

Prof. Dr. Petra Ahrweiler

ORCID: 0009-0008-8773-3181

URL for web site: <https://technikundinnovation.sozioologie.uni-mainz.de/team/prof-dr-petra-ahrweiler/>

• **Education and key qualifications**

- 15/11/2000 Habilitation / Venia Legendi
Institute of Sociology, University of Bielefeld, Germany
- 24/04/1994 PhD
Faculty of Philosophy and Social Sciences I, Free University of Berlin, Germany
Werner Rammert
- 1990 Dipl.-Soz. (Master Degree)
Institute of Sociology, University of Hamburg, Germany

• **Current positions**

- 2013 - Full Professor of Technology and Innovation Sociology / Social Simulation (TISSS)
Institute of Sociology, Johannes Gutenberg University Mainz, Germany
- 2017 - Director TISSS Lab
Institute of Sociology, Johannes Gutenberg University Mainz, Germany

• **Previous positions**

- 2013 – 2017 Scientific Director and CEO
European Academy of Technology and Innovation Assessment, Germany
- 2007 – 2015 Full Professor of Technology and Innovation Management and Innovation Policy
Michael Smurfit School of Business, University College Dublin, Ireland
- 2009 – 2013 Scientific Director
IRU Innovation Research Unit, University College Dublin, Ireland
- 2008 – 2013 Guest Professor and Member of Faculty
Engineering Systems Division ESD, Massachusetts Institute of Technology MIT,
Cambridge, USA

RESEARCH ACHIEVEMENTS AND PEER RECOGNITION

Research achievements

Type of achievement	Short description
Publication Book, social science, edited volume on research outputs of AI FORA, sole editor, 3 first-authored chapters	Ahrweiler, P. (ed.) (forthcoming): Participatory Artificial Intelligence in Public Social Services. From Bias to Fairness in Assessing Beneficiaries. Springer Series Artificial Intelligence, Simulation and Society, Springer Cham. (including chapter on “Inclusive technology co-design for participatory AI”)
Publication IT Conference Proceedings of AnnSim (IEEE), first author	Ahrweiler, P., Gilbert, N., Juranyi, Z., Bicket, M., Sabater Coll, A., Kamps, G., Luque Capellas, B. and D. Wurster (2024): Using ABM and Serious Games to create “Better AI”. Proceedings of the 2024 Annual Simulation Conference (ANNSIM’24), Society for Modeling & Simulation International (SCS).
Publication Book, novel, inclusive science communication for AI FORA ;	Ahrweiler, P. (2024): Angels and other Cows. A Celestial Adventure into AI Worlds, the Social Good, and Unknown Connections, https://doi.org/10.1007/978-3-031-60401-0

Publication IT Conference Proceedings of European Social Simulation Association ESSA, first author, methods contribution in simulation	Ahrweiler , P., Gilbert, N., Bicket, M., Sabater Coll, A., Luque Capellas, B., Wurster, D., Siqueiros, J.M. and E. Späth (2024): Gamification and Simulation for Innovation. In: Advances in Social Simulation (eds. C. Elsenbroich and H. Verhagen), Springer Proceedings in Complexity, pp. 121-136.
Publication Journal article in JASSS on the role of computational models during crisis, co-authored, highly cited; https://scholar.google.com/citations?user=Th5reZUAAAAJ&hl=de	Squazzoni, F., Polhill, J. G., Edmonds, B., Ahrweiler , P., Antosz, P., Scholz, G., Chappin, E., Borit, M., Verhagen, H., Giardini, F., & Gilbert, N. (2020). Computational Models That Matter During a Global Pandemic Outbreak: A Call to Action. <i>JASSS - The Journal of Artificial Societies and Social Simulation</i> , 23(2), Article 10. https://doi.org/10.18564/jasss.4298
Publication Journal article in NATURE, co-authored, programmatic contribution on the role of peer review and data use in science	Squazzoni, F. Ahrweiler P., Barros, T., Bianchi F., Birukou A., Blom HJJ, Bravo G., Cowley S. Dignum V., Dondio P., Grimaldo F., Haire L., Hoyt J., Hurst P., Lammey R., MacCallum C., Marušić A., Mehmani B., Murray H., Nicholas D., Pedrazzi G., Puebla I., Rodgers P., Ross-Hellauer T., Seeber M., Shankar K., Van Rossum J., Willis M. (2020). Unlock ways to share peer review data. <i>Nature</i> , 578(7796):512-514. [doi:10.1038/d41586-020-00500-y]
Publication IT Conference Proceedings SpringSIM (IEEE), first author, methods contribution in policy modelling	Ahrweiler , P., Frank, D. and Gilbert, N. (2019): Co-Designing Social Simulation Models for Policy Advice: Lessons Learned From the INFSO-SKIN Study. In 2019 Spring Simulation Conference (SpringSim). Tucson, AZ, USA: IEEE. https://ieeexplore.ieee.org/document/8732901
Publication Journal article in JASSS, co-authored, programmatic contribution on policy modelling, https://scholar.google.com/citations?user=Th5reZUAAAAJ&hl=de	Gilbert, N., Ahrweiler , P., Barbrook-Johnson, P., Narasimhan, K. and Wilkinson, H. (2018): Computational Modelling of Public Policy: Reflections on Practice, <i>Journal of Artificial Societies and Social Simulation (JASSS)</i> Vol. 21 (1) 14. DOI: 10.18564/jasss.3669
Publication Journal article in Scientometrics, single-authored	Ahrweiler , P. (2017): Agent-based simulation for science, technology, and innovation policy. <i>Scientometrics</i> Vol. 110 (1): 391-415. DOI: 10.1007/s11192-016-2105-0.
Software Agent based model used by more than 40 research groups worldwide; 2 textbooks with contributions across interdisciplinary domains; co-developer with Gilbert & Pyka	SKIN simulation platform; https://github.com/InnovationNetworks/skin Ahrweiler , P., Gilbert, N. and A. Pyka (eds, 2016): <i>Joining Complexity Science and Social Simulation for Innovation Policy. Agent-based Modelling using the SKIN Platform</i> . Cambridge Scholars Publishing, UK.

