



# *End-term workshop "Climate Predictability & Inter-regional Linkages"*

## *Looking at achievements & future research priorities*

*Introduction to breakout group Projects' legacy & added value*

Erica Key, Belmont Forum Secretariat

**BELMONT**  
FORUM





Climate  
Predictability

**BELMONT**  
FORUM

**6th Chinese Conference on Dendrochronology**

Sixth International Workshop on Monsoons

(IWM-6)

Singapore, 13-17 November 2017



**Fourth International Conference on Earth System Modelling (ICESM)**

**Winter Polar Vortex Workshop**

**18th IUAES World Congress**

WORLD (OF) ENCOUNTERS: THE PAST, PRESENT AND FUTURE OF ANTHROPOLOGICAL KNOWLEDGE

Florianópolis Brazil July 16 - 20, 2018 Federal University of Santa Catarina (UFSC)

**EMC European Meteorological Society**

The first circular

WCRP/SPARC SATIO-TCS joint workshop on Stratosphere-Troposphere Dynamical Coupling in the Tropics

**INCOMPASS project**

part of the NERC/MoES Monsoons Programme 2015-2018

**AGU POLAR 2018**

**NiPR**

The Ninth Symposium on Polar Science 4-7 December 2018

第9回 極域科学シンポジウム 平成30年12月4日(火)~12月7日(金)

**Socio Logia JORNADAS UNLP**

**FaHCE**

**IX Jornadas de Sociología de la UNLP** 5, 6 y 7 de diciembre de 2016

Organiza: Departamento de Sociología de la Facultad de Humanidades y Ciencias de la Educación (UNLP)

**CLIVAR SCIENCE CONFERENCE**

18-25 Sept 2016

**IAPSO-IAMAS-IAGA**

27 August - 1 September 2017 Cape Town, South Africa

**XMAS**

Xiamen Symposium on Marine Environmental Sciences

FEBRUARY 22-23, 2020 LA JOLLA, CALIFORNIA

**SURFACE CURRENTS IN THE COUPLED OCEAN-ATMOSPHERE SYSTEM WORKSHOP**

Nansen Tutu Center 10th anniversary symposium: Ocean, weather and climate, science to the service of society. 10-12 March 2020. Cape Town, South Africa in parallel with OOPC panel

**5th International Conference on Reanalysis**

**8TH GEWEX OPEN SCIENCE CONFERENCE: EXTREMES AND WATER ON THE EDGE**

MAY 6 - 11, 2018 | CANMORE, ALBERTA, CANADA

**IGESS 2018**

June 1-3, 2018 Chengde, China

**International Conference on Earth System Science**

2018年地球系统科学国际研讨会

**JORNADAS INTERNACIONALES DE ANTROPOLOGÍA DEL CONFLICTO URBANO**

El papel del patrimonio en el marco del nuevo turismo urbano

13 al 15 de diciembre de 2017

**CONFERENCE TRANSFORMATIONS 2019**

LEARNING FROM TRANSFORMATIVE ACTION AND THINKING

**& Inter-regional Linkages**

**Asia Oceania Geosciences Society**

www.asiaoceania.org

PAMIP workshop 2019

Created: 28 September 2018

**JPI Climate**

**EGU European Geosciences Union**

**BAR Digital Belt and Road**

**PAGES Zaragoza 2017**

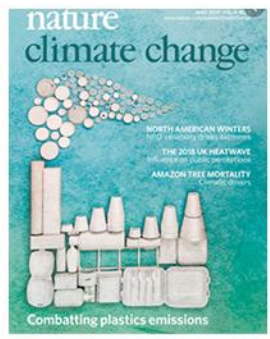
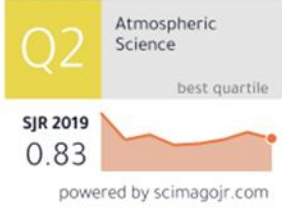
**5th Open Science Meeting**

