

Prof. Dr. Julia Pongratz



PRESENT POSITIONS

- ◇ **Full professor for Physical Geography and Land Use Systems** at the Ludwig-Maximilians-University Munich since 2018/04
- ◇ **Director of the Department of Geography** at the LMU Munich since 2020/10
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WORK EXPERIENCE

- ◇ **Professor (W3), LMU Munich, Germany** since 2018/04
Head of the chair for Physical Geography and Land Use Systems, comprising a research group, didactics of geography, and a biochemical soil-vegetation lab. Research foci lie on human-climate-vegetation feedbacks in past and future, drivers of anthropogenic emissions, and advanced Earth system modeling.
- ◇ **Lead of the group “Land Use in the Earth system”, at the Max Planck Institute for Meteorology, Hamburg, Germany** (jointly with LMU Munich) 2020-2021
- ◇ **Lead of the Emmy Noether independent junior research group “Forest management in the Earth system”,** funded by the German Research Foundation, at the Max Planck Institute for Meteorology, Hamburg, Germany 2013-2020
Lead of an independent research group assessing effects of land use change on the Earth system. Key foci lie on developing a forest management module in an Earth system model to evaluate land use choices in a mitigation-adaptation framework and on a comprehensive assessment of potentials and side-effects of land-based climate engineering.
- ◇ **Fellow, Max Planck Institute for Meteorology, Hamburg, Germany** 2012–2013
Independent research as Klaus Hasselmann fellow: Multi-model analysis of global land use emissions and the carbon budget.
- ◇ **Postdoc, Carnegie Institution, Dep. Global Ecology, Stanford, USA** 2009–2012
Climate modeling (MPI-ESM, CAM3.5, HadCM3L) with focus on land surface processes and on geoengineering; assessment of food security using empirical crop models; evaluation of the mitigation potential of reforestation.
- ◇ **Ph.D. research, Max Planck Institute for Meteorology, Hamburg, Germany** 2006–2009
Reconstruction of historical land cover including uncertainty estimate; design and implementation of simulations with comprehensive climate models, model development (ECHAM5/JSBACH), and data analysis.
Ph.D. thesis *A model estimate on the effect of anthropogenic land cover change on the climate of the last millennium*

- ◇ **Scientific assistant, German Aerospace Center, Institute for Atmospheric Physics**, Oberpfaffenhofen, Germany 2005–2006
Design and implementation of cloud detection algorithms for MSG data; radiative transfer simulations.
- ◇ **Student employment, University of Maryland**, College Park, MD, USA in collaboration with **NASA Goddard Space Flight Center**, Greenbelt, MD, USA 2003–2004
Within the LBA-Project: Design, implementation, and evaluation of model simulations (SiB2); derivation of vegetation parameters from remote sensing. Work resulted in Diploma thesis *Estimating the impact of land cover change on energy and water balance in Mato Grosso, Brazil*
- ◇ **Student assistant, Ludwig-Maximilians-University Munich**, Munich, Germany 2001–2003
Within the GLOWA project: Maintenance of eddy covariance measurement stations; field measurements; processing and analysis of remote sensing data.

- EDUCATION
- ◇ **Ph.D. (Dr. rer. nat.)** in Geosciences (with distinction), Max Planck Institute for Meteorology/University of Hamburg, Germany 2006/04–2009/04
 - ◇ **Diploma** in Physical Geography (minors Physics and Remote Sensing), Ludwig-Maximilians-University Munich, Germany 2000/10–2005/07
 - ◇ **Study-abroad year** at University of Maryland, College Park, MD, USA 2003/08–2004/08

PROFESSIONAL
ACTIVITIES

- ◇ **Editor:**
 - Guest editor for Environmental Research Letters of the Focus Issue on Carbon Dioxide Removal (CDR) since 2023
 - Member of the Board of Reviewing Editors of *Science* since 2019
 - Editor for *Biogeosciences* for the Special Issue on the 10. International Carbon Dioxide Conference (ICDC10) 2017–2018
 - Assistant editor for *Climatic Change* 2010–2014
 - Guest editor for *Biogeosciences* for the Special Issue on Integrated Land Ecosystem-Atmosphere Processes Study, iLEAPS 2011–2016
- ◇ **Conference convener:**
 - Co-organizer of Future Earth’s AIMES workshop on Nature-based Solutions 2023/11
 - Co-organizer of webinar “Incorporating human activities more comprehensively into land models”, International Land Modeling Forum Interactive Webinars 2023/10
 - Co-convener of session “Land Use and Land Cover Change”, World Climate Research Program (WCRP) Open Science Conference, Kigali, Rwanda 2023/10
 - Organizer of the “Carbon Dioxide Removal Dialog” at Deutsches Museum, Munich, Germany (consisting of Stakeholder Dialogue, Education Conference, Science Workshop of CDRterra, public events) 2023/10
 - Co-organizer of the round-table discussion “Peatlands” by the Bavarian Academy of Sciences, Ecology Forum, Munich, Germany 2023/04
 - UN Climate Conference (COP27), Sharm-el-Sheik, Egypt: Organization of the presentation of CDRterra at the German Pavilion; panelist at Coalition of Rainforest Nations, at UN side-event “2022 GCP Carbon Budget,