Google scholar profile at:

<https://scholar.google.com/citations?user=Th5reZUAAAAJ&hl=de>

	All	Since 2019
Citations	2885	1270
h-index	28	18
i10-index	42	29

Peer recognition

Example of significant recognition by peers	Short explanation
2024 Finalist in the Social Sciences & Humanities category of the Fallings Walls Foundation's GlobalCall24.	This year's Falling Walls Global Call received more than 1.100 nominations from over 300 different institutions; (https://falling-walls.com/science-summit/finalists)
2020-2022 President of the European Social Simulation ESSA; (http://www.essa.eu.org/homepage/past-presidents/)	The European Social Simulation Association (ESSA) promotes the development of social simulation research, education and application in Europe.
2012-2024 Member of ESSA Management Committee;	The European Social Simulation Association (ESSA) promotes the development of social simulation research, education and application in Europe.
Since 2015 Member of German Academy for Technical Sciences Acatech; (https://www.acatech.de/person/petra-ahrweiler-15547/) Membership only on invitation.	Acatech is the National Academy of Science and Engineering. The Academy provides policymakers and society with independent, evidence-based advice aiming to promote sustainable growth through innovation.
Since 2010 Member of AcademiaNet, the network of excellent female scientists in Germany; (https://www.academia-net.org/profile/petra-ahrweiler/80199) Membership only on invitation.	AcademiaNet is a database of profiles of excellent female researchers from all disciplines. All researchers are nominated for AcademiaNet by prestigious science partner organisations according to strict selection criteria.
2010 2010: Best-Paper-Award of the EU FP7 Support Action "CROSSROAD" (ICT for Governance and Policy Modelling)	https://cordis.europa.eu/project/id/248484?isPreviewer=1
2008-2013 Research Fellow at Massachusetts Institute of Technology MIT, Engineering Systems Division (ESD), Cambridge, USA	Guest professorship in the area of technology and innovation management, member of faculty
2000-2007 Heisenberg Fellow of German Research Foundation DFG	To enable outstanding researchers to prepare for a senior academic role.
2002–2005: Funding of an individual membership within the EU Network of Excellence on Complex Systems EXYSTENCE	https://cordis.europa.eu/project/id/IST-2001-32802?isPreviewer=1
Science Prize 2001 of "Centrum for Mediation in Germany" for Habilitation Thesis https://www.centrale-fuer-mediation.de/wissenschaftspreis.htm	Ahrweiler, P. (2001): Informationstechnik und Kommunikationsmanagement. Netzwerksimulation für die interdisziplinäre Wissenschafts- und Technikforschung. Campus: Frankfurt/New York.
1996-2000 Habilitation Fellow of German Research Foundation DFG	To enable outstanding researchers to prepare for habilitation.
Kurt-Hartwig-Siemers Prize 1994 for the PhD Thesis (Ahrweiler, P. (1995): Artificial intelligence research in Germany. The establishment of a high-tech subject. Waxmann: Münster/New York.)	Ahrweiler, P. (1995): Künstliche Intelligenz-Forschung in Deutschland. Die Etablierung eines Hochtechnologie-Fachs. Waxmann: Münster/New York.
1990-1994 Fellow of the Studienstiftung des deutschen Volkes (German National Merit Foundation). (funded as a fellow also already during studies 1986-1990)	To enable outstanding researchers to prepare for PhD.

