of Demography (University of Southern Denmark in Odense, Denmark): intensive PhD course in agent-based modelling
2016 – 2019	WU Wien: master-level elective practical course in agent-based modelling
2015 – 2017	TU Wien: master-level compulsory introductory and elective specialization courses in computational social simulation – mainly on agent-based computational simulation
2015	MPDIR Rostock: Advanced ABM course in a post-doctoral school on agent-based modelling and simulation
2013	TU Wien: planned, organized and taught the BEST summer school on game theory and computational social simulation
2005 – 2014	TU Wien: multiple bachelor and master-level compulsory and elective, introductory and specialization courses in computational social simulation and computational economics
2003 – 2014	TU Wien: multiple bachelor and master-level compulsory and elective, introductory and specialization courses in economics (economics, microeconomics, behavioural economics, socio-economics) and applied game theory

From 2003-2021 I advised and co-advised more than 50 bachelor thesis and supported more than 20 master thesis and furthermore provided extensive support and mentoring for several PhD students at Technische Universität Wien and Vienna University of Economics and Business (Wolfgang Radax, Manuel Wäckerle, Tobias Haberler [ul], Wolfgang Köpf [ul], Lena Gerdes).

In 2011, I was awarded the Teacher's Award of the Faculty of Informatics and the computer science student's union for outstanding teaching performance for the course 'Information Economics', held in the academic year 2010/2011.

Achievements and Prizes

2019	Kurt Rothschild Price for communication of scientific economics 2019 (together with Judith Kohlenberger and Isabella Buber-Ennsner)
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2015	Best paper award at SIMUL 2015 conference (joint work with Wim De Mulder, Geert Molenberghs, Thomas Fent, Geert Verbeke)
2011	Teacher's Award of the Faculty of Informatics and the computer science student's union for outstanding teaching performance for the course Information Economics, held in the academic year 2010/2011
2009	Volterra Replication Prize by the ESSA (European Social Simulation Association), for the 'Replication of the Demographic Prisoner's Dilemma' (joint work with Wolfgang Radax)

Scientific Community Services

2025 – 2026	Program committee member of the ACM SIGSIM-PADS 2026 held in Vienna, Austria
2018 – 2019	Guest Editor of the Empirica – Journal of European Economics - 2018 Special Conference Issue
2018	Head of the local organizational committee of the NOeG 2018 conference held at TU Wien
2017 – 2018	Scientific committee member of the NOeG 2018 conference held Vienna, in Austria
2013	Scientific committee member of the EAEPE 2013 conference held in Paris, France
2012 – 2013	Guest Editor of the Empirica – Journal of European Economics - 2012 Special Conference Issue
2012	Scientific committee member of the EAEPE 2012 conference held at Cracow, Poland
2012	Co-Head of the local organizational committee of the NOeG 2012 conference held at TU Vienna
2012	Scientific committee member of the NOeG 2012 conference held at TU Vienna
2011	Head of the local organizational committee of the Schumpeter 2011 (+EAEPE 2011) conference held at Tech Gate Vienna (TU Vienna)
2011	Scientific committee member of the EAEPE 2011 conference
	Reviewer for 'Journal of Artificial Societies and Social Simulation' and 'Demographic Research'

Miscellaneous activities

2015 – 2025	IT-coordinator (lead, strategic decisions and scientific computing) of the Vienna Institute of Demography, Austrian Academy of Sciences
2003 – 2025	IT-coordinator, sysadmin of the Research Unit Economics, Institute of Statistics and Mathematical Methods in Economics, TU Wien

2015 – 2019	External member of the curricular for studies in Business Informatics (Wirtschaftsinformatik) and Data Science, curricular track coordinator for the Economic Modeling track of Business Informatics curriculum at TU Wien
2004 – 2014	Permanent member of the curricular committee in Business Informatics (Wirtschaftsinformatik) at TU Wien ('Mittelbau'-Vertreter)
2010 – 2011	Member of the curricular sub-committee for studies in Business Informatics (Wirtschaftsinformatik) of TU Wien
2006	Local organizer of the NOeG 2006 conference held TU Wien
2004	Local co-organizer of the 'Jahrestagung 2004 des Ausschusses für Evolutorische Ökonomik des Vereins für Socialpolitik'
1998 – 2001	Permanent student union representative in various permanent organizational committees and finding committees of the TU Wien (Studienkommission, Fakultätsrat, Berufungskommissionen)

Technical skills

- *Standard Software [very experienced]:* Microsoft Office (Word, Excel, Powerpoint, Access, Publisher, Visio, Project); openOffice/LibreOffice and other standard software
- *Graphic Applications [experienced]:* Adobe Creative Suite (Illustrator, Indesign, Photoshop, Dreamweaver, Acrobat); Inkscape
- *Scientific Software:* R, RStudio, Stata, limesurvey, Qualtrics + multiple specialized software packages
- *Client / Server Computer Network Administration (deployment/setup, configuration and administration) [very experienced]:* 25+ years of experience with Windows (Windows 3, 3.1 + MSDOS 3.3/5/6, 95, 98, 2000, XP, Vista, 7, 8, 10, 11) standalone & client operating systems; 20+ years of experience with Linux client & server operating systems (Redhat & Fedora, Suse & openSuse, Debian) – LAMP, Sendmail/Postfix & multiple other server daemons; 15+ years of experience with Windows Server (2003, 2008, 2012, 2016, 2019, 2022) operating systems including IIS, MSSQL, AD & MS Exchange Server (2007, 2013); Limited Experience with Mac family client operating systems MacOS 9 & MacOS X
- *Software Development / Computer Languages:* R; NetLogo (very experienced); PHP (very experienced, but somewhat outdated); VisualBasic & VBA for Applications (e.g. Access) (very experienced, but outdated); Unix-Shell Scripting; Perl; C (outdated); Javascript (experienced); Java; Pascal, Turbo Pascal & Delphi (all experienced, but outdated); SQL/Databases - MSSQL, MySQL, MariaDB (experienced, but outdated); Document description languages: HTML, LaTeX, XML
- *Client / Server Hardware (planning, selection & acquisition, assembling, configuration & administration) [very experienced]* Common PC Hardware (Multi-CPU, Small Clusters), Computer Networks (Cabling, Router, VPN & Firewall Configuration, etc.)

Due to my training and decade-long work experience gained in many different professional positions (in universities, scientific research institutions and in non-scientific

companies) as scientist, head of IT, lecturer, instructor, teacher, mentor, software developer, designer, client / server support and administration, I have a very strong grasp of IT systems and computer science especially in scientific working environments.