- Scaling Solutions, and the Role of Agriculture”, and at IPCC event at the “Science for Climate Action” Pavilion on “Estimating greenhouse gas emissions” 2022/11
- (Co-)Organization of workshops and panels as co-spokesperson of the focus area “Climate Futures: Dialogues across the Science-Society-Policy Interface” of the Center for Advanced Studies of the LMU 2022/10-2024/09
 - Co-organization of “Land surface modelling summit”, Oxford, U.K. 2022/09
 - UN Climate Conference (COP26), Glasgow, U.K./online: panelist at UN-IPCC pavilion and at MetOffice Science Pavilion “2021 Global Carbon Budget: the latest update on current trends in CO₂ emissions and carbon sinks” 2021/11
 - Co-organization of Munich Science Communication Lab’s “Communicating Planetary Health: A Transdisciplinary Research Symposium” (online) 2021/07
 - Co-organization of Aspen Global Change Institute virtual workshop “Linking Human and Earth System Models for Global Change Analysis” 2021/07
 - Organization of virtual session “Synergies and trade-offs for the multiple usages of land on our way to climate neutrality” at German Sustainability Science Summit 2021 2021/07
 - Co-organization of the webinar “Boreal Forests and Climate Change” by Future Earth and the Royal Swedish Academy of Sciences 2021/05
 - Co-convener of session “Land use and land cover change effects on surface biogeophysics, biogeochemistry and climate” at the European Geosciences Union General Assemblies, Vienna, Austria 2018/2019/2020/2021/2022/2023
 - Co-organization of Future Earth’s AIMES Workshop on “Degradation of Tropical Forests: observations, modeling and socio-environmental implications”, Manaus, Brazil 2019/11
 - Co-convener of session “Assessing, modelling, and analysing land use and land management impacts on the Earth system” at the Global Land Programme 4th Open Science Meeting 2019, Bern, Switzerland 2019/04
 - Co-organization of workshop “Detection and Attribution of Climate Engineering”, Blankenese, Germany 2018/12
 - Co-organization of session “Interactions of Global Forest Resources and Climate” at the IUFRO (International Union of Forest Research Organizations) 125th Anniversary Congress, Freiburg 2017/09
 - Scientific steering committee “10. International Carbon Dioxide Conference”, Interlaken, Switzerland 2017/08
 - Co-organization of session “Earth system modelling and social macrodynamics” at the 2nd German Future Earth Summit, Berlin 2016/01
 - Co-organization of ISSI workshop: “Integrating Earth Observation data and the description of land management practices into global carbon cycle models (Part 1 and 2)”, Bern 2014/03 and 2015/03
 - Scientific steering committee “Climate, land-use and conflict in Northern Africa” workshop of the Excellence Cluster CliSAP and the MPI for Meteorology at KlimaCampus Hamburg, Lübeck 2014/09
 - Co-organization of CMIP6 land-use workshop, Hamburg 2014/07

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- Session chair “Land-based geoengineering” at the iLEAPS Science Conference on “Terrestrial ecosystems, atmosphere, and people in the Earth System”, Nanjing, China 2014/05
 - Member of the scientific committee and session chair “Land cover and land use change” at the joint GV2M / TERRABITES conference, Avignon 2014/02
 - Co-organization of COST workshop “Land use datasets: status and requirements for Earth System Models”, Vienna 2013/04
 - Co-organization of COST workshop “Large-Scale Modeling of Forest Disturbance and Age Dynamics”, San Vito di Cadore 2013/09
 - Co-organization of COST workshop “Land use datasets: status and requirements for ESMS”, Potsdam 2013/04
 - Co-organization of COST workshop “Historical Trends in land biogeochemistry: Land use change emissions estimates, data, and modelling”, Exeter 2012/10
 - Chair of the key event “Which land-use/land-cover changes induce important feedbacks and effects in the climate system?” at the Planet under Pressure conference, London 2012/03
 - Session chair “Land use change and climate interactions” at the iLEAPS conference, Garmisch 2011/09
- ◇ **Advisory boards and committees:**
- Member of the Supervisory Board of the Helmholtz-Centre for Environmental Research (UFZ Leipzig) since 2023
 - Member of the UK Research and Innovation “Greenhouse Gas Removal” Review Panel since 2023
 - Advisor in the Carbon Expert Panel to Schmidt Futures for designing new flagship program 2022-2023
 - Member of the Working Group “Consistent technology risk profiles for transitioning to sustainable low carbon emission scenarios (RiskTransS-cens)” of the German Committee Future Earth (Deutsches Komitee für Nachhaltigkeit) 2022-2024
 - Member of the Steering Committee of the International Land Modeling Forum since 2022
 - Member of the “Programmausschuss Erdbeobachtung” (program on Earth observations) of the German Aerospace Center (DLR) since 2021
 - Member of the Board of the “Zentrum für Ethik und Philosophie in der Praxis (ZEPP)” of LMU Munich since 2021
 - Spokesperson of CDRterra, the funding measure by the German Ministry of Education and Research on Carbon Dioxide Removal since 2021
 - Member of the Board of Deutsche Energie-Agentur’s (dena) “Leitstudie Aufbruch Klimaneutralität” since 2020
 - Spokesperson of the Working Group “Modelling Human-Environmental Interactions in the Anthropocene (HERMITIAN)” of the German Committee Future Earth (Deutsches Komitee für Nachhaltigkeit) 2020-2022
 - Member of the Graduate Board of the Rachel Carson Center for Environment and Society since 2020