Other contributions to the research community

This year's additional activities:

- 2024 Track chair for the Social Sciences of the European Workshop on Algorithmic Fairness EWAF 2024, organized in Mainz, Germany, on 1-3 July 2024. <https://2024.ewaf.org>
- 2024 Track chair for "Humans, Societies, and Artificial Agents" of the 2024 Annual Simulation Conference (ANNSIM), organized in Washington, D.C., USA, on 20–23 May 2024. <https://scs.org/annsim/>
- Since 2024 sole editor of Springer book series “Artificial Intelligence, Simulation and Society” (https://www.springer.com/series/17406?srsId=AfmBOopViQNXQG8tM321wqSLlfBi_w5JqNR4fOwVd-XHM_dgqt3ksLzj)

Long-term ongoing:

- Since 2020 Member of Quality Assurance Committee of Johannes Gutenberg University (<https://www.blogs.uni-mainz.de/zq-eng/about-us/the-center-for-quality-assurance-and-developments-zq-academic-advisory-council/>)
- Since 2019 Member of Interdisciplinary Public Policy Mainz (IPP); <https://ipp-mainz.uni-mainz.de/about-us/researcher/>
- Since 2018 Liaison Professor (Vertrauensdozentin) of Studienstiftung des deutschen Volkes at Johannes Gutenberg University Mainz
- Since 2015 Member of the Editorial Board of Journal of Artificial Societies and Social Simulation JASSS
- Since 2000 Member of Selection Committee of Studienstiftung des deutschen Volkes
- Since 2000 Expert of the REA, European Commission (Individual Expert, Rapporteur) for various programmes and projects: ID EX2014D212501.

PUBLICATIONS PETRA AHRWEILER

h-index: 28; i10-index: 42

(Google Scholar citation records: <https://scholar.google.com/citations?user=Th5reZUAAA&hl=de>)

Peer-Reviewed International Journals and Proceedings

- **Ahrweiler, P.**, Gilbert, N., Bicket, M., Sabater Coll, A., Luque Capellas, B., Wurster, D., Siqueiros, J. and E. Späth (2024): Gamification and Simulation for Innovation. In: Elsenbroich, C. and H. Verhagen (eds) *Advances in Social Simulation*. Springer Proceedings in Complexity. Springer, Cham: 121-136.
- Herget, F., Kleppmann, B., **Ahrweiler, P.**, Gruca, J. and M. Neumann (2022): How Perceived Complexity Impacts on Comfort Zones in Social Decision Contexts - Combining Gamification and Simulation for Assessment. In: Czupryna, M., Kamiński, B. (eds) *Advances in Social Simulation*, 203-215. Springer Proceedings in Complexity. Springer, Cham. https://doi.org/10.1007/978-3-030-92843-8_16.
- Squazzoni, F., **Ahrweiler P.**, Barros, T., Bianchi F., Birukou A., Blom HJJ, Bravo G., Cowley S. Dignum V., Dondio P., Grimaldo F., Haire L., Hoyt J., Hurst P., Lammey R., MacCallum C., Marušić A., Mehmani B., Murray H., Nicholas D., Pedrazzi G., Puebla I., Rodgers P., Ross-Hellauer T., Seeber M., Shankar K., Van Rossum J., and M. Willis (2020): Unlock ways to share peer review data. *Nature*, 578(7796):512-514. [[doi:10.1038/d41586-020-00500-y](https://doi.org/10.1038/d41586-020-00500-y)]
- Squazzoni, F., Polhill, J. G., Edmonds, B., **Ahrweiler, P.**, Antosz, P., Scholz, G., Chappin, É., Borit, M., Verhagen, H., Giardini, F. and Gilbert, N. (2020): Computational Models That Matter During a Global Pandemic Outbreak: A Call to Action. *Journal of Artificial Societies and Social Simulation* 23 (2) 10 <<http://jasss.soc.surrey.ac.uk/23/2/10.html>>. doi: 10.18564/jasss.4298.
- **Ahrweiler, P.**, Frank, D. and Gilbert, N. (2019): Co-Designing Social Simulation Models for Policy Advice: Lessons Learned From the INFOS-SKIN Study. In 2019 Spring Simulation Conference (SpringSim). Tucson, AZ, USA: IEEE. <https://ieeexplore.ieee.org/document/8732901>
- **Ahrweiler, P.**, Gilbert, N., Schrempf, B., Grimpe, B. and M. Jirotko (2018): The role of civil society organisations in European responsible research and innovation. *Journal of Responsible Innovation*, 6(1): 25–49. <https://doi.org/10.1080/23299460.2018.1534508>.

