

**JULES Annual Conference Hosted virtually by Sarah Chadburn & Exeter University group  
Tuesday 14th to Friday 17th September 2021**

Registration:

There is no need to register in advance for the conference, please use the link below to access all of the sessions.

[https://teams.microsoft.com/join/19%3ameeting\\_ODBmMjdjODYtMTY2My00NjU2LTkzZjMtOTYzYjA5NGE1MmU3%40thread.v2/0?context=%7b%22Tid%22%3a%22912a5d77-fb98-4eee-af32-1334d8f04a53%22%2c%22Oid%22%3a%22a2ac8428-1d44-4014-b4ec-3de6341ae245%22%7d](https://teams.microsoft.com/join/19%3ameeting_ODBmMjdjODYtMTY2My00NjU2LTkzZjMtOTYzYjA5NGE1MmU3%40thread.v2/0?context=%7b%22Tid%22%3a%22912a5d77-fb98-4eee-af32-1334d8f04a53%22%2c%22Oid%22%3a%22a2ac8428-1d44-4014-b4ec-3de6341ae245%22%7d)

**Information for speakers: You will have 12 minutes for your presentation and 3 minutes for questions.**

**Please ensure you arrive promptly for presentations to commence.**

**Please mute yourself on arrival and during presentations.**

**Questions for speakers will be submitted via the chat function to the session question convenor.**

Note we will not be recording the meeting. Uploading your slides to go on the JULES website afterwards is encouraged. Please email your slides in pdf form to Toby Marthews [tobmar@ceh.ac.uk](mailto:tobmar@ceh.ac.uk) (please remove anything that you don't want to make public).

<b>9.30 - 11.30am Tuesday 14th September</b>		
<b>Session 1: Introduction and module updates</b>		<b>Chair: Rachael Turton</b>
9.30 - 9.40	Sarah Chadburn	Welcome, Introduction & House Admin
9.40 - 9.50	John Edwards/Rich Ellis	Surface
9.50 - 10.05	Nic Gedney/Anne Verhoef	Hydrology
10.05 - 10.15	Lina Mercado/Karina Williams	Vegetation
10.15 - 10.25	Eleanor Burke/Sarah Chadburn	Biogeochemistry
10.25 - 10.30	Comfort Break	
10.30 - 10.40	Gerd Folberth/Kirsti Ashworth	Biogenic Fluxes
10.40 - 10.50	Chantelle Burton/Doug Kelley	Fire
10.50 - 11.00	Tristan Quaife/Graham Weedon	Evaluation

11.00 - 11.10	Eleanor Burke/Chris Huntingford	IMOGEN
11.10 - 11.20	Ian Harman/Rachel Law	CABLE
11.20 - 11.30	All	Group Discussion

<b>1 - 3pm Tuesday 14th September September</b>		
<b>Session 2: JULES and JPEGs updates</b>		<b>Chair: Sarah Chaburn Question convenor: Carolina Duran-Rojas</b>
1.00 - 1.10	Introduction	
1.10 - 1.25	Richard Gilham	JULES and the Next Generation Modelling System
1.25 - 1.40	Eleanor Burke	JULES-IMOGEN - an intermediate climate model used to represent carbon feedbacks
1.40 - 1.55	Doug Kelley	JPEG Mortality
1.55 - 2.00	Comfort Break	
2.00 - 2.15	Anna Harper	JPEG Soil Moisture stress
2.15 - 2.30	Karina Williams	JPEG JULES Face
2.30 - 2.35	Tristan Quaife	JPEG Canopy Processes
2.35 - 2.45	All	JPEG Discussion
2.45 - 3.00	Eleanor Blyth	JULES annual conference September 2022

<b>9.30 -11.30am Wednesday 15th September</b>		
<b>Session 3: Biogeochemistry, Biogenic fluxes and Hydrology</b>		<b>Chair: Eleanor Burke Question convenor: Joe Clarke</b>
9.30 - 9.40	Introduction	
9.40 -	Eddy Robertson	How to spin-up the slow components of JULES

9.55		
9.55 - 10.10	Matthew Wiggins	Modelling Equilibrium Soil Carbon using JULES
10.10 - 10.25	Gareth Davey	Considering water table dynamics may improve models of methane emissions from global wetlands.
10.25 - 10.35	Comfort Break	
10.35 - 10.50	Sarah Chadburn	JULES-Peat: A new approach to simulate peat accumulation, degradation and stability.
10.50 - 11.05	Garry Hayman	Atmospheric Dry Deposition in JULES
11.05 - 11.20	Robert Parker	The ESA Digital Twin Earth Precursor - Climate Impact Explorer
11.20 - 11.30	All	<p>Welcome to new community members:</p> <ul style="list-style-type: none"> <li>● Assumpta Onyeagoziri</li> <li>● Louisa Oldham</li> <li>● Giuseppe Degan Di Dieco</li> <li>● Merve Gorguner</li> </ul>