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- Member of the steering committee of the German Alliance for Global Health Research 2020-2022
- Member of the scientific steering committee for Future Earth's AIMEs project (Analysis, Integration and Modelling of the Earth System) since 2018, co-chair of working group "Modeling Earth Systems and Human interactions" since 2019
- Member of the scientific steering committee for Future Earth's Global Carbon Project since 2018, member of annual global carbon budget core team since 2017
- Member of the scientific steering group for two CMIP6 and CMIP7 projects (Coupled Model Intercomparison Project endorsed by IPCC): Land use model intercomparison project (LUMIP) and Coupled climate-carbon cycle model intercomparison project (C4MIP) since 2015
- Member of the executive board of the German Research Foundation's Priority Program "Climate Engineering" 2016-2020
- Member of the scientific advisory group for the EU FP7 program LUC4C 2013-2017
- Member of the editorial advisory board for founding *Anthropocene Review* 2013-2014
- Committee member for the selection seminars of the German National Academic Foundation repeatedly

◇ **Mentoring of junior/female researchers:**

- At University of Oldenburg: "Progressio" mentoring program for female junior researchers since 2021
- At Christian-Albrechts-Universitaet Kiel: "via:mento ocean" Mentoring Programme for Female (Post)doctoral Researchers 2018-2019

PUBLICATIONS ◇ **More than 130 peer-reviewed articles**, including in Nature, Science, and PNAS, which received more than 17,000 citations (web of science). Contributing author to the IPCC's Assessment Reports 5 and 6, contributing author to UNEP Emissions Gap Report (since 2022), lead author State of CDR Report (since 2023)

- See attached full list of publications.

MEDIA
COVERAGE ◇ **Regular presence in media** including coverage by the top national TV and print outlets (e.g., Tagesschau, FAZ, SZ, Deutschlandfunk, BR, Handelsblatt), two documentaries on arte (on Geoengineering and on CO2 removal), coverage also by international press (Washington Post, New York Times, ...)

TEACHING ◇ **Training:** University didactic and rhetoric (Center for Science and Research Management Speyer) (2015), Presentation, voice, and media coachings (part of the FastTrack Program) (2012, 2013, 2014), Media training (by Jessica Wahl) (2013)

◇ **Outreach to Schools:** Voluntary teaching of "Fridays for Future – the physical science basis" at the Geographical Society of Munich (repeated upon popular request) and various high schools in Munich

◇ **University of Munich:** Courses in Geography: Bachelor's Program, Master's Program in Environmental Systems and Sustainability – Monitoring, Modeling, and Management, and teacher training; occasional contributions to other departments' and TUM's courses

- ◇ **University of Hamburg:** Courses in the Master's Program in Integrated Climate System Sciences (SICCS)
 - ◇ **Summer schools:** Lecturer at the Munich Climate School 2021 and 2023, at the International Max Planck Research School on Earth System Modeling 2017, at the Max Planck Institute for Meteorology's Earth System Modelling Schools (EaSyMS) 2015 and 2016, and at the Swiss Climate Summer Schools 2014 and 2019.
- SUPERVISION OF EARLY-CAREER SCIENTISTS
- ◇ I am/have been first supervisor for **9 Ph.D. students** at the University of Hamburg and the University of Munich.
 - ◇ I (have) supervise(d) **15 Postdocs** (5 of the 6 alumni have become permanent researchers, permanent science managers, or professors).
- THIRD-PARTY FUNDING AS PI
- ◇ **“Climate Tipping Points: Uncertainty-aware quantification of Earth system tipping potential from observations and models and assessment of associated climatic, ecological, and socioeconomic impacts” (ClimTip)** funded by the Horizon Europe program 2024-2028 2024-2028
 - ◇ **“Navigating European Forests and forest bioeconomy sustainably to EU climate neutrality” (ForestNavigator)** funded by the European Commission's Horizon Europe program 2022-2026
 - ◇ **“Response of the Earth System to overshoot, Climate neUtrality and negative Emissions” (RESCUE)** funded by the European Commission's Horizon Europe program 2022-2026
 - ◇ **“Addressing the new role of terrestrial CO₂ fluxes for climate mitigation”** funded by the Stifterverband 2020-2022
 - ◇ **Carbon Dioxide Removal Synthesis and Transfer Project (CDRSynTra) (coordination)** funded by the German Ministry of Education and Research 2021-2024
 - ◇ **“Scrutinizing the feasibility of terrestrial CDR potentials under socio-ecological constraints” (STEPSEC) (coordination)** funded by the German Ministry of Education and Research 2021-2024
 - ◇ **“High-resolution monitoring of avoided carbon emissions and carbon restoration potentials from land use change”** funded by the Stifterverband 2020-2022
 - ◇ **Earth system models for the future (ESM2025)** funded by the European Commission's Horizon2020 program 2021-2025
 - ◇ **VERIFY (Verifying Greenhouse Gas Emissions)** funded by the European Commission's Horizon2020 program since 2019
 - ◇ **LAMACLIMA (LAnd Management for CLimate Mitigation and Adaptation)** funded by the Joint Programming Initiative “Connecting Climate Knowledge for Europe” since 2019
 - ◇ **Emmy Noether independent junior research group** funded by the German Research Foundation (DFG) 2013-2020
 - ◇ **CE-LAND & CE-LAND+(Climate engineering on land: potentials and side-effects of afforestation and biomass plantations as instruments for Carbon Extraction)** funded as part of the DFG's Priority Program “Climate Engineering” 2013-2016 and 2016-2019