- Gilbert, N., **Ahrweiler, P.**, Barbrook-Johnson, P., Narasimhan, K. and Wilkinson, H. (2018): Computational Modelling of Public Policy: Reflections on Practice, *Journal of Artificial Societies and Social Simulation (JASSS)* Vol. 21 (1) 14. DOI: 10.18564/jasss.3669
- Frank, D. and **Ahrweiler, P.** (2018): The Future of Artificial Intelligence: Policy Research Perspectives. In *Science Policy Paper 3 (2018): Whither Artificial Intelligence? Debating the Policy Challenges of the Upcoming Transformation*. <http://publikationen.ub.uni-frankfurt.de/frontdoor/index/index/docId/51031>
- **Ahrweiler, P.** (2017): Agent-based simulation for science, technology, and innovation policy. *Scientometrics* Vol. 110 (1): 391-415. DOI: 10.1007/s11192-016-2105-0.
- Li, L., **Ahrweiler, P.** and Hang, X. (2017): 新熊彼特主义视角下基于主体的计算经济学研究 . Agent-based Computational Economics from the Neo-Schumpeterian Perspective. *Economic Perspectives* (7): 137-147. (in Chinese).
- **Ahrweiler, P.**, Schilperoord, M., Pyka, A. and N. Gilbert (2015): Modelling Research Policy - Ex-Ante Evaluation of complex Policy Instruments. *Journal of Artificial Societies and Social Simulation (JASSS)* Vol. 18 (4) 5. DOI: 10.18564/jasss.2927.
- Leydesdorff, L. and **P. Ahrweiler** (2014): In Search of a Network Theory of Innovations - Relations, Positions, and Perspectives. *Journal of the American Society for Information Science and Technology (JASIST)* 65(11), 2359–2374.
- **Ahrweiler, P.** and M. Keane (2013): Innovation Networks. *Mind & Society* 12: 73–90, DOI 10.1007/s11299-013-0123-7.
- **Ahrweiler, P.** and R. Viale (2013): Introduction to cultural and cognitive Dimensions of Innovation. *Mind & Society* 12:5–10, DOI 10.1007/s11299-013-0128-2.
- Pyka, A., **Ahrweiler P.** and N. Gilbert (2012): ПРОЦЕССЫ ПОРОЖДЕНИЯ И ДИФФУЗИИ ЗНАНИЯ В ИННОВАЦИОННЫХ СЕТЯХ: АГЕНТНАЯ СИМУЛЯЦИОННАЯ МОДЕЛЬ (Knowledge Generation and Diffusion Processes in Innovation Networks). *The Journal of Sociology and Social Anthropology*, Vol. XV (5), 327–348.
- **Ahrweiler, P.** (2012): [Review of Complex Adaptive Innovation Systems. Relatedness and Transversality in the Evolving Region \(Regions and Cities\); by P. Cooke, Routledge: London 2012.](#) *Journal of Artificial Societies and Social Simulation (JASSS)*, 15 (4).
- Edmonds, B., Gilbert, N., **Ahrweiler, P.** and A. Scharnhorst (2011): [Simulating the Social Processes of Science](#). *Journal of Artificial Societies and Social Simulation (JASSS)*, 14 (4), 14.
- **Ahrweiler, P.** (2011): [Modelling Theory Communities in Science](#). *Journal of Artificial Societies and Social Simulation (JASSS)*, 14 (4), 8.
- **Ahrweiler, P.**, Pyka, A. and N. Gilbert (2011): A New Model for University-Industry Links in Knowledge-Based Economies. *Journal of Product Innovation Management (JPIM)*, 28: 218–235.
- **Ahrweiler, P.**, Gilbert, N. and A. Pyka (2011): Agency and Structure. A social Simulation of knowledge-intensive Industries. *Computational & Mathematical Organization Theory (CMOT)* 17 (1): 59–76.
- **Ahrweiler, P.** (2009): Review of Complexity Perspectives in Innovation and Social Change (Methods Series; by Lane D., Pumain D., van der Leeuw S. Ernst, West G. (eds.), Springer: Berlin, 2009). *Journal of Artificial Societies and Social Simulation (JASSS)*, 12(4), 19.4.4.
- Pyka, A. and **P. Ahrweiler** (2008): Innovation Networks – An Introduction. *International Journal of Foresight and Innovation Policy* 4 (3/4): 1–8.
- Gilbert, N., **Ahrweiler, P.** and A. Pyka (2007): Learning in Innovation Networks - Some Simulation Experiments. *Physica A: Statistical Mechanics and Its Applications*, 378 (1): 667–693.
- Pyka, A., Gilbert, N. and **P. Ahrweiler** (2007): Simulating Knowledge Generation and Distribution Processes in Innovation Collaborations and Networks. *Cybernetics and Systems* 38 (7): 667–693.
- **Ahrweiler, P.**, Gilbert, N. and A. Pyka (2006): Institutions Matter but... Organisational Alignment in Knowledge- Based Industries. *Science, Technology & Innovation Studies* 2 (1): 39–58.
- **Ahrweiler, P.** and N. Gilbert (2005): Caffe Nero - the Evaluation of Social Simulation. *Journal of Artificial Societies and Social Simulation (JASSS)* 8 (4), 14.
- Pyka, A. and **P. Ahrweiler** (2004): Applied Evolutionary Economics and Social Simulation – An Introduction. *Journal of Artificial Societies and Social Simulation*, 7 (2), 6.
- **Ahrweiler, P.** (2002): Jon Sunbo: The strategic Management of Innovation – A Review. *Journal of Evolutionary Economics* 12: 577–581.