Global Challenges for our Common Future: a paleoscience perspective



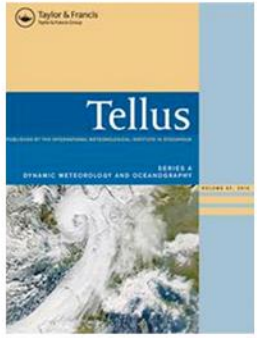
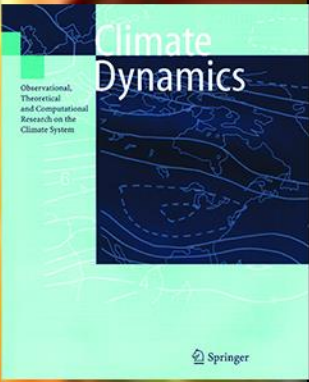
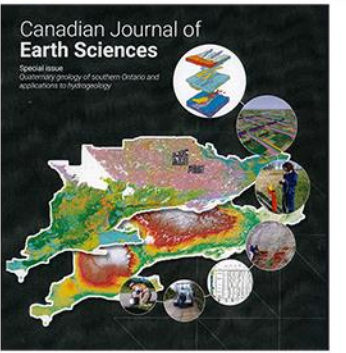
# Communication

Scientific Online Letters on the Atmosphere

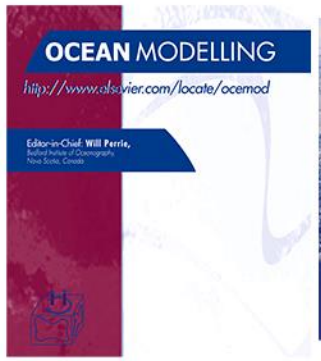
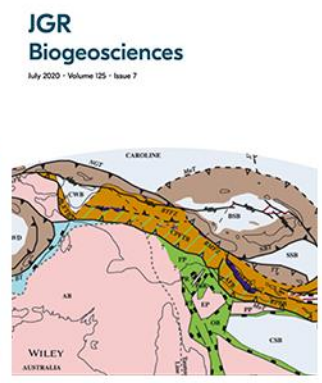
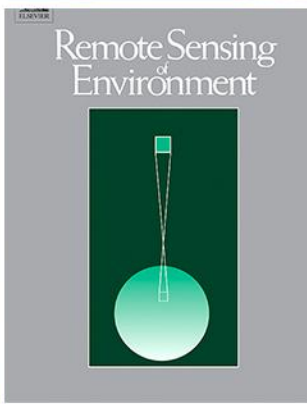
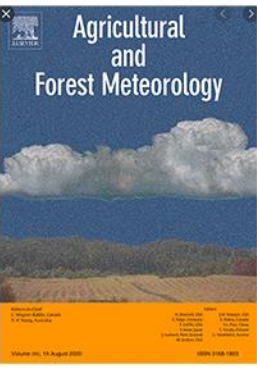


