

Prof. Dr. Julia Pongratz

2020/07

- PRESENT POSITIONS**
- ◇ **Full professor for Physical Geography and Land Use Systems** at the Ludwig-Maximilians-University Munich since 2018/04
 - ◇ **Group leader at the Max Planck Institute for Meteorology**, Hamburg, Germany (jointly with LMU Munich) since 2013/07
 - ◇ **Address: Department of Geography, Ludwig-Maximilians-University, Luisenstrasse 37, 80333 München, Germany**
phone: +49-89-2180-66525, email: julia.pongratz@lmu.de <http://www.geographie.uni-muenchen.de/departament/personen/pongratz-julia.php>
- WORK EXPERIENCE**
- ◇ **Professor (W3), LMU Munich, Germany** since 2018/04
Head of the chair for Physical Geography and Land Use Systems. Research foci lie on human-climate-vegetation feedbacks in past and future, drivers of anthropogenic emissions, and advanced Earth system modeling.
 - ◇ **Lead of the Emmy Noether independent junior research group “Forest management in the Earth system”**, funded by the German Research Foundation, now “Land Use in the Earth system”, Max Planck Institute for Meteorology, Hamburg, Germany since 2013/08
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

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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:**
 - 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 since 2011
- ◇ **Conference convener:**
 - Co-organization of “Land surface modeling summit”, Oxford, U.K. postponed
 - 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
 - Co-organization of 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
 - Scientific steering committee “10. International Carbon Dioxide Conference”, Bern, 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 session “Interactions of Global Forest Resources and Climate” at the IUFRO (International Union of Forest Research Organizations) 125th Anniversary Congress, Freiburg 2017/09
 - 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

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- 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
 - 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: Landuse 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 steering committee of the German Alliance for Global Health Research since 2020
 - 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 projects (Coupled Model Intercomparison Project 6 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

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- PUBLICATIONS ◇ **More than 70 peer-reviewed articles**, including in Nature, Science, and PNAS, which received more than 3000 citations. Contributions to the IPCC's Assessment Reports.
- See <http://www.geographie.uni-muenchen.de/departement/personen/pongratz-julia.php> for list of publications and recent news coverage (e.g., FAZ, SZ, BR, Handelsblatt, carbonbrief).
 - Publications of the Max Planck group at <https://www.mpimet.mpg.de/en/science/the-land-in-the-earth-system/working-groups/land-use-in-the-earth-system/publications/>.
- 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 the Bachelor's Program in Geography, in the Master's Program in Environmental Systems and Sustainability – Monitoring, Modeling, and Management, and in the teacher training
- ◇ **University of Hamburg:** Courses in the Master's Program in Integrated Climate System Sciences (SICCS)
- ◇ **Summer schools:** Lecturer 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.
- PH.D.
STUDENT
SUPERVISION ◇ **First supervisor:**
- Raphael Ganzenmüller, Ph.D. Geography, University of Munich since 2019/09
 - Suqi Guo, Ph.D. Geography, University of Munich since 2019/09
 - Hao-wei Wey, Ph.D. Geosciences, University of Hamburg since 2017/03
 - Johannes Winckler, Ph.D. Geosciences, University of Hamburg 2014/06-2017/11
 - Sylvia Nyawira, Ph.D. Geosciences, University of Hamburg 2014/04-2017/11
 - Dorothea Mayer, Ph.D. Geosciences, University of Hamburg 2013/08-2017/07
- ◇ **Co-supervisor or external committee member:**
- Committee member for Azeb Worku Degife, Ph.D. Geography, University of Munich 2020/02
 - Committee chair for Felix Hentschel, Ph.D. Geosciences, University of Munich 2020/02
 - Committee member for Martina Franz, Ph.D. Karlsruhe Institute of Technology 2019/11
 - Committee member for Siavash Ghelichkhan, Ph.D. Geosciences, University of Munich 2019/07
 - Committee member for Laura Casella, Ph.D. Geosciences, University of Munich 2019/03
 - Committee chair for Michael Lindner, Ph.D. Geosciences, University of Munich 2019/02

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- Committee member for Reinhard Prestele, Ph.D. VU University Amsterdam 2019/06
- Co-advisor for Guilherme Mendonca, Ph.D. Geosciences, University of Hamburg since 2017/04
- Co-advisor for Victoria Naipal, Ph.D. Geosciences, University of Hamburg 2012/08–2016/01
- Committee member for Richard Fuchs, Ph.D. University of Wageningen 2014/10
- Panel chair for Rafaela Flach, Ph.D. Geosciences, University of Hamburg since 2016/03

THIRD-PARTY
FUNDING AS
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- ◇ **“Hig-resolution monitoring of avoided carbon emissions and carbon restoration potentials from land use change”** funded by the Stifterverband since 2020
- ◇ **VERIFY (Verifying Greenhouse Gas Emissions)** funded by the European Commission’s Horizon2020 programme 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) since 2013
- ◇ **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

- ◇ **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” 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 2020/03/05
- ◇ **University of Augsburg, Institute of Geography Seminar**. Keynote: “Land-based carbon dioxide removal – risks and opportunities”, Augsburg 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?”, Munich 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”, Amsterdam 2019/06/28
- ◇ **KlimaCampus Hamburg Colloquium** Talk: “Managing climate by managing land”, Hamburg 2019/06/20
- ◇ **Deutsches Klima-Konsortium**. Workshop on a national strategy for Earth system modeling, Working Group 1 “ESM components and configuration” 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”, Berlin 2019/06/04
- ◇ **University of Munich, Meteorological Colloquium**. Talk: “Do forests cool or warm the climate?”, Munich 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
- ◇ **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, Jena.** Keynote: “Managing climate by managing land” 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

- ◇ **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
- ◇ **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

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- ◇ **Otto Hahn Medal** of the Max Planck Society 2009
- ◇ **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