- Gilbert, N., Pyka, A. and **P. Ahrweiler** (2001): Innovation Networks – A Simulation Approach. *Journal of Artificial Societies and Social Simulation (JASSS)* 4 (3), 8.
- **Ahrweiler, P.** (1999): David Byrne: Complexity Theory and the Social Sciences – A Review'. *Emergence. A Journal of Complexity Issues in Organizations and Management*, Special Issue: 101–103.

Monographies

- **Ahrweiler, P.** (2024): *Angels and other Cows. A Celestial Adventure into AI Worlds, the Social Good, and Unknown Connections*. Springer: Cham. DOI <https://doi.org/10.1007/978-3-031-60401-0>.
- **Ahrweiler, P.** (2001): *Informationstechnik und Kommunikationsmanagement. Netzwerksimulation für die interdisziplinäre Wissenschafts- und Technikforschung*. Campus: Frankfurt/New York.
- **Ahrweiler, P.** (1995): *Künstliche Intelligenz-Forschung in Deutschland. Die Etablierung eines Hochtechnologie-Fachs*. Waxmann: Münster/New York.

Editions

- **Ahrweiler, P.** (ed.) (forthcoming): *Participatory Artificial Intelligence in Public Social Services. From Bias to Fairness in Assessing Beneficiaries*. Springer: Cham.
- **Ahrweiler, P.,** Neumann, M. (eds. 2021): *Advances in Social Simulation. Proceedings of the 15th Social Simulation Conference: 23–27 September 2019*. Springer, Springer: Berlin, Heidelberg, New York.
- **Ahrweiler, P.,** Gilbert, N. and A. Pyka (eds, 2016): *Joining Complexity Science and Social Simulation for Innovation Policy. Agent-based Modelling using the SKIN Platform*. Cambridge Scholars Publishing, UK.
- Gilbert, N., **Ahrweiler, P.** and A. Pyka (eds.) (2014): *Simulating Knowledge Dynamics in Innovation Networks*, Springer: Heidelberg/New York.
- **Ahrweiler, P.** and R. Viale (eds.) (2013): *Cultural and Cognitive Dimensions of Innovation*, Special Issue, *Mind & Society*, 12.
- **Ahrweiler, P.** (ed.) (2010): *Innovation in Complex Social Systems*. Routledge: London.
- **Ahrweiler, P.** and A. Pyka (eds.) (2008): *Innovation Networks. International Journal of Foresight and Innovation Policy* 4, Special Issue 3/4.
- Thomass, B. and **P. Ahrweiler** (eds.) (2005): *Internationale partizipatorische Kommunikationspolitik – Strukturen und Visionen*. LIT: Münster/New York.
- Pyka, A. and **P. Ahrweiler** (eds.) (2004): *Applied Evolutionary Economics and Social Simulation. Journal of Artificial Societies and Social Simulation* 7. Special Issue 2.
- **Ahrweiler, P.** and N. Gilbert (eds.) (1998): *Computer Simulations in Science and Technology Studies*. Springer: Berlin, Heidelberg, New York.

Book chapters

- **Ahrweiler, P.,** Abe, J. and M. Neumann (2024): Using a case study approach for investigating the status quo and future options of AI-based social assessment in public service provision. In: *Participatory Artificial Intelligence in Public Social Services. From Bias to Fairness in Assessing Beneficiaries*. Springer: Cham.
- **Ahrweiler, P.** (2024) Towards culture-sensitive, responsive and participatory AI. In: *Participatory Artificial Intelligence in Public Social Services. From Bias to Fairness in Assessing Beneficiaries*. Springer: Cham.
- **Ahrweiler, P.,** Spaeth, E., Siqueiros Garcia, J.M., Luque Capellas, B. and D. Wurster (2024): Inclusive technology co-design for participatory AI. In: *Participatory Artificial Intelligence in Public Social Services. From Bias to Fairness in Assessing Beneficiaries*. Springer: Cham.