<b>1 - 3pm Wednesday 15th September</b>		
<b>Session 4: Hydrology</b>		<b>Chair: Anne Verhoef</b> <b>Question convenor: Liz Cooper</b>
1.00 - 1.10	Introduction	
1.10 - 1.25	Toby Marthews	Inundation prediction at global scale using JULES and CaMa-Flood: progress and future challenges
1.25 - 1.40	Jasdeep Anand	A Machine Learning emulator of JULES soil moisture: Applications to African drought
1.40 - 1.55	Heather Rumbold	Demonstrating the impact of coupled irrigation over the Iberian semi-arid environment
1.55 - 2.00	Comfort Break	
2.00 - 2.15	Sihan Li	Seasonal planning for monsoon-related multi-hazards: using Hydro-JULES to predict landslide susceptibility in Nepal

2.15 - 2.30	Marcus Buechel	Potential hydrological implications of widespread afforestation in Great Britain
2.30 - 2.45	Noah Smith	Strengthening the foundations for explicitly modelling microtopography in permafrost landscapes
2.45 - 3.00	Helen Johnson	Introducing the freshwater lake model: FLake

<b>9.30 - 11.30 Thursday 16th September</b>		
<b>Session 5: Vegetation and Fire</b>		<b>Chair: Anna Harper</b> <b>Question convenor: Simon Jones</b>
9.30 - 9.40	Introduction	
9.40 - 9.55	Martin de Kauwe	Examining the vulnerability of Australian Eucalypts to future drought-induced tree mortality
9.55 - 10.10	Arthur Argles	JULES-RED simulations of forest demography and resilience in Brazil
10.10 - 10.25	Mike Wolffe	Quantifying the Impacts of Particulate Matter Deposition on Global Cereal Crops
10.25 - 10.35	Comfort Break	
10.35 - 10.50	Jeremy Walton	From Amazon to Desert: Characterizing Biomes using Machine Learning
10.50 - 11.05	Rodolfo Nobrega	The use of Earth observation-based methods to enlighten land-surface modelling: evidence for the soil–water stress functions
11.05 - 11.20	Rob King	Using LST-Air Temperature Difference as a metric of Vegetation Moisture Stress
11.20 - 11.30	All	Welcome to new community members: <ul style="list-style-type: none"> <li>● Timothy Lam</li> <li>● Matt Kasoar</li> <li>● Anastasios Rovithakis</li> <li>● Katie Blackford</li> </ul>

<b>1 - 3pm Thursday 16th September</b>		
<b>Session 6: Vegetation and Fire</b>		<b>Chair: Lina Mercado</b> <b>Question convenor: Arthur Argles</b>
1.00 - 1.10	Introduction	
1.10 - 1.25	Wenjia Cai	Recent trends and drivers in gross primary production
1.25 - 1.40	Simon Jones	Non-structural Carbohydrate at the global scale and their relationship with atmospheric CO2 variability
1.40 - 1.55	Giulia Mengoli	Ecosystem photosynthesis in land-surface models: a first-principles approach
1.55 - 2.00	Comfort Break	
2.00 - 2.15	Douglas Kelley	Observational constraints on future shifts in fire regimes using JULES-ES/ISIMIP2b/ConFire.
2.15 - 2.30	Chantelle Burton	South American fires and their impacts on ecosystems increase with continued emissions
2.30 - 2.45	Lewis Palmer	Testing the JULES Model for predicting spatio-temporal variations in stable carbon isotopes over the United Kingdom
2.45 - 3.00	All	Group Discussion

<b>9.30 - 11.30am Friday 17th September</b>		
<b>Session 7: CABLE, IMOGEN and evaluation</b>		<b>Chair: Andy Wiltshire</b> <b>Question convenor: Noah Smith</b>
9.30 - 9.40	Introduction	
9.40 - 9.55	Ian Harman	Land-air interaction within the ACCESS climate models
9.55 - 10.10	Ewan Pinnington	Using Satellite Observations to Improve Hydrological and Carbon Flux predictions of the JULES Land Surface Model
10.10 - 10.25	Andy Hartley	JULES-ES for ISIMIP: Multi-sectoral climate impacts with JULES

10.25 - 10.35	Comfort Break	
10.35 - 10.50	Garry Hayman	Investigation of the regional effectiveness of methane and land-based mitigation options to meet the aims of the Paris Climate Agreement using an inverted form of the IMOGEN.
10.50 - 11.20	All	Group discussion: Future directions for JULES
11.20 - 11.30		Closing remarks from the organisers