- ◇ **ComparCE & ComparCE2 (Comparative assessment of potential impacts, side-effects and uncertainties of CE measures and emission-reduction efforts)** funded as part of the DFG's Priority Program "Climate Engineering" 2013–2016 and 2016–2019
- ◇ **ISSI (International Space Science Institute, Bern) International Team** "Integrating Earth Observation data into the description of land management practices into global carbon cycle models" 2013–2015
- INVITED PRE-SENTATIONS,
INVITED
WORKSHOP
CONTRIBUTIONS
- ◇ **National Academy of Science and Engineering.** Talk and discussion on Carbon Management, Munich 2023/11/08
- ◇ **Panelist at the Bavarian Academy of Sciences.** "Unser Klima. Alarmierende Signale aus dem All und den Tiefen des Meeres", Munich 2023/10/18
- ◇ **Deutsches Museum, "Wissenschaft für jedermann".** Talk (one of three speakers) "Was Sie schon immer über CO₂-Entnahme aus der Atmosphäre wissen wollten", Munich 2023/10/11
- ◇ **European Joint Programming Initiative (JPI) Climate Workshop** "The Role of R&D and Policy for advancing Carbon Dioxide Removal (CDR) in the EU", Brussels 2023/09/05
- ◇ **Lecture series of the Franconian Geographical Society.** Talk "Landnutzung – von unbeabsichtigten Klimawirkungen zum Einsatz als Klimaschutzmaßnahme", Erlangen 2023/06/26
- ◇ **Akademie der Wissenschaften und der Literatur / Wilhelm-Lauer-Stiftung.** Speaker at ceremony for the 100th anniversary of Wilhem Lauer, Bonn 2023/06/16
- ◇ **Zentrum Liberale Moderne.** Input to stakeholder dialogue on Carbon Management and negative emissions in agriculture and forestry, online 2023/05/25
- ◇ **German Meteorological Society, Section Northern Germany.** "Chancen und Risiken von CO₂-Entnahme aus der Atmosphäre", online 2023/05/09
- ◇ **Bundeszentrale für politische Bildung.** Part of the speakerpool on climate change, Berlin since 2023/05
- ◇ **Senckenberg Gesellschaft für Naturforschung.** Talk "Kaum Raum für Natur: Landnutzungswandel als globales Problem für Arten, Ökosysteme und Klima", Frankfurt a.M. 2023/03/08
- ◇ **The European University Alliance for Global Health (EUGLOH 2.0) Kick-Off.** Keynote speech "Mitigating climate change", Munich 2023/01/30
- ◇ **Parliament of Brandenburg, Germany.** Input to expert discussion on Carbon Capture and Storage, online 2023/01/18
- ◇ **World Wide Fund For Nature (WWF) Lab,** on assessments of carbon dioxide removal methods, online 2022/11/28
- ◇ **German Environment Agency (UBA) expert panel** on climate engineering, online 2022/10/26
- ◇ **German Development Cooperation (GIZ) Event Series** on Carbon Dioxide Removal for climate protection, online 2022/09/07
- ◇ **Workshop of the Wissenschaftsplattform Klimaschutz (WPKS)** on negative emissions and Carbon Management Strategy, Berlin 2022/09/07
- ◇ **Colloquium of the Munich Science Communication Lab.** Talk "Challenges in the Discourse about Carbon Capture and Storage: Improving Technological Mitigation without Risking Rebound Effects", online 2022/07/26