- **Ahrweiler, P.** (2024): The Evolution of Innovation. In: Routledge International Handbook of Complexity Economics (eds. Chen, P., Elsner, W. and A. Pyka). London: Routledge.
<https://www.routledge.com/Routledge-International-Handbook-of-Complexity-Economics/Chen-Elsner-Pyka/p/book/9780367634216?srsId=AfmBOooMQyXE5v3zAx0zoLHTCI4QZEAWPEQBPTtEyPSfblzZ1UJHf4M>
- **Ahrweiler, P.** and M. Neumann (2023): Epistemological Foundations. In: Neumann, M. (ed.): An Interpretive Account to Agent-based Social Simulation: Using Criminology to Explore Cultural Possibilities (1st ed.). London: Routledge: 14-34. <https://doi.org/10.4324/9781003393207>
- **Ahrweiler, P.** (2019): Innovation Management Simulations using Agent-Based Modelling, in: Chen, J., Brem, A., Viardot, E., Wong, P. K.: *The Routledge Companion to Innovation Management*: 539-559.
- **Ahrweiler, P.** (2019): Theories in (inter)action. A complex dynamic system for theory evaluation in Science Studies. In: Bar-Yam, Y. *Unifying Themes in Complex Systems Volume I.*, Boca Raton: CRC Press: 75-84.
- **Ahrweiler, P.** (2017): Simulationsexperimente realexperimenteller Politik – der Gewinn der Zukunftsdimension im Computerlabor. In: Böschen, S., Gross, M. and W. Krohn (eds.): *Experimentelle Gesellschaft*. Nomos Verlagsgesellschaft, edition sigma: Baden-Baden, pp. 199-237.
- **Ahrweiler, P.**, N. Gilbert and A. Pyka (2016): Joining Complexity Science and Social Simulation for Innovation Policy. In: Ahrweiler, P., Gilbert, N. und A. Pyka (eds.): *Joining Complexity Science and Social Simulation for Innovation Policy. Agent-based Modelling using the SKIN Platform*. Cambridge Scholars Publishing, UK.
- **Ahrweiler, P.**, Pyka, A. and N. Gilbert (2016): Policy Modelling of Large-Scale Social Systems - Lessons from the SKIN Model of Innovation. In: Ahrweiler, P., Gilbert, N. and A. Pyka (eds.): *Joining Complexity Science and Social Simulation for Innovation Policy. Agent-based Modelling using the SKIN Platform*. Cambridge Scholars Publishing, UK.
- **Ahrweiler, P.** (2015): RRI-Governance zwischen linearer Interventionslogik und Sozialinnovation. Interview. In: Bogner, A., Decker, M. and M. Sotoudeh (eds.): *Responsible Innovation. Neue Impulse für die Technikfolgenabschätzung. Gesellschaft – Technik – Umwelt, Neue Folge Bd. 18*. Nomos Verlagsgesellschaft, edition sigma: Baden-Baden: 131-136.
- Majstorovic, D., Wimmer M., Lay-Yee, R., Davis, P. and **P. Ahrweiler** (2015): Features and Added Value of Simulation Models Using Different Modelling Approaches Supporting Policy-Making: A Comparative Analysis. In: Janssen, M., Wimmer, M. and A. Deljoo (eds.): *Policy Practice and Digital Science – Integrating Complex Systems, Social Simulation and Public Administration in Policy Research*. [Series Public Administration and Information Technology](#), Springer: Heidelberg/New York: 95–123.
- **Ahrweiler, P.** and N. Gilbert (2015): The Quality of Social Simulation - an Example from Research Policy Modelling. In: Janssen, M., Wimmer, M. and A. Deljoo (eds.): *Policy Practice and Digital Science – Integrating Complex Systems, Social Simulation and Public Administration in Policy Research*, Series Public Administration and Information Technology, Springer: Heidelberg/New York: 35– 55.
- **Ahrweiler, P.**, Gilbert, N. and A. Pyka (2015): Innovation Policy Modeling with SKIN. In: Johnston, E. (ed.): *Governance in the Information Era: Theory and Practice of Policy Informatics*. Routledge: London: 229–246.
- **Ahrweiler, P.**, Pyka, A. and N. Gilbert (2014): Simulating Knowledge Dynamics in Innovation Networks: an Introduction. In: Gilbert, N., Ahrweiler, P. and A. Pyka (eds.): [Simulating Knowledge Dynamics in Innovation Networks](#), Springer: Heidelberg/New York: 1–14.
- **Ahrweiler, P.**, Schilperoord, M., Pyka, A. and N. Gilbert (2014): Testing Policy Options for Horizon 2020 with SKIN. In: Gilbert, N., Ahrweiler, P. and A. Pyka (eds.): [Simulating Knowledge Dynamics in Innovation Networks](#), Springer: Heidelberg/New York: 155–184.
- Schilperoord, M. and **P. Ahrweiler** (2014): Towards a Prototype Policy Laboratory for Simulating Innovation Networks. In: Gilbert, N., Ahrweiler, P. and A. Pyka (eds.): [Simulating Knowledge Dynamics in Innovation Networks](#), Springer: Heidelberg/New York: 185–198.
- Schrempf, B. and **P. Ahrweiler** (2014): Modelling the Emergence of a General- Purpose Technology from a knowledge-based Perspective – the Case of Nanotechnology. In: Gilbert, N., Ahrweiler, P. and A. Pyka (eds.): [Simulating Knowledge Dynamics in Innovation Networks](#), Springer: Heidelberg/New York: 201–216.