# Journals

**atmosphere**  
an Open Access Journal by MDPI



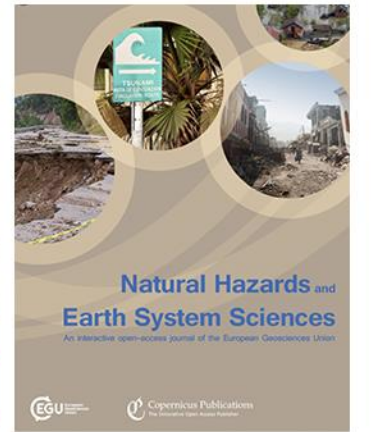
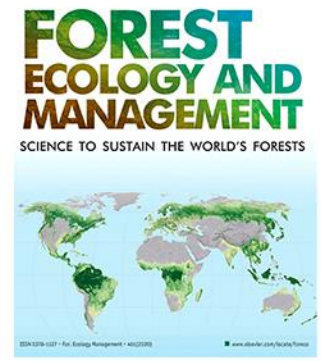
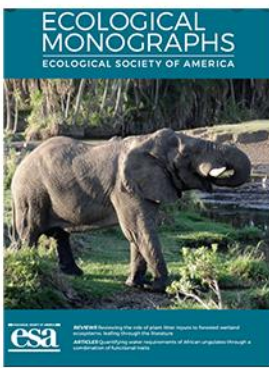
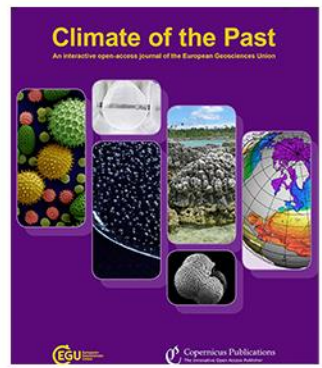
Journal of the Meteorological Society of Japan since 1882

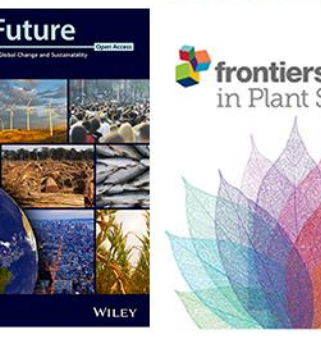
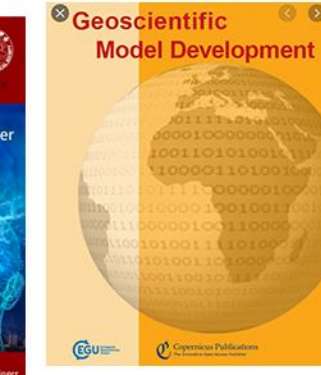
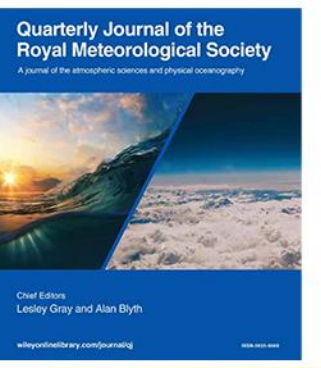
