Job: Post-doc position in Earth system modelling of nature-based climate solutions

No Deadline

"The successful applicant will be part of a Microsoft-funded research project investigating the climate implications of temporary land-based carbon storage."

[LINK](#)

Read more » Job: Post-doc position in Earth system modelling of nature-based climate solutions
An, Soon-Il; et al. (2021): Global cooling hiatus driven by an AMOC overshoot in a carbon dioxide removal scenario

An, Soon-Il; Shin, Jongsoo; Yeh, Sang-Wook; Son, Seok-Woo; Kug, Jong-Seong; Min, Seung-Ki; Kim, Hyo-Jeong (2021): Global cooling hiatus driven by an AMOC overshoot in a carbon dioxide removal scenario. In Earth’s Future. DOI: 10.1029/2021EF002165.

"Here, we performed an Earth system model simulation to explore the reversibility of earth climate, in which a CO$_2$ concentration level gradually increases to 4 times CO$_2$ of the present-day level and then returns to the present-day level."

LINK

Read more » An, Soon-Il; et al. (2021): Global cooling hiatus driven by an AMOC overshoot in a carbon dioxide removal scenario

24.06.2021

# New Publications

0 Comments
Zickfeld, Kirsten; et al. (2021): Asymmetry in the climate–carbon cycle response to positive and negative CO2 emissions

"It is commonly assumed that the climate–carbon cycle response to a negative CO₂ emission is equal in magnitude and opposite in sign to the response to an equivalent positive CO₂ emission. Here we test the hypothesis that this response is symmetric by forcing an Earth system model with positive and negative CO₂ emission pulses of varying magnitude and applied from different climate states."

Read more » Zickfeld, Kirsten; et al. (2021): Asymmetry in the climate–carbon cycle response to positive and negative CO2 emissions
Saidi, Majid; Inaloo, Ebrahim Balaghi (2021): CO2 Removal Using 1DMA2P Solvent via Membrane Technology: Rate Based Modeling and Sensitivity Analysis

"A numerically solved reaction rate/kinetic model for CO₂ removal from a CO₂/N₂ gas mixture into novel reactive 1-dimethylamino-2-propanol (1DMA2P) solution in a gas–liquid membrane contactor was constructed."

Read more » Saidi, Majid; Inaloo, Ebrahim Balaghi (2021): CO2 Removal Using 1DMA2P Solvent via Membrane Technology: Rate Based Modeling and Sensitivity Analysis

14.06.2021

# New Publications

0 Comments

Belmonte, Beatriz A.; et al. (2021): A fuzzy optimization model for
planning integrated terrestrial carbon management networks


"Although recent papers have reported the development of process integration models for optimizing carbon management networks based on either biochar application or enhanced weathering, none have reported models integrating these two NETs in the same system. To address this gap, a fuzzy mixed-integer linear programming model is developed that integrates biochar application and enhanced weathering for large-scale carbon sequestration."

Grassi, Giacomo; et al. (2021): Critical adjustment of land mitigation pathways for assessing countries’ climate progress
"Here we present a ‘Rosetta stone’ adjustment to translate IAMs’ land-use mitigation pathways to estimates more comparable with GHG inventories."

Read more » Grassi, Giacomo; et al. (2021): Critical adjustment of land mitigation pathways for assessing countries’ climate progress

Plazzotta, Maxime; et al. (2019): Impact of Solar Radiation Modification on Allowable CO₂ Emissions: What Can We Learn From Multimodel Simulations?

"Here we use the results of six Earth system models simulating a continuous stratospheric injection of 5 Tg of sulfur dioxide per year between 2020 and 2069 under the representative concentration pathways 4.5 to 8.5."

investigate the impact of SRM on land and ocean carbon uptake.

[Read more » Plazzotta, Maxime; et al. (2019): Impact of Solar Radiation Modification on Allowable CO₂ Emissions: What Can We Learn From Multimodel Simulations?]

Visioni, Daniele; et al. (2021): Identifying the sources of uncertainty in climate model simulations of solar radiation modification with the G6sulfur and G6solar Geoengineering Model Intercomparison Project (GeoMIP) simulations

Visioni, Daniele; MacMartin, Douglas G.; Kravitz, Ben; Boucher, Olivier; Jones, Andy; Lurton, Thibaut et al. (2021): Identifying the sources of uncertainty in climate model simulations of solar radiation modification with the G6sulfur and G6solar Geoengineering Model Intercomparison Project (GeoMIP) simulations. Preprint. In Atmos. Chem. Phys. DOI: 10.5194/acp-2021-133.

"We present here results from the Geoengineering Model Intercomparison Project (GeoMIP) simulations for the experiment G6sulfur and G6solar for six Earth System Models participating in the Climate Model Intercomparison Project (CMIP) Phase 6. The aim of the experiments is to reduce the warming from that resulting from a high-tier emission scenario (Shared Socioeconomic Pathways SSP5-8.5) to that resulting from a medium-tier emission scenario (SSP2-4.5)."
Job: PostDoc "Biogeochemical Earth System Modeling"

Deadline: 05. March 2021

"This position is part of the Helmholtz Young Investigator group Marine Carbon and Ecosystem Feedbacks in the Earth System (MarESys) led by Dr. Judith Hauck. MarESys aims to assess integrated effects of climate change and variability in the ocean with a focus on ocean carbon feedbacks and marine ecosystem drivers."

Read more » Job: PostDoc "Biogeochemical Earth System Modeling"
Gettelman, A.; et al. (2021): Climate Impacts of COVID-19 Induced Emission Changes


"We use estimates of emission changes for 2020 in two Earth System Models (ESMs) to simulate the impacts of the COVID-19 economic changes."

Read more » Gettelman, A.; et al. (2021): Climate Impacts of COVID-19 Induced Emission Changes