

Moritz Müller - Curriculum Vitae (September 2025)

Born on 02 May 1978 in Stuttgart, Germany

Professional Address:

Bureau d'Economie Théorique et Appliquée (BETA)
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Research interests:

Innovation economics, knowledge economics, economics of science, networks.

Academic positions:

- 2012 - present: Maître de conférences en Management Stratégique de l'Innovation, Faculté des Sciences Economiques et de Gestion (FSEG), Université de Strasbourg, France. Researcher at Bureau d'Economie Théorique et Appliquée (BETA), CNRS UMR-7522.
- 2010 - 2012: Postdoctoral Researcher at the Chair of Systems Design, ETH Zurich, Switzerland

International affiliations:

- 10/2012 – present: Associated Research Fellow at the Chair in Economic Policy, Karlsruhe Institute of Technology (KIT), Germany
- 07/2012 - 09/2012: Senior Research Fellow at the Chair in Economic Policy, Karlsruhe Institute of Technology (KIT), Germany
- 05/2012 - 06/2012: Visiting Scholar at Gordon Institute of Business Science (GIBS), University of Pretoria, South Africa

Education:

- 2005 - 2010: PhD at Bureau d'Economie Théorique et Appliquée (BETA) and Faculté des Sciences Economiques et de Gestion, Université de Strasbourg, France. Supervisor: Robin Cowan. Title of dissertation: Formation of Industrial Research Networks.
- 1998 - 2005: Industrial Engineering at the Karlsruhe Institute of Technology (KIT), Germany. Diploma Thesis: Agent-based Modelling of Households in the Electricity Sector, at the Fraunhofer Systems and Innovation Research (ISI), Karlsruhe, Germany.

Faculty responsibilities:

- 09/2015 – 08/2020: Coordination of the French-German double-degree master for 'Management of International Innovation' in the 'Management des Projets et des Organisations' track at FSEG, co-funded by UFA 2011-2015, renewed till 2019.
- 09/2013 – 08/2015: Coordination of the first year of the Master specialisations 'Production, Logistique, Innovation' and 'Qualité' in the 'Management des Projets et des Organisations' track at FSEG.

Teaching experience:

- Statistics and Econometrics: SAS /R programming (Master 'Analyse et Politiques Economiques', 2013 to present), R (Urfist, 2014 to present), Network Economics (Master EMI, 2013 to present), Statistics for economics and Business (Bachelor IEM, 2014 to present), Econometrics on Networks (Doctoral school BETA-PISA, 2012 to 2014), Nonparametric econometrics (Master APE/SE, 2020 to present), Big data reinforcement learning (Master DS2E, 2020 to present).
- Management and Economics: Network economics (Master IPI, 2012), Strategic Management (Master course, 2012 to present), Socio-economic approaches to innovation (Master M2i, 2013 to present).

Peer-reviewed publications:

- Bianchini, S., Müller, M., Pelletier, P. (2025) Drivers and barriers of AI adoption and use in scientific research. *Technological Forecasting and Social Change* 220, /10.1016/j.techfore.2025.124303.

- Müller, M., Cowan, R., Barnard, H. (2023) The role of local colleagues in establishing international scientific collaboration: Social capital in emerging science systems. *Industrial and Corporate Change* 32(5):1077–1108, /10.1093/icc/dtad043
- Cowan, R., Müller, M., Kirman, A., Barnard, H. (2023) Overcoming a legacy of racial discrimination: competing policy goals in South African academia. *Socio-Economic Review*. /10.1093/ser/mwad043
- Bianchini, S., Müller, M., Pelletier, P. (2022) Artificial Intelligence in Science: An Emerging General Method of Invention. *Research Policy*, /10.1016/j.respol.2022.104604
- Bucci, A., Eraydin, L., Müller, M., 2019. Dilution effects, population growth and economic growth under human capital accumulation and endogenous technological change. *Journal of Macroeconomics*, 62, /10.1016/j.jmacro.2018.08.003.
- Müller, M., Cowan, R., Barnard, H., 2018. On the value of foreign PhDs in the developing world: Training versus selection effects in the case of South Africa. *Research Policy*, 47(5):886-900.
- Barnard, H., Cowan, R., and Müller, M., 2012. Global excellence at the expense of local diffusion, or a bridge between two worlds? Research in science and technology in the developing world. *Research Policy*, 41(4): 756-769.
- Bureth, A., Müller, M., Pénin, J., and Wolff, S., 2007. Brevet, innovation modulaire et collaboration. *Revue d'économie industrielle*, 120(4): 135-154.
- Müller, M., Sensfuss, F., and Wietschel, M., 2007. Simulation of current pricing-tendencies in the German electricity market for private consumption. *Energy Policy*, 35(8): 4283-4294.