- ◇ **Rachel Carson Center Tuesday discussion.** Input and discussion on “The need for ‘Carbon Dioxide Removal’... and the issues around land”, Munich 2022/07/19
- ◇ **G7 Summit of the Science Ministers** Frankfurt a.M. 2022/06/13
- ◇ **Agricultural Model Intercomparison and Improvement Project AgMIP-Wheat.** Keynote “The land use model intercomparison project”, Freising 2022/03/07
- ◇ **German Alliance for Global Health Research (GLOHRA) Academy Series.** Talk “Climate, land use, humans – the new role of terrestrial vegetation in climate neutrality pathways”, online 2022/02/01
- ◇ **Global Forum for Food and Agriculture (GFFA) 2022.** Panelist on sustainable land use, online 2022/01/27
- ◇ **City of Munich’s Innovation Lab, online.** Talk “Innovationen in der Klimaforschung” 2021/11/25
- ◇ **Speaker at workshop by LMU’s Center for Advanced Studies on “Nanoscience for Future. Scientific Background on Emissions and Carbon Dioxide Removal”.** Talk “The carbon budget and need for Carbon Dioxide Removal”, online 2021/11/12
- ◇ **Speaker at The Marcus Wallenberg Prize Digital Ceremony and Symposium “Predicting Forest Details from a Distance”,** online 2021/10/26
- ◇ **Panelist at the Bavarian Academy of Sciences, Munich.** “Zukunft Wasser. Zwischen Dürre und Flut” (the future of water) 2021/10/20
- ◇ **Keynote speaker at European Soil Observatory Forum,** session on soil erosion and land-use, online 2021/10/20
- ◇ **Panelist at GeoWoche organized by the German and Austrian Geographical Societies** on the future of geography as school subject, online 2021/10/08
- ◇ **Studienstiftung des deutschen Volkes.** Online Seminar: “Die Rolle terrestrischer Ökosysteme auf dem Weg zu den Klimazielen von Paris” 2021/09/28
- ◇ **Japanese German Exchange on Climate Research Policy and Cooperation - Carbon Dioxide Removal (CDR)** organized by the German and Japanese ministries of education and research (BMBF/MEXT), online 2021/09/07
- ◇ **Swiss Climate Summer School.** Keynote: “Land use change: major driver of local, regional and global climate change”, Ascona, Switzerland 2021/09/30
- ◇ **Panelist at Karlsruhe Institute for Technology, Academy for Responsible Research, Teaching, and Innovation** on “Geoengineering: Clutching at straws or part of a climate solution strategy?”, online 2021/07/07
- ◇ **Speaker at LMU teacher training program “Klimawandel verstehen und handeln” (Scorza/Lesch), lecture series “Bildung für Klimaschutz”** “Das anthropogene Kohlenstoffbudget: Ist der Umkehrpunkt der Emissionen erreicht?”, online 2021/06/21
- ◇ **Center for Digital Technology and Management (CDTM) of LMU/TUM.** Talk “Climate Change – Where we are, how we got there and what to do now”, online 2021/06/07
- ◇ **Speaker at Center for Ethics and Philosophy in Practice, lecture series on Ethics and Climate Change** 2021/06/08

- ◇ **Speaker at Planetary Health Academy:** Crossing Planetary Boundaries: Climate Change and the Loss of Biodiversity, online 2021/05/11
- ◇ **Panelist at the 12th Deutsche Klimatagung of the German Meteorological Society** on innovation and mitigation, online 2021/03/17
- ◇ **19. Bayerischer Mittelstandstag.** Keynote: “Covid-19 und das Paris-Abkommen”, online 2020/12/08
- ◇ **Zentrum für Kunst und Medien Karlsruhe.** Discussion between scientist and artist as part of the exhibition “Critical Zones”: “Terrestrische Universität: The Right Uses of Land” 2020/11/12
- ◇ **Design Thinking** Keynote at workshop “Wie müssen die Bestimmungssysteme im Sinne der Nachhaltigkeit und Digitalisierung transformiert werden?” 2020/10/20
- ◇ **Institute for Climate and Atmospheric Science at University of Leeds** Virtual seminar: “Forests as key drivers of local, regional and global climate” 2020/10/13
- ◇ **Max Planck Institute for Biology of Ageing.** Virtual seminar: “Land-use change – a prime tool for mitigation and adaptation?” 2020/06/30
- ◇ **Climate Analytics Webinar series – Interrelations between land cover, land management and climate change.** Webinar: “Forest Management and Land Cover Change under Changing Climate” 2020/06/23
- ◇ **Akademie für Politische Bildung in cooperation with the Max Weber-Programm / Studienstiftung des deutschen Volkes.** Online seminar: “Klimawandel und Umweltschutz” 2020/06/12
- ◇ **Zentrum für Kunst und Medien Karlsruhe.** Lecture as part of the exhibition “Critical Zones”: “Terrestrische Universität: Grundlagen des Klimawandels” 2020/06/11
- ◇ **Global Land Project / Karlsruhe Institute of Technology, working group on “Large-scale Behavioural Models of Land Use Change”.** “Integrating local and global climate effects of land-use change”, online 2020/05/29
- ◇ **European Forest Institute/Potsdam Institute for Climate Impact Research, conference “Managing forests in the 21st century”.** Keynote: Forests as key drivers of local, regional and global climate, Potsdam 2020/03/05
- ◇ **Hearing at the Bavarian Parliament.** Expert input on climate protection in Bavaria, Munich 2020/02/13
- ◇ **University of Augsburg, Institute of Geography Seminar.** Keynote: “Land-based carbon dioxide removal – risks and opportunities” 2020/02/03
- ◇ **Symposium of the Max Planck Society, “Geoanthropology – Comprehending the Human-Earth System“.** Talk: “New Roles of Land Management in the Anthropocene”, Berlin 2019/12/16
- ◇ **Technical University of Munich, Colloquium for Applied Ecology and Planning.** Talk: “Do forests cool or warm the climate?”, Weihenstephan 2019/12/02
- ◇ **University of Munich, Seminar of the Institute of Evolution and Systematics of Plants and Fungi.** Talk: “Do forests cool or warm the climate?” 2019/11/27
- ◇ **dena Energiewende-Kongress.** Panelist at “Klimaneutralität – Aufbruch zu einer Zielbestimmung”, Berlin 2019/11/25

