

CV Reimund P. Rötter

Personal Data

Title	Prof. Dr.
First name	Reimund Paul
Name	Rötter
Current position	W3 Professor of Tropical Plant Production and Agricultural Systems Modelling
Current institution/site, country	University of Göttingen, Faculty of Agricultural Sciences, Department of Crop Sciences, Tropical Plant Production and Agricultural Systems Modelling, Göttingen, Germany
Identifiers/ORCID	0000-0002-3804-9964

Qualifications and Career

Stages	Periods and Details	
Degree programme	1990–1992	Centre of Agrobiology (CABO) and Theoretical Production Ecology (TPE), Wageningen University and Research (WUR), Wageningen, The Netherlands
	1986–1989	Geosciences (Diploma), University of Trier, Trier, Germany
	1982–1985	Physical Geography/Geosciences (Pre-Diploma), University of Trier, Trier, Germany
Doctorate	1990–1993	Dr. rer. nat., Supervisors: Prof. Dr. R. Jaetzold, subject: Geosciences, University of Trier, Trier, Germany & Prof. Dr. H. Van Keulen, Wageningen University, The Netherlands
Stages of academic/professional career	Since 2016	Professor of Tropical Plant Production and Agricultural Systems Modelling, University of Göttingen, Germany
	Since 2008	Lecturer, Agro-Ecology, University of Helsinki, Finland
	2019–2022	Dean of research, Faculty of Agricultural Sciences, University of Göttingen, Germany
	2009–2016	Professor, Production Ecology and Agrosystems Modelling, Natural Resources Institute Finland (Luke), Helsinki, Finland
	2007–2008	Principal scientist, Agro-Ecology, Plant Production Research, MTT Agrifood Research Finland, Mikkeli, Finland
	2001–2007	Research theme coordinator, Sustainable Agriculture & Rural Development; North-South Programme, Wageningen University & Research (WUR), The Netherlands
	1996–2000	Internationally recruited staff, system network coordinator, land-use optimization; International Rice Research Institute (IRRI), Laguna, Philippines
	1993–1996	Researcher and lead author of the Intergovernmental Panel on Climate Change (IPCC) report 1995, Working Group II., Winand Staring Centre (STIBOKA) and Agrosystems Analysis Group (CABO), Wageningen, The Netherlands

Supplementary Career Information

I have 2 children (born in 06/1999 and 08/1991).

Engagement in the Research System

Since 2019	UGOE speaker, International Master, Soils and Global Change (IMSOGLO)
Since 2018	Review board member "Agricultural Systems of the Future" of Federal Ministry of Education and Research (BMBF)
2017–2019	Speaker Sustainable International Agriculture (SIA) International Master Programme

The total sum of grants acquired during last 5 years (BMBF funded projects SALLnet (€1.23M), BARISTA (€490K) and DFG funded BRACE (€85K)) amounted to €1.8M; since 2019, I am Senior Editor of the journal Food Security; I have been (Associate) editor/reviewer for >20 international journals, including Nature, PNAS, Nature Climate Change, and (co-)editor of seven peer-reviewed books.

Supervision of Researchers in Early Career Phases

During period 1999 to 2022 I have supervised >20 doctoral and 11 postdoctoral researchers – among the latter, two became research directors (in India and Vietnam, respectively), two founded start-ups (in Germany), one became professor (at Beijing University, China) and six are further pursuing their academic career.