Book chapters:

- Arman, R., Müller, M. 2017. Management of creativity in a large-scale research facility. In: Wagner, M., Valls-Pasola, J., and Burger-Helmchen, T. (Eds.), *The Global Management of Creativity*, 140-158. Routledge Taylor and Francis Group, London and New York.
- Barnard, H., Cowan, R., Müller, M. 2015. The role of global connectedness in the development of indigenous science in middle-income countries. In: Archibugi, D., Filippetti, A. (Eds.), *The Handbook of Global Science, Technology, and Innovation*, 382-406. John Wiley & sons, Ltd.

Working papers (not published in peer-reviewed journals):

- Bianchini, S., Mueller, M., Pelletier, P., and Wirtz, K. (2021) Global health science leverages established collaboration network to fight COVID-19. arXiv:2102.00298v1
- Müller, M., Cowan, R., Duysters, G., Jonard, N. 2009. Knowledge structures and complementarities in the pharmaceutical industry. *Working Paper BETA #2009-24*.

Ongoing research (mimeos):

- with Bianchini, S., Pelletier, P., Better science with LLMs? A study of French Phd theses.
- with Cowan, R., Science policy interaction in South Africa through the lens of SDG.
- with Barnard, H., Kakaire, T. How researchers in low-income country organisations experience structural inequality in global health research collaboration.
- with Ott, I. Scheu, F. Schmoch, U., Voelkle, J. The co-evolution of scientific and technological knowledge on geothermal energy.
- with Durmaz, C. Innovational complementarity in a network economy.
- with Moratal, N., Wolff, S. Scientific excellence, creativity and communities at large Research Infrastructures.

Research projects:

- 10.2018 – 06.2024: Social Transformation in South African Science and Innovation (STIS), PRC funded by ANR, coordinated by Robin Cowan (PI).
- 2021 to present: Followup on EvaRIO, informal cooperation.
- 01.2013 - 10.2014: *EvaRIO (Evaluation of Research Infrastructures in Open innovation and research systems)*, Coordination and Support Action project funded by the EC under the 7th Framework Programme, directed by Sandrine Wolff. Contribution to 'Focus 3: Research Infrastructures as catalysers of collaborations and networks'.
- 04/2010 - 04/2012: *R&D network life cycles*, at the Chair of Systems Design, D-MTEC, ETH Zurich, with Prof. F. Schweitzer and Msc. M. Tomasello. Financed by the Swiss National Science Foundation (SNF), to end in April 2012. Operational responsibility.
- 10/2008 - 03/2009: *COICOSA, Changement Organisationnel et Informatisation - évolution des Compétences et sélection des SALariés*, at BETA, University of Strasbourg, with Stéphane Robin. Financed by Agence Nationale de la Recherche (ANR). Exploratory analysis of a new data set.

- 11/2006 - 03/2007: *MIDeV, Modularité et Incitation dans le Développement de Vaccins géniques*, at BETA, University of Strasbourg. Project within the Programme "Science biomédicales, santé et société" of CNRS-MiRe. Social Network Analysis of the industrial network of firms in the vaccines industry.
- 10/2006 - 05/2007: *EU-Inno, Analyzing and Evaluating the Impact on Innovation of Publicly Funded Research Programmes*, at BETA, University of Strasbourg. Financed by DG Enterprise. Prepared a bibliography survey on alliances and networks, arranged interviews with industry and conducted them jointly with senior researchers.
- 12/2004 - 09/2005: *PowerACE, Development of a Multiagent System for the Simulation of the German Electricity Sector*, at the Fraunhofer Institute for Systems and Innovation Research ISI, Karlsruhe, Germany. Financed by VolkswagenStiftung. Conceptualised and implemented the Household Module in Java.