- ◇ **Max Planck Institute for the History of Science, Anthropocene Colloquium.** Talk: “New Roles of Land Management in the Anthropocene”, Berlin 2019/11/05
- ◇ **Geographische Gesellschaft München.** Talk: “Fridays for Future – die wissenschaftlichen Grundlagen“, Munich 2019/10/17 and 2019/11/07
- ◇ **German Congress for Geography.** Panelist at “Zur Diskussion gestellt: Die 10 wichtigsten Forschungsthemen und Herausforderungen für die Geographie“, Kiel 2019/09/27
- ◇ **German Congress for Geography.** Panelist at “Das Anthropozän und die Geographie – eine große Herausforderung?” (“The Anthropocene and Geography – a grand challenge?”), Kiel 2019/09/29
- ◇ **Aspen Global Change Institute.** Walter Orr Roberts Public Lecture: “Climate Consequences of Land Management”, Aspen, USA 2019/09/18
- ◇ **Aspen Global Change Institute.** Workshop “Impacts of Land Use and Land Management on Earth System Evolution, Biogeochemical Cycles, Extremes and Inter-Sectoral Dynamics”, Aspen, USA 2019/09/15-20
- ◇ **Swiss Climate Summer School.** Keynote: “Land use change: a prime tool for mitigation and adaptation?”, Ascona, Switzerland 2019/09/09
- ◇ **Vrije Universiteit Amsterdam, Institute for Environmental Studies.** Talk: “Managing climate by managing land” 2019/06/28
- ◇ **KlimaCampus Hamburg Colloquium** Talk: “Managing climate by managing land” 2019/06/20
- ◇ **Deutsches Klima-Konsortium.** Workshop on a national strategy for Earth system modeling, Working Group 1 “ESM components and configuration”, Berlin 2019/06/11-12
- ◇ **Munich GeoCenter.** Talk: “Managing climate by managing land”, Munich 2019/05/17
- ◇ **Humboldt University Berlin, Geography Colloquium.** Talk: “Managing climate by managing land” 2019/06/04
- ◇ **University of Munich, Meteorological Colloquium.** Talk: “Do forests cool or warm the climate?” 2019/05/17
- ◇ **Global Carbon Project.** Workshop “REgional Carbon Cycle Assessment and Processes-2 (RECCAP2) 2019-2021”, Gotemba, Japan 2019/03/20
- ◇ **University of Cologne, Geosciences Colloquium.** “Lands of opportunity? From side-effects of land use to mitigating climate change”, Cologne 2019/01/07
- ◇ **Oak Ridge National Lab.** Workshop “Integrating CO2 Fertilisation Evidence Streams and Theory: Global Terrestrial Carbon Sink”, Biosphere 2 at Oracle, USA 2018/09/18-21
- ◇ **Marie Curie Innovative Training Network C-CASCADES,** Expert talk at “Mini-Conference 3 – Anthropogenic Perturbation of the Boundless Carbon Cycle”: “Human perturbation of the land carbon cycle”, Hamburg 2018/01/25
- ◇ **Inauguration Symposium of the SwissForestLab, “Forests in the Anthropocene: Risks and opportunities”.** Keynote lecture: “Three trillion trees – the role of forests and their changes in the global carbon cycle”, WSL Birmensdorf, Switzerland 2017/09/04
- ◇ **German National Research Foundation, Emmy Noether Annual Meeting.** Emmy Noether-Lecture: “Ackern für den Klimaschutz”, Potsdam 2017/07/20