- **Ahrweiler, P.** and A. Pyka (2014): Innovation. In: Saam, N. and N. Braun (eds.): Handbuch Modellbildung und Simulation in den Sozialwissenschaften. VS-Verlag: Wiesbaden: 855–885.
- **Ahrweiler, P.** and M. Keane (2014): Innovation Networks (Reprint). In: Shamiyeh, M. and DOM Research Laboratory (eds.): Driving Desired Futures: Turning Design Thinking into Real Innovation. Birkhaeuser: Basel: 278–294.
- **Ahrweiler, P.**, Schilperoord, M., Gilbert, N. and A. Pyka (2012): Simulating the Role of MNCs for Knowledge and Capital Dynamics in Networks of Innovation. In: Heidenreich, M. (ed.): Innovation and Institutional Embeddedness of Multinational Companies. Edward Elgar: Cheltenham, UK: 384–412.
- **Ahrweiler, P.** (2010): Innovation in complex social Systems - An Introduction. In: Ahrweiler, P. (ed.): *Innovation in complex social Systems*. Routledge: London: 1– 25.
- **Ahrweiler, P.** (2010): Innovation in complex social Systems - Some Conclusions. In: Ahrweiler, P. (ed.): *Innovation in complex social Systems*. Routledge: London: 315–322.
- Scholz, R., Nokkala, T., **Ahrweiler, P.**, Pyka, A. and N. Gilbert (2010): The agent- based Nemo Model (SKEIN) - Simulating European Framework Programmes. In: Ahrweiler, P. (ed.): *Innovation in complex social Systems*. Routledge: London: 300–314.
- Gilbert, N., **Ahrweiler, P.** and A. Pyka (2010): Learning in Innovation Networks - some Simulation Experiments. Re-Print. In: Ahrweiler, P. (ed.): *Innovation in complex social Systems*. Routledge: London: 235–249.
- Pyka, A., **Ahrweiler, P.** and N. Gilbert (2009): Agent-based Modelling of Innovation Networks - The Fairytale of Spillovers. In: Pyka, A. and A. Scharnhorst (eds.): *Innovation Networks. New Approaches in Modeling and Analyzing*. Springer: Berlin/New York: 101–126.
- Gilbert, N. and **P. Ahrweiler** (2009): The Epistemologies of Social Simulation Research. In: Squazzoni, F. (ed.): *Epistemological Aspects of Computer Simulation in the Social Sciences*. Springer: Berlin/New York: 12–28.
- Pyka, A., **Ahrweiler, P.** and N. Gilbert (2006): Knowledge-Generation and -Distribution Processes in Innovation Collaborations and Networks. In: Trappl, R. (ed.): *Cybernetics and Systems, Vol. 2*, Austrian Society for Cybernetic Studies, Vienna: 673–678.
- **Ahrweiler, P.** (2005): Gesellschaftliche Kohäsion durch Kommunikationstechnologie? Zur Interdependenz von technischem und sozialem Wandel. In: Ahrweiler, P. and B. Thomass (eds.): *Internationale partizipatorische Kommunikationspolitik*. LIT: Münster/New York: 165–180.
- **Ahrweiler P.**, Gilbert N. and A. Pyka (2004): Die Simulation von Lernen in Innovationsnetzwerken. In: Florian, M. and F. Hillebrand (eds.): *Adaption und Lernen in und von Organisationen*. Westdeutscher Verlag: Wiesbaden: 165–185.
- **Ahrweiler P.**, Gilbert N. and A. Pyka (2004): Simulating Knowledge Dynamics in Innovation Networks. In: Leombruni, R. and M. Richiardi (eds.): *Industry and Labor Dynamics - the Agent-based Computational Economics Approach*. World Scientific Press: Singapore: 284–296.
- **Ahrweiler, P.** (2003): Computer-Mediation: Softwaregestütztes Kommunikations- und Konfliktmanagement. In: Christaller, T. and J. Wehner (eds.): *Autonome Maschinen*. Westdeutscher Verlag: Wiesbaden: 244–267.
- Gilbert, N., Pyka, A., and **P. Ahrweiler** (2002): Simulating Innovation Networks. In: Pyka, A. and G. Küppers (eds.) *Innovation Networks. Theory and Practice*. Edward Elgar: Cheltenham: 169–196.
- **Ahrweiler, P.**, de Jong, S. and P. Windrum (2002): Evaluating Innovation Networks. In: Pyka, A. and G. Küppers (eds.): *Innovation Networks. Theory and Practice*. Edward Elgar: Cheltenham: 197–212.
- **Ahrweiler, P.** (2000): Die Integration heterogener Wissenssysteme auf dem Computer. In: Ohly, H.P. et al. (eds.): *Globalisierung und Wissensorganisation - Neue Aspekte für Wissen, Wissenschaft und Informationssysteme*. Ergon: Würzburg: 375–389.
- **Ahrweiler, P.** and S. Wörmann (1998): Computer Simulations in Science and Technology Studies. In: Ahrweiler, P. and N. Gilbert (eds.): *Computer Simulations in Science and Technology Studies*. Springer: Berlin/New York, 33–52.
- **Ahrweiler, P.** and R. Wolkenhauer (1998): SiSiFOS – Simulating Studies on the internal Formation and the Organization of Science. In: Ahrweiler, P. and N. Gilbert (eds.): *Computer Simulations in Science and Technology Studies*. Springer: Berlin/New York: 129–143.
- **Ahrweiler, P.** (1998): Theories in (Inter)Action - A complex dynamic System for Theory Evaluation in Science. In: Bar-Yam, Y. (ed.): *Unifying Themes in Complex Systems*. Perseus Books: Boston: 75–85.