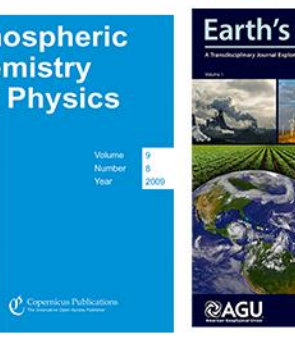
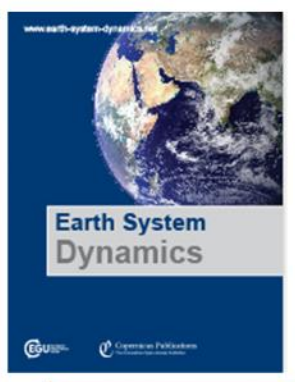
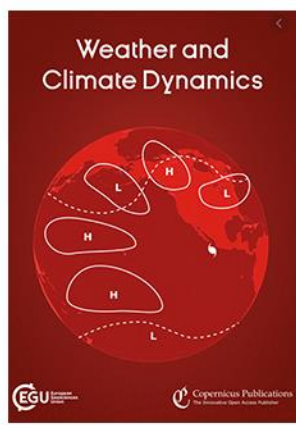
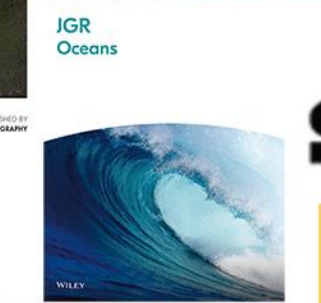
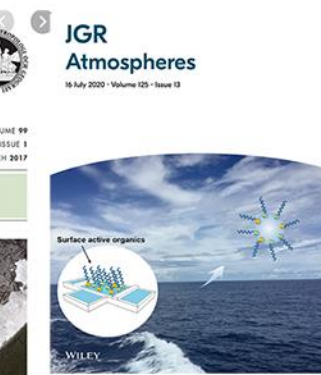
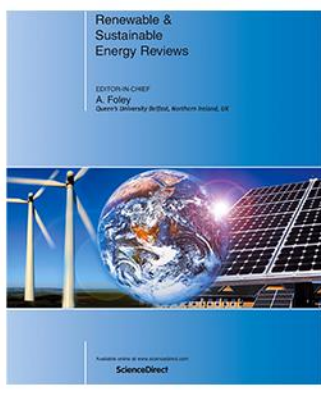
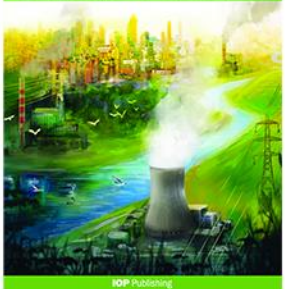
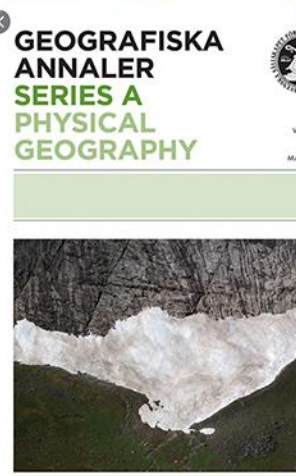
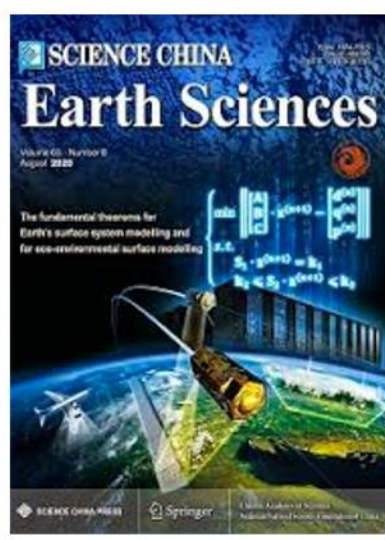
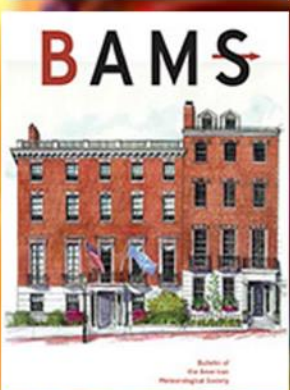