Scientific Results

Category A

1. Senapati N, Semenov MA, et int., Webber H (2022) Global wheat production could benefit from closing the genetic yield gap. Nat Food 3:532–541. doi: [10.1038/s43016-022-00540-9](https://doi.org/10.1038/s43016-022-00540-9) (with **Rötter RP**)
I created the idea of a "genetic yield gap" and this paper is pioneering in using and operationalizing this term in simulating potential global production gains for the wheat crop.
- Rötter RP**, Scheiter S, et int., Erasmus B (2021) Modeling the multi-functionality of African savanna landscapes under global change. Land Degrad Dev 32:2077–2081. doi: [10.1002/ldr.3925](https://doi.org/10.1002/ldr.3925)
Illustrates my capability to lead an international group of experts towards a common methodology for modelling the multi-functionality of landscapes.
- Rötter RP**, Appiah M, et int., Hoffmann M (2018) Linking modelling and experimentation to better capture crop impacts of agroclimatic extremes—A review. Field Crops Res. 221:142–156. doi: [10.1016/j.fcr.2018.02.023](https://doi.org/10.1016/j.fcr.2018.02.023)
My role was conceptualising and drafting this paper, which marks the start of my research and that of my group on crop impacts of climate extremes.
- Rötter RP**, Hoffmann MP, Koch M, Müller C (2018) Progress in modelling agricultural impacts of and adaptations to climate change. Curr Opin Plant Biol 45:255–261. doi: [10.1016/j.pbi.2018.05.009](https://doi.org/10.1016/j.pbi.2018.05.009)
This invited paper demonstrates that I am considered as one of the leading expert in the field of crop modelling in climate impact research – it is based on my keynote at the international conference IMPACTSWORLD 2017 at Potsdam, Germany.

- Asseng S, Ewert F, et int., Zhu Y (2015) Rising temperatures reduce global wheat production. *Nat Clim Chang* 5:143–147. doi: [10.1038/nclimate2470](https://doi.org/10.1038/nclimate2470) (with **Rötter RP**) *My role was to conceptualise the combination of rigorous model evaluation with suitable field experiments and apply a model ensemble for upscaling simulation results; >1000 citations.*
- Rötter RP**, Tao F, Höhn JG, Palosuo T (2015) Use of crop simulation modelling to aid ideotype design of future cereal cultivars. *J Exp Bot* 66:3463–3476. doi: [10.1093/jxb/erv098](https://doi.org/10.1093/jxb/erv098) [Open Access] *Marks the start of pioneering research on model-aided crop ideotyping - has since become a frequently cited reference for this increasingly important research field.*
- Trnka M, **Rötter RP**, et int., Semenov MA (2014) Adverse weather conditions for European wheat production will become more frequent with climate change. *Nature Clim Change* 4:637–643. doi: [10.1038/nclimate2242](https://doi.org/10.1038/nclimate2242) *Co-leading role (conceptualising and writing up) it marks the start of my research on agroclimatic indicators; > 350 citations.*
- Rötter RP**, Palosuo T, et int., Trnka M (2012) Simulation of spring barley yield in different climatic zones of Northern and Central Europe: A comparison of nine crop models. *Field Crops Res.* 133:23–36. doi: [10.1016/j.fcr.2012.03.016](https://doi.org/10.1016/j.fcr.2012.03.016) *Initiating role in this paper that has become a key reference for barley crop modelling*
- Palosuo T, Kersebaum KC, et int., **Rötter R** (2011) Simulation of winter wheat yield and its variability in different climates of Europe: A comparison of eight crop growth models. *Eur J Agron* 35:103–114. doi: [10.1016/j.eja.2011.05.001](https://doi.org/10.1016/j.eja.2011.05.001) *Lead by my postdoctoral researcher T. Palosuo (LUKE /Finland); paper shows my experience in postdoctoral supervision and seniority in a larger team of co-authors. It is pioneering in using crop model ensembles in climate impact research.*
- Rötter RP**, Carter TR, Olesen JE, Porter JR (2011) Crop–climate models need an overhaul. *Nature Clim Change* 1:175–177. doi: [10.1038/nclimate1152](https://doi.org/10.1038/nclimate1152) *Marks the start of my research on crop model improvement - has since become a classic reference paper for the crop modelling community and frame for better capturing extremes in crop modelling.*