- **Ahrweiler, P.** (1997): Negotiating a new Science: Artificial Intelligence. In: Etzkowitz, H. and L. Leydesdorff (eds.): Universities and the global Knowledge Economy. Pinter: London/Washington: 97–105.
- **Ahrweiler, P.** (1995): KI West und KI Ost: Die Institutionalisierung eines Hochtechnologie-Fachs in Deutschland. In: Rammert, W. (ed.): Soziologie und künstliche Intelligenz. Produkte und Probleme einer Hochtechnologie. Campus: Frankfurt/New York: 111–131.

Other publications

- Sabater, A. and **P. Ahrweiler** (2024): Empowering Societal Engagement in AI: Aligning Ethics, Sustainability, and Development within the Digital Economy. T20 Policy Brief of T20 Task Force on Inclusive Digital Transformation. G20 Summit Brazil 2024.
https://www.t20brasil.org/media/documentos/arquivos/TF05_ST_05_Empowering_Societal66cf6a3318459.pdf.
- **Ahrweiler, P.** and M. Neumann (2021): AI Governance for the People. In: AI Governance in 2020. A Year in Review. Shanghai Institute for the Science of Science (ed.). Shanghai, June 2021: 41-43.
- **Ahrweiler, P.** (2020): Interdisciplinary Approach to AI Governance Research. In: AI Governance in 2019. A Year in Review. Shanghai Institute for the Science of Science (ed.). Shanghai, June 2020: 25-27.
- **Ahrweiler, P.** (2016): Research can be more responsible with the right Partner. Euroscientist Jan 2016. <http://www.euroscientist.com/research-can-be-more-responsible-with-the-right-partner/>.
- **Ahrweiler, P.** (2014): Predicting Science Policy Outcome with agent-based Models. Euroscientist Mai 2014.
<http://www.euroscientist.com/predicting-science-policy-outcomes-with-agent-based-model/>.
- **Ahrweiler, P.**, Gilbert, N. und Pyka, A. (2012): Using network analysis to monitor and track effects resulting from changes in policy intervention and instruments. Final Report SMART 2010/0025, DG Information Society and Media, European Commission, Brussels, Belgium.
- **Ahrweiler, P.** (2002): Computergestütztes Konfliktmanagement in modernen Organisationen. Zeitschrift für Konfliktmanagement 5 (5): 209–212.
- **Ahrweiler, P.**, Pyka, A. and N. Gilbert (2001): Innovationsnetzwerke - Simulationsexperimente zur Politikberatung. I.T.S. Time: Technology, Innovation, Management & Engineering 2: 21–28.