Conferences and presentations:

- 02.07.2025: Presentation of the final report on socio-economic impact of the synchrotron SOLEIL
- 16.06.2025: Invited speaker at the Ph.D. Summer School on the Economics of the Green and Digital Transitions: Innovation Policies for a Global Europe, UNU-MERIT, Maastricht, Netherlands. Presentation: Science policy interaction in South Africa through the lens of SDG.
- 20.03.2025: Invited speaker at plenary discussion at the Technodays 2025 of Technopolis Group, France.
- 27.03.-28.03.2023: Workshop BETA-SOLEIL sur l'évaluation des impacts socio-économiques des infrastructures de recherche, University of Strasbourg, Strasbourg, France. Presentation: Science at SOLEIL: Impact on scientific development and social organization.
- 17.11.2022: SciSTIP research workshop at CREST, University of Stellenbosch, South Africa. Presentation: Transition from PhD to Jobs in South Africa, by my co-author Robin Cowan.
- 04.06.2022: GeoInno 2022, Bocconi University, Milano, Italy: Presentation: Global health science leverages established collaboration network to fight COVID-19, joint work with Stefano Bianchini, Pierre Pelletier, Kevin Wirtz.
- 05.05.-06.05.2022: REvaluation 22, European R&I Policy Evaluation Conference, Vienna, Austria. Presentation: SOLEIL'S socio-economic impact study. Measuring learning effects at the micro- and meso-analytical levels, joint work with Sandrine Wolff and Laurent Bach.
- 03.11.-04.11.2022: 9th ZEW/MaCCI Conference on the Economics of Innovation and Patenting. Presentation: The co-evolution of scientific and technological knowledge on geothermal energy, by my co-author Ingrid Ott.
- 28.04.2022: The wealth of nations in the post-covid era conference (virtual). Presentation: Global health science leverages established collaboration network to fight COVID-19, joint work with Stefano Bianchini, Pierre Pelletier, Kevin Wirtz.
- 08.04.2022: WOEPSR, University of Leuven, Belgium. Presentation: Peer effects among locals in establishing international scientific collaboration The case of the South African science system, joint work with Robin Cowan and Helena Barnard.
- 02.02.2022: Internal seminar, CSI. Presentation: Strategic complementarity in innovation among non-competing firms, joint work with Cemil Durmaz.
- 25.10.-26.10.2019: Workshop APEX – Academic Pipeline Development for Excellence STIS Workshop at University of Stellenbosch. Presentation: The diffusion of international co-authors in the South African science system, joint work with Robin Cowan and Helena Barnard.
- 03.06.-05.06.2019: European Meeting on Applied Evolutionary Economics 2019 (EMAE), at SPRU – Science Policy Research Unit, University of Sussex Business School, Brighton, UK. Presentation: Economic growth, innovation and the size of the market: On AI network effects in competition and growth, joint work with Levent Eraydin.
- 27.04.-28.04.2018: The 12th Workshop on The Organisation, Economics and Policy of Scientific Research, at the University of Bath School of Management, Bath, UK. Presentation: The diffusion of international co-authors in the South African science system, joint work with Helena Barnard and Robin Cowan.
- 31.01.-02.02.2018: GeoINNO 2018, at Faculty of Economics and Business, University of Barcelona, Spain. Presentation: The diffusion of international co-authors in the South African science system, joint work with Helena Barnard and Robin Cowan.
- 16.-17.10.2017: *BETA Workshop: Economics of Science and Innovation*, at Faculty of Economics and Management, University of Strasbourg, organized by BETA (Bureau d'Economie Théorique et Appliquée). Presentation: The diffusion of international co-authors in the South African science system, joint work with Helena Barnard and Robin Cowan.
- 11.-14.09.2017: *Finance and Economic Growth in the Aftermath of the Crisis*, at Department of Economics, Management and Quantitative Methods (DEMM) University of Milan, Italy. Presentation: Dilution effects,