Climate Predictability

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& Inter-regional Linkages





Climate Predictability

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Presented in collaboration with Borealis – a festival for experimental music

# Next Step 3 – Climate

We join with Borealis, Bergen’s festival for new and contemporary music, for this performance of two new works that address the season’s theme of climate change and the challenges it presents and as part of our NEXT STEPS series, we welcome academics from the University of Bergen to illuminate what we hear.

**Weather influences:** Dr Robert Lee (Meteorology) was interviewed by Talk Radio about his study showing forecasts of weather patterns in the UK can be aided by looking at recent weather in the tropics and East Pacific.



← Desert Dust in the Atmosphere: Giant Particles, Giant Consequences?      Rainfall decline over Eastern Africa linked to shorter wet seasons →

**From Indonesia to the British Isles: using El Niño and weather patterns in the tropics to help predict North Atlantic and European weather**

Posted on 10 February, 2020 by danaallen



**For our weather next month, take a look at Kuala Lumpur**



Thunderstorms in Kuala Lumpur and the tropics cause effects that spread across the globe  
ALAMY

To predict the weather in Kilburn or Kinross it is worth studying the outlook in Kuala Lumpur, a study suggests.



**Seminar talk: Sea surface temperature variability and predictability based on prescribed wind-stress simulations**

Annika Reintges from GEOMAR Helmholtz Centre for Ocean Research will give a seminar talk on 13 August.



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## De-colonizing groundwater governance? Learning from local initiatives to care for, share, or recharge aquifers.

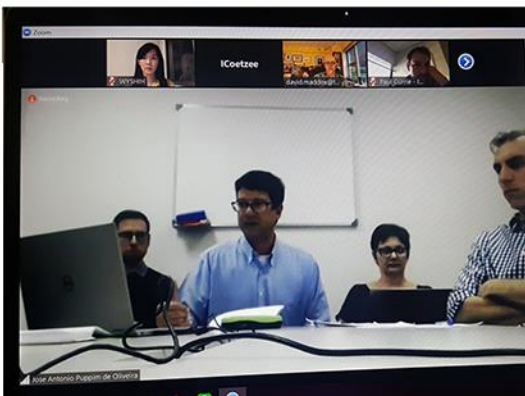
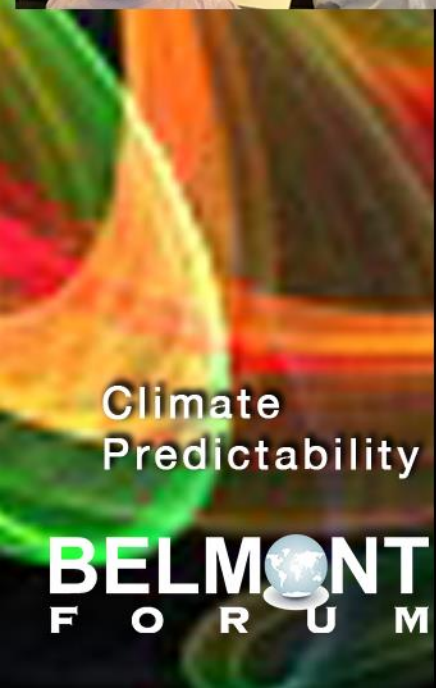
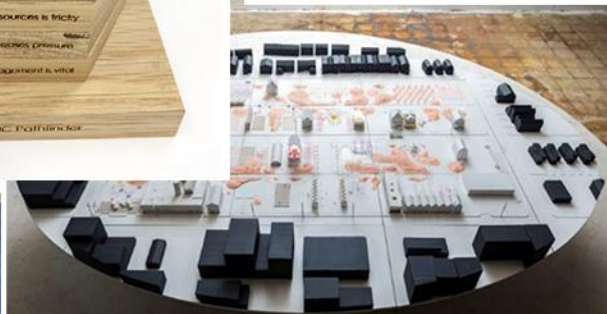
Margreet Zwarteveen

Date: 27 February 2020 Time: 7:00 PM

Finishes: 27 February 2020 Time: 8:30 PM

Venue: Brunei Gallery Room: B103

Type of Event: Seminar





**Belmont Forum** @Belmont\_Forum · 9h  
 Tomorrow we will have our first meet with the Arctic Resilience awardee teams. If you haven't already, check out their project videos on the @Belmont\_Forum YouTube channel & follow the teams' progress @SeMPER\_Arctic, @SERUSproject, nicharctic.ca, mpi.ysn.ru/en/



# BELMONT FORUM

HOME ABOUT CRAS OPPORTUNITIES POST-AWARD eIDM IMPACT PROJECTS NEWS CALENDAR RESOURCE LIBRARY CONNECT



## News Posts

16th Annual Meeting  
 Asia Oceania Geosciences Society

# AOGS

28 Jul- 2 Aug 2019  
 Singapore

# BELMONT FORUM

## Annual Report 2017

### BELMONT FORUM

multi-national funding to address urgent needs in global change research

**Awardee Network Map 2012-2016**

- More than 40 funding partners on six continents supporting 48 active projects
- Awardees include participation from 420 scientists and stakeholders in more than 35 countries
- Projects leverage existing expertise and investments to construct an ever-broadening network of scientists and funding partners
- Advancing interdisciplinary and transdisciplinary science in multi-national research projects
- Implementing a global open data policy and principles which began from scientific and stakeholder communities
- Ensuring accept of community-relevant results and decisions vital to inform human action and adaptation to global environmental change

