IIASA at AGU 2019

Below lists related AGU sessions and papers featuring IIASA researchers, alumni, and former Young Scientists Summer Program (YSSP) Participants.

More information regarding the event may be found [here](#), and for the full program please visit the [AGU Program page](#).

Monday, 09 December

**PAPERS**

[B11H-2223 - Methods beyond Observations and Models: Analytical Options and Open Gaps](#)
Stephan Pietsch, Ecosystem Services and Management (ESM) Program

[B13H-2597 - Elevated CO2, Mycorrhiza, and the Boreal Forest Carbon Balance](#)
Oskar Franklin, ESM Program

[B13L-2471 - Increased nitrous oxide emissions in East Asia as estimated by bottom-up and top-down approaches](#)
Wilfrid Winiwarter, Air Quality and Greenhouse Gases (AIR) Program

[B13M-2658 - Application of different assessment approaches among ecosystem services considering demand and supply focused on forest carbon](#)
Moonil Kim, ESM Program
Cholho Song, Korea University, YSSP 2017
Sungeun Cha, Korea University, YSSP 2018

[B51L-2401 - Partitioning of plant functional trait variation into phenotypic plasticity and neutral components reveals functional differences among neotropical tree species](#)
Florian Hofhansl, ESM & Evolution & Ecology (EEP) Programs
Ulf Dieckmann, EEP Program
Oskar Franklin, ESM Program

[GC11F-1157 - Modeling wildfire dynamics using FLAM coupled with deep learning methods](#)
Andrey Krasovskii, Ping Yowargana, Dmitry Schchepashchenko, Florian Kraxner, ESM Program
Xikun Hu, KTH Royal Institute of Technology, YSSP 2019

[GC13F-1202 - A regional nuclear conflict has global implications for food security](#)
Christian Folberth, Nikolay Khabarov, ESM Program
Wenfeng Liu, EAWAG Swiss Federal Institute of Aquatic Science and Technology, YSSP 2015
Alison Heslin, Columbia University, IIASA alumna
GC13G-1219 - The Role of Social Networks and Migration in Climate Adaptation among Subsistence Farming Households: A Stylized Agent-Based Model
Nicolas Choquette-Levy, Princeton University, YSSP 2019
Matthias Wildemeersch, Advanced Systems Analysis (ASA) Program
Simon Levin, Princeton University, IIASA alumnus

H11J-1615 - Water cycle modifications and Earth System resilience: roadmap to a new water planetary boundary
Yoshihide Wada, Water Program
Johan Rockström, Stockholm Resilience Centre, IIASA collaborator
Martina Floerke, University of Kassel, IIASA alumna

H11O-1729 - Hyper-resolution hydrological modeling of a managed watershed: The application of CWatM at 30 arc-seconds resolution in the Upper Bhima basin
Mikhail Smilovic, Peter Burek, Taher Kahl, Yoshihide Wada, Water Program
Guillaumot Luca, Rennes University, IIASA Guest Research Scholar

H13G-02 - Recent global decline in endorheic basin water storage and its implications for the water cycle
Yoshihide Wada, Water Program

PA14A-05 - Committed Emissions from Existing Energy Infrastructure Jeopardize 1.5 °C Climate Target
Zhang Qiang, Tsinghua University, IIASA alumnus
Yue Qin, University of California Irvine, YSSP 2016

Tuesday, 10 December
PAPERS
GC23A-05 - Economic impacts of future glacier decline in the Indus River Basin
Simon Parkinson, Adriano Vinca, Edward Byers, Keywan Riahi, Energy Program
Ansir Ilyas, Lahore University of Management Science, YSSP 2018

GC23B-04 - Land-Use Harmonization 2: New Features and New Scenarios
Peter Havlik, Tamas Krisztin, ESM Program
Keywan Riahi, Energy Program
Shinichiro Fujimori, National Institute for Environmental Studies, IIASA Guest Research Scholar, YSSP 2006
Katherine V Calvin, Pacific Northwest National Laboratory, IIASA alumna
Tomoko Hasegawa, National Institute for Environmental Studies, IIASA alumna
Detlef van Vuuren, Netherlands Environmental Assessment Agency, IIASA collaborator

GH21C-1220 - PM2.5 pollution induced morbidity burdens and the associated economic costs in Asian countries
Gregor Kiesewetter, Fabian Wagner, AIR Program
Muye Ru, Duke University, YSSP 2019
GC21H-1400 - Global Spatial Urban Expansion Scenarios Consistent with the Shared Socioeconomic Pathways (SSPs)
Brian O'Neill, The University of Denver, YSSP 1998

H21O-1958 - Co-design of a Water Cycle Diagram to Discover Similarities and Differences among Global Water Impact Models
Yoshihide Wada, Peter Burek, Water Program
Yusuke Satoh, National Institute for Environmental Studies, IIASA Guest Research Scholar

H21G-08 - Food-water-energy for Urban Sustainable Environments (FUSE): Integrated Analyses Focused on Pune, India and Amman, Jordan
Yoshihide Wada, Peter Burek, Taher Kahil, Mikhail Smilovic, Water Program

Wednesday, 11 December
SESSIONS
PA31B - Flood Risk and Resilience: Integrating Models, Methods, and Data to Inform Resilience-Building at Risk Management Scales I, II Posters
Primary Convener and Chair: Reinhard Mechler, Risk & Resilience (RISK) Program

PAPERS
A31I-2680 - Co-benefits of low carbon pathways for local air pollution in India
Peter Rafaj, Gergor Kiesewetter, Wolfgang Schoepf, AIR Program
Volker Krey, Energy Program
Saritha Sudharmma Vishwanathan, Indian Institute of Management Ahmedabad, IIASA alumna