- ◇ **GEOMAR Helmholtz Center for Ocean Research.** Talk in the FB1 seminar series: “Modeling the impacts of land use change on climate”, Kiel 2017/07/17
- ◇ **EGU General Assembly.** Talk: “Model meets data: Challenges and opportunities to implement land management in Earth System Models”, Vienna 2017/04/28)
- ◇ **University of Munich, Search Colloquium for W3 professorship in Physical Geography.** Talk: “Lands of opportunity? From side-effects of land use to mitigating climate change”, Munich 2017/02/10
- ◇ **University of Basel, Search Colloquium for professorship in Atmospheric Sciences.** Talk: “Lands of opportunity? From side-effects of land use to mitigating climate change”, Basel, Switzerland 2016/09/27
- ◇ **Our Common Future Under Climate Change.** Talk in Large Parallel Session “Climate Change and Land Systems: Impacts and Feedbacks”: “Land use changes and their impacts on climate”, Paris 2015/07/07
- ◇ **Swiss Climate Summer School.** Keynote: “Land use: The early human impact on climate” , Grindelwald 2014/08/31
- ◇ **Culture, Climate and Environment Interactions at Prehistoric Wetland Sites Conference, University of Bern.** Keynote: “Reconstruction of past regional to global land use and cover change” (06/12 2014)
- ◇ **EGU General Assembly.** Talk: “Integrating land management into Earth system models: the importance of land use transitions at sub-grid-scale”, Vienna 2014/04/29
- ◇ **PhD Earth System science conference.** Keynote: “Managing climate by managing land”, Jena 2014/03/14
- ◇ **AGU Fall Meeting.** Talk: “Terminology as a key uncertainty in net land use flux estimates”, San Francisco 2013/12/12
- ◇ **University of Göttingen, Bioclimatology Seminar.** Talk: “Managing climate by managing land” 2013/07/03
- ◇ **COST Action Land use change emissions estimates, data and modelling.** Talks: “Effect of anthropogenic land-use and land cover changes on climate and land carbon storage in CMIP5 projections for the 21st century”, ”Review of published land use emission estimates” 2012/03/21-23
- ◇ **Planet under Pressure.** Panelist: “The Anthropocene: tracing the contours of Earth’s newest epoch” 2012/03/26
- ◇ **Stanford University, Workshop on Security and the Environment.** 2012/01/18
- ◇ **3rd iLEAPS Science Conference.** Talk: “Global land cover change in the last millennium — effects on past and present climate” 2011/09/23
- ◇ **iLEAPS Land Use and Land Cover Change Kick-off Meeting.** Talk: “The long history of land use change and climate” 2011/09/21
- ◇ **Max Planck Institute for Biogeochemistry, Institute’s Colloquium.** Talk: “Effects of climate change and geoengineering on food security.” 2011/09/15
- ◇ **45th Congress of the Canadian Meteorological and Oceanographic Society.** Talk: “An overview of the effects of historical land cover change on climate and the carbon cycle” 2011/06/09

- ◇ **Princeton University, Workshop on Advancing Land-use Modeling and Analysis for Carbon Cycling Studies.** Talks: “Land use change and the carbon cycle in the last millennium”, “Land use change in AR5 at the Max Planck Institute for Meteorology, Hamburg, Germany” 2011/05/17-18
- ◇ **Max Planck Institute for Meteorology, Millennium Workshop.** Talk: ”Plough, pasture, and the plague — did mankind shape preindustrial climate?” 2011/03/31
- ◇ **Laboratoire des Sciences du Climat et de l’Environnement, ORCHIDEE Seminar.** Talk: “Land use change and climate — from Genghis Khan to geo-engineering” 2011/01/04
- ◇ **University of California, Los Angeles, Department of Atmospheric and Oceanic Sciences Seminar.** Talk: “The Effects of Agricultural Expansion on the Climate of the Last Millennium” 2010/04/29
- ◇ **Woods Hole Research Center, informal seminar.** Talk: “The effects of agricultural expansion on the climate of the last millennium” 2010/03/23
- ◇ **University of California, Santa Barbara, National Center for Ecological Analysis and Synthesis, Forests and Climate Policy Working Group Meeting.** Talk: “Historical anthropogenic land cover change in a global GCM” 2010/01/26
- ◇ **Energy Modeling Forum, Stanford University, Climate Change Impacts and Integrated Assessment Workshop XIV.** 2008/07/28-08/02
- ◇ **Energy Modeling Forum, Stanford University, Land Use Harmonization Workshop.** 2008/02/05-07

AWARDS

- ◇ **Highly Cited Researcher (Clarivate – Web of Science)** 2023/09
- ◇ **Award for Teaching Innovations** (shared with 3 colleagues) of the LMU Munich for co-initiating the “Munich Climate (Law) School”, an interdisciplinary summer school across LMU’s faculties 2023/07
- ◇ **Award for Teaching Innovations** (shared with 1 colleague) of the LMU Munich (as the first lecturer to receive the Award multiple times) for a joined geography-philosophy seminar on “Climate Change and Ethics” 2022/07
- ◇ **Highly Cited Researcher (Clarivate – Web of Science)** 2020/09
- ◇ **Award for Teaching Innovations** of the LMU Munich for developing a Model United Nations Climate Conference 2020/12
- ◇ **Elected as member of the Ecology Forum** of the Bavarian Academy of Sciences 2019/11
- ◇ **Elected as member of the Junge Akademie** (Young Academy) of the the Berlin-Brandenburgische Akademie der Wissenschaften and the Leopoldina — National Academy of Sciences 2014–2018
- ◇ **Member of AcademiaNet** – Portal for Outstanding Female Scientists and Scholars since 2013
- ◇ **Fast Track Program of the Robert Bosch Stiftung** 2012–2014
- ◇ **Editor’s Citation for Excellence in Refereeing** for Reviews of Geophysics 2011
- ◇ **Wladimir Peter Köppen Award** of the KlimaCampus, University of Hamburg 2010
- ◇ **Otto Hahn Medal** of the Max Planck Society 2009

Prof. Dr. Julia Pongratz

- ◇ **Young Scientists' Outstanding Poster Paper (YSOPP) Award** of the EGU 2008
- ◇ **Scholarship of the German National Academic Foundation** (Studienstiftung des deutschen Volkes) 2001–2005
- ◇ **Grant from the German-American Fulbright Program** 2003–2004

OTHER

- ◇ Part-time work due to parental leave (two children) 2014–2017

Publication list (as of 2023/10/31)

1. Peer-reviewed journal and book articles

* supervised students and postdocs

In review / in print / in discussion

Bustamante, Mercedes; et al., incl. **Pongratz, Julia**: Ten New Insights in Climate Science 2023. *Global Sustainability*, subm.