Category B

1. **Rötter, RP**, Köster, M (2022). Klimawandel und Ernährungssicherheit: Inwieweit könnte eine angepasste Landwirtschaft in der Europäischen Union zur globalen Ernährungssicherheit beitragen? In: Ifo-Institut für Wirtschaftsforschung (Hrsg.), Ifo-Schnelldienst-Ifo-Institut für Wirtschaftsforschung. *München. Jahrgang 75, 08.2022, S. 10-14.* www.ifo.de/publikationen/2022/zeitschrift-einzelheft/ifo-schnelldienst-082022-anpassung-klimawandel [Open Access] *Invited contribution/on request of IFO-Institute to bring the topic climate change and global food security under given Russian-Ukrainian conflict to a wider audience.*
- Climate scenario database for Europe as documented in: Fronzek S, Ruane A, **Rötter RP**, Webber H (2021). A daily time-step observed and scenario climate dataset on a European grid for crop modelling applications (version3). Leibnitz Centre for Agricultural Landscape Research (ZALF). doi: [10.4228/zalf.vjcp-vep3](https://doi.org/10.4228/zalf.vjcp-vep3) [Open Access] *Contribution providing high resolution (25 x 25 km) climate /climate change scenario data sets for agricultural impact modelling for Europe – free downloads.*

Rötter RP, Koch M (2019) Der Klimawandel als Herausforderung für Ugandas wichtigsten Exportwirtschaftszweig In: Jahreis M, Marquart S, Möllers N (eds) Kosmos Kaffee. Verlag Deutsches Museum, München, Germany. ISBN: 978-3940396839.
www.deutsches-museum.de/museum/verlag/publikation/kosmos-kaffee
Invited contribution to catalogue of special exhibition "Kosmos Kaffee" - an exhibition (Wanderausstellung) on coffee and its cultivation for a global audience.

Academic Distinctions

2018	Clarivate Highly Cited Researcher
2013	Agricultural scientist of the Year, MTT Agrifood, Finland
2007	Nobel Peace Prize awarded on Dec 10, 2007 (Recipient: RP Rötter, member of IPCC, lead author and reviewer since 1995), Al Gore and the IPCC were joint winners of the prize in 2007
1991	Scholarship for PhD guest research, at CABO, Wageningen University & Research/Netherlands; Germany Academic Exchange Service (DAAD)
1990	PhD scholarship award from the state of Rhineland-Palatinate (Gifted&Talented Education, 'Begabtenförderung')

Other Information

Not applicable

Data protection and consent to the processing of optional data

If you provide voluntary information (marked as optional) in this CV, your consent is required. Please confirm your consent by checking the box below.

I expressly consent to the processing of the voluntary (optional) information, including "special categories of personal data"¹ in connection with the DFG's review and decision-making process regarding my proposal. This also includes forwarding my data to the external reviewers, committee members and, where applicable, foreign partner organisations who are involved in the decision-making process. To the extent that these recipients are located in a third country (outside the European Economic Area), I additionally consent to them being granted access to my data for the above-mentioned purposes, even though a level of data protection comparable to EU law may not be guaranteed. For this reason, compliance with the data protection principles of EU law is not guaranteed in such cases. In this respect, there may be a violation of my fundamental rights and freedoms and resulting damages. This may make it more difficult for me to assert my rights under the General Data Protection Regulation (e.g. information, rectification, erasure, compensation) and, if necessary, to enforce these rights with the help of authorities or in court.

I may **revoke** my consent in whole or in part at any time – with effect for the future, freely and without giving reasons – vis-à-vis the DFG (postmaster@dfg.de). The lawfulness of the processing carried out up to that point remains unaffected. Insofar as I transmit "special categories of personal data" relating to third parties, I confirm that the necessary legitimation under data protection law exists (e.g. based on consent). I have taken note of the DFG's Data Protection Notice relating to research funding, which I can access at www.dfg.de/privacy_policy and I will forward it to such persons whose data the DFG processes as a result of being mentioned in this CV.

¹ Special categories of personal data are those "revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and (...) genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person's sex life or sexual orientation" (Article 9(1) GDPR).