A33I-3060 - Development of a Comprehensive Regional Emissions Inventory in Support of Air Quality Modeling and Aircraft Field Campaign over East Asia
Markus Amann, Zbigniew Klimont, Fabian Wagner, Wolfgang Schoepf, Robert Sander, AIR Program
Younha Kim, Konkuk University, YSSP 2014

B34D-03 - The magnitude, trend and drivers of the global nitrous oxide budget: a new assessment
Wilfried Winiwarter, AIR Program

B34D-04 - Global cropland-N2O emission dataset
Wilfried Winiwarter, AIR Program
Francesco Tubiello, Food & Agriculture Organization, IIASA alumnus

GC31O-1285 - Income-driven and policy-intervened energy transitions in rural residential energy sector in India, and their roles to the achievement of its NAAQS
Pallav Purohit, Peter Rafaj, AIR Program
Muye Ru, Duke University, YSSP 2019
Saritha Sudharmma Vishwanathan, Indian Institute of Management Ahmedabad, IIASA alumna
GC31O-1293 - The distribution of health co-benefits and its impact on optimal climate policy
Fabian Wagner, AIR Program

Wei Peng, Penn State University, IIASA alumna

GC31J-1336 - Groundwater depletion embedded in domestic transfers and international exports of the United States
Yoshihide Wada, Water Program

GC32B-04 - A Sustainable Agriculture Matrix of environmental and socioeconomic indicators for protecting Earth’s climate
Christian Folberth, ESM Program

GC33D-04 - Agricultural vulnerability to changing snowmelt
Yue Qin, Ohio State University, YSSP 2016

GC33F-1436 - Early retirement of power plants in climate mitigation scenarios
Oliver Fricko, Joeri Rogelj, Energy Program
Shinichiro Fujimori, National Institute for Environmental Studies, IIASA Guest Research Scholar, YSSP 2006
Katherine V Calvin, Pacific Northwest National Laboratory, IIASA alumna

PA33D-1124 - How can disaster forensics inform climate risk scenarios? A multi-method case study on flood risk and resilience in Peru
Reinhard Mechler, Adam French, RISK Program

Thursday, 12 December

SESSIONS

GC42A - Multiscale Modeling of Human-Natural Earth System Interactions for Sustainable and Resilient Planning at the Nexus of Water-Energy-Food Security, Health, and Conflict Session I, II Posters
Convener and Chair: Simon Parkinson, Energy Program and University of Victoria
Yue Qin, Ohio State University, YSSP 2016

NH42A - The Landslide Life Cycle: From Process Understanding to Hazard and Risk Assessment I, II, III
Convener and Chair:
Dalia Kirschbaum, Research Physical Scientist, NASA Goddard Space Flight Center, IIASA alumna

U43C - Career Panels and Networking Throughout the Engagement Area
Primary Convener and Chair:
Dalia Kirschbaum, Research Physical Scientist, NASA Goddard Space Flight Center, IIASA alumna

PAPERS

A42A-08 - Carbon Emissions Reduction and Health Co-Benefits in the Electric Power Generation Sector under Shared Socioeconomic Pathways in China
Shaohui Zhang, AIR Program

B42D-02 - The Pivotal Role of Heterogeneity in the Persistence of Soil Organic Matter
Christina Kaiser, EEP Program
C22C-06 - Reduced winter off-road tundra travel under climate change
Jinfeng Chang, ESM Program

GC43F-1339 - A hybrid model-observation analysis of changes in global flood hazard
Yoshihide Wada, Water Program
Jinfeng Chang, ESM Program

GC43H-1403 - Impacts of ozone and climate change on California perennial crops
Yue Qin, Ohio State University, YSSP 2016

H41S-2010 - The role of groundwater in modulating the global mean sea level variations during ENSO events
Yoshihide Wada, Water Program

H41S-2016 - 1.5 and 2-degree Warming Jeopardize Millions of People with Severe Water stress in South Asia
Yoshihide Wada, Water Program

H42F-02 - High-resolution global water temperature modelling
Yoshihide Wada, Water Program
Michelle van Vliet, Wageningen University & Research Center, IIASA alumna

H42C-04 - Human dimensions of changing global freshwater availability
Yoshihide Wada, Water Program

H42F-07 - Beyond Frontiers in Hydrologic Science
Yoshihide Wada, Water Program

Friday, 13 December
SESSIONS
B53C Plant Traits, Adaptation, and Biogeochemical Cycles: From Measurements to Models Session I, Session II, III Posters
Convener and Chair: Oskar Franklin, ESM Program

PAPERS
A53B-04 - Coordinating air pollution and clean power strategies in India for health and climate objectives
Pallav Purohit, Fabian Wagner, AIR Program
Wei Peng, Penn State University, IIASA alumna

A53T-2926 - Declined Decrease of Tropospheric NO2 in the Past Decade
Zbigniew Klimont, AIR Program

GC52A-06 - Compound Temperature and Precipitation Shifts in Historical and Historical Natural-Only Model Simulations
Peter Greve, Yoshihide Wada, Water Program
Omid Mazdiyasni, University of California Irvine, YSSP 2016
Ted Veldkamp, Vrije University Amsterdam, IIASA alumna
H52F-02 - How Much Do Lowlands Depend on Mountain Water Resources? Global Development from Mid-20th to Mid-21st Century
Yoshihide Wada, Water Program

H53A-02 - Exploring water management options under changing climate, land cover and socio-economic drivers for the extended Lake Victoria Basin
Peter Burek, Sylvia Tramberend, Mohamed Kahil, Robert Burtscher, Yoshihide Wada, Water Program

H54E-01 - A Global Near-Real-Time Soil Moisture Monitor
Yoshihide Wada, Water Program
Eric Wood, Princeton University, IIASA alumnus