De Hertog, Steven, J., Carmen Elena Lopez Fabara, Ruud van der Ent, Jessica Keune, Diego G. Miralles, Raphael Portmann, Sebastian Schemm, *Felix Havermann, *Suqi Guo, Fei Luo, Iris Manola, Quentin Lejeune, **Julia Pongratz**, Carl-Friedrich Schleussner, Sonia I. Seneviratne, Wim Thiery. [Effects of idealised land cover and land management changes on the atmospheric water cycle](#). EGUsphere [preprint], doi:10.5194/egusphere-2023-953.

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Li, Hongmei; Ilyina, Tatiana; *Loughran, Tammas; Spring, Aaron; **Pongratz, Julia**. [Reconstructions and predictions of the global carbon budget with an emission-driven Earth System Model](#). *Geophysical Research Letters*, subm.

Loughran, Tammas; Tilo Ziehn, Rachel Law, Josep G. Canadell, **Julia Pongratz**, Spencer Liddicoat, Tomohiro Hajima, Akihiko Ito, David M. Lawrence, Vivek K. Arora. [Limited mitigation potential of forestation under a high emissions scenario: results from multi-model and single model ensembles](#). *Journal of Geophysical Research – Biogeosciences* subm.

Nath, Shruti, Lukas Gudmundsson, Jonas Schwaab, Gregory Duveiller, Steven Johan De Hertog, *Suqi Guo, *Felix Havermann, Fei Luo, Iris Manola, **Julia Pongratz**, Sonia Isabelle Seneviratne, Carl Friedrich Schleussner, Wim Thiery, and Quentin Lejeune. [TIMBER v0.1: a conceptual framework for emulating temperature responses to tree cover change](#). Preprint egusphere-2022-1024, doi: 10.5194/egusphere-2022-1024.

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*Guilherme Mendonca, Christian Reick, **Julia Pongratz**. [Time-scale dependence of airborne fraction and underlying climate-carbon cycle feedbacks for weak perturbations in CMIP5 models](#). *Biogeosciences Disc*.

Rosan, Thais M.; Stephen Sitch; Michael O'Sullivan; Luana S. Basso; Chris Wilson; Camila Silva; Emanuel Gloor; Dominic Fawcett; Viola Heinrich; Jefferson G. Souza; Gilney Silva

Bezerra; Celso von Randow; Lina M. Mercado; Luciana Gatti; Andy Wiltshire; Pierre Friedlingstein; **Julia Pongratz**; *Clemens Schwingshackl; Matthew Williams; Luke Smallman; Jürgen Knauer; Vivek Arora; Daniel Kennedy; Hanqin Tian; Wenping Yuan; Atul K. Jain; Stefanie Falk; Benjamin Poulter; Almut Arneth; Qing Sun; Sönke Zaehle; Anthony P. Walker; Etsushi Kato; Xu Yue; Ana Bastos; Philippe Ciais; Jean-Pierre Wigneron; Clement Albergel; Luiz E.O.C. Aragão. [Amazon forests a net carbon source during drought and under high rates of human-disturbance](#). *Communications Earth & Environment*, doi: 10.21203/rs.3.rs-2598162/v1.

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*Bultan, Selma; Julia E.M.S. Nabel, *Kerstin Hartung, *Raphael Ganzenmüller, Liang Xu, Sassan S. Saatchi, and **Julia Pongratz**. [Tracking 21st century anthropogenic and natural carbon fluxes through model-data integration](#). *Nature Communications* **13**(1): 5516-5530, doi: 10.1038/s41467-022-32456-0.

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Nakaoka, Yosuke Niwa, Tsuneo Ono, Denis Pierrot, Benjamin Poulter, Gregor Rehder, Laure Resplandy, Eddy Robertson, Christian Rödenbeck, Thais M Rosan, Jörg Schwinger, *Clemens Schwingshackl, Roland Séférian, Adrienne J Sutton, Colm Sweeney, Toste Tanhua, Pieter P Tans, Hanqin Tian, Bronte Tilbrook, Francesco Tubiello, Guido R Van Der Werf, Nicolas Vuichard, Chisato Wada, Rik Wanninkhof, Andrew J Watson, David Willis, Andrew J Wiltshire, Wenping Yuan, Chao Yue, Xu Yue, Sönke Zaehle, Jiye Zeng. [Global Carbon Budget 2021](#). *Earth System Science Data* 14:1917–2005, doi: 10.5194/essd-14-1917-2022.

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