- population growth and economic growth under human capital accumulation and endogenous technological change, joint work with Levent Eraydin and Alberto Bucci.
- 18.-19.05.2017: *11th Workshop on The Organisation, Economics and Policy of Scientific Research*, at Department of Economics and Statistics S. Cognetti de Martiis, Collegio Carlo Alberto, Torino, organized by LEI and BRICK. Presentation: On the value of foreign PhDs in the developing world: Training vs. selection effects in the case of South, joint work with Helena Barnard and Robin Cowan.
 - 21.03.2017: *5th KIT-BETA research workshop on Knowledge, sustainability and productivity*, at KIT Karlsruhe, Germany. Presentation: Dilution effects, population growth and economic growth under human capital accumulation and endogenous technological change, joint work with Levent Eraydin and Alberto Bucci.
 - 08.04.2016: *Workshop on Academic Science in South Africa*, Stellenbosch, April 7-8, South Africa. Presentation: On the social value of a foreign PhD: Spillovers in knowledge and networks, joint work with Helena Barnard and Robin Cowan.
 - 19.02.2016: *Workshop on Global Management of Creativity in the Digital Age*, Augsburg, February 18-19, Germany. Presentation: Creativity management in giant research infrastructures: Local interactions and global co-opetition, joint work with Arman Avadikyan
 - 27.06.2015: *Sunbelt XXXV, International Sunbelt Social Network Conference*, at Brighton, UK (June 23 – 28). Presentation: Network Additionality of Large Research Infrastructures, joint work with Caroline Hussler and Sandrine Wolff.
 - 25.09.2015: *Globelics*, La Havana, Cuba. Presentation: On the training and selection effects of foreign and local universities for students from the developing world, joint work with Helena Barnard and Robin Cowan.
 - 26.06.2014: *IWcee14 - International Workshop on Computational Economics and Econometrics, The Socio-Economics of Networks: Theory and Applications*, at CNR, Rome. Presentation: The role of foreign-trained PhDs in academic upgrading in the developing world, joint work with Helena Barnard and Robin Cowan.
 - 15.04.2014: *AC21 international forum 2014* at Stellenbosch University, South Africa. Presentation: The role of foreign-trained PhDs in academic upgrading in the developing world, joint work with Helena Barnard and Robin Cowan.
 - 16.10.2013: *EvaRIO Final Conference* Strasbourg, 16.10.2013, France. Presentation: EvaRIO focus study: RIs as catalysers of collaborations and networks, joint work with Caroline Hussler, Marie-Anne Mawhin, Nuria Moratal-Ferrando, Sandrine Wolff.
 - 01.10.2013: *EvaRIO Workshop*, Synchrotron Soleil, France. Presentation: EvaRIO focus study: RIs as catalysers of collaborations and networks, joint work with Caroline Hussler, Marie-Anne Mawhin, Nuria Moratal-Ferrando, Sandrine Wolff.
 - 21.03.2013: *Workshop on German-French Knowledge networks* during the French-German week, at KIT, Germany. Presentation: Scientific collaboration in Europe.
 - 22.11.2012: *6th MEIDE (Micro Evidence on Innovation and Development) conference*, Cape Town, South Africa. Presentation: The Role of Foreign-trained PhDs in Academic Upgrading in the Developing World, joint work with Helena Barnard and Robin Cowan.
 - 10.10.2010: *ECOST-WORKSHOP Modelling knowledge dynamics*, at The Virtual Knowledge Studio for the Humanities and Social Sciences, Amsterdam, Netherlands. Presentation: Scientific collaboration in South Africa, joint work with Helena Barnard and Robin Cowan.
 - 07-08.09.2009: *FIRB-RISC CONFERENCE Research and entrepreneurship in the knowledge-based economy*, at KITeS-Cespri, Bocconi University Milan, Italy. Presentation: Knowledge Structures, joint work with Robin Cowan, Geert Duysters and Nicolas Jonard.
 - 13-24.07.2009: *TENTH TRENTO SUMMER SCHOOL*, Intensive course in Networks and Innovation, CEEL program in Adaptive Economic Dynamics, Italy. Presentation: Knowledge Structures, joint work with Robin Cowan, Geert Duysters and Nicolas Jonard.
 - 22-28.09.2008: *Internal workshop of BETA* in Cargese, France. Presentation: Knowledge Structures, joint work with Robin Cowan, Geert Duysters and Nicolas Jonard.

Reviewing activities: Research Policy, Scientometrics, Structural Change and Economic Dynamics, Technological Forecasting and Social Change, Industry and Innovation, Studies in Higher Education.