Peer funding calls supported priority focused topics:

- Climate Resilience
- Food Security and Lead the Change
- Adaptability and Ecosystem Services
- Urban Resilience and Science for Sustainability
- Mountains at Frontiers of Change
- Climate Resilience and Ocean-Atmosphere Linkages

New funding opportunities explore research on:

- Food-Water-Energy Nexus
- Transformations to Sustainability

Transdisciplinary training is being made available through collaboration with ISSC.

Open data access is being developed through activity in four thematic areas:

- Coordination
- Data Planning
- e-Infrastructures
- Human Dimensions

Become part of our global network. Visit [www.belmontforum.org](http://www.belmontforum.org) for current activity and future opportunities.



Mark Howden  
 Australian National University

Ioan Fazey  
 University of York

Tobias Buser  
 Swiss Academies of Arts and Sciences

Mauricio Molina  
 Universidad de Valparaiso

Susanne Moser  
 Antioch University New England

Ursula Oswald  
 Universidad Autónoma de México

Susanna Ehlers  
 Inter-American Institute for Global Change Research

October 17th 2019  
 Santiago, CHILE

TRANSFORMATIONS  
 CONFERENCE  
 2019

Transforming Our World

Swiss Science Briefing 2020

## A Sustainable Europe through Transdisciplinary Research

05 February 2020 – 17:30-20:00  
 Mission of Switzerland to the European Union  
 Place du Luxembourg 1  
 1050 Brussels

swiss academies of arts and sciences

SHARING KNOWLEDGE & EXCELLENCE

# Climate Predictability

# BELMONT FORUM

# Belmont Forum Data Management Plan Scorecard

 Bishop, Bradley W.;  Ungvari, Judit;  Davis, Rowena I;  Lee, Tina;  Goudeseune, Lise;  Virapongse, Arika; Samors, Robert J.

This document is a resource developed for the Belmont Forum for evaluating formal Data Management Plans submitted by research teams who've been awarded Collaborative Research Action funding.

The purpose and use of this Scorecard is three-fold:

1. as an evaluation tool to quantitatively assess full proposal DMP responses to questions drawn from the Data and Digital Outputs Management Plan (DDOMP) template that are included in the Belmont Forum grant application process on BFGO.org;
2. as a training resource to be shared with potential proposers to help define expectations for data management and/or with awardees (i.e., post-award) to identify specific elements of their data management planning efforts that may be unclear or lacking; and/or
3. as an evaluation tool employed by the Secretariat or TPOs to assess milestones and progress during mid- or end-term project review/valorization.

Climate  
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& Inter-regional  
Linkages

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**Data Management Training Webinar**  
193 views · Apr 23, 2018

**Belmont Forum Research Goals and Methods Section 3: Data Planning and Resources**  
23 views · Apr 16, 2019

**Why Data Management (BF DMT Module 1)**  
209 views · Jun 3, 2019

**Toolkit Training 3: Training Options**  
31 views · Apr 9, 2019

**How Data Management (BF DMT Module 2)**  
144 views · Apr 9, 2019

# DDOMP Resources on YouTube

**Additional Considerations for Data Management (BF DMT Module 3)**  
31 views · Jun 3, 2019

**Toolkit Training 1: Welcome to the Data Management Toolkit!**  
84 views · Apr 9, 2019

**Toolkit Training 1: Welcome to the Data Management Toolkit!**  
84 views · Apr 9, 2019



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**Datasets (5)**

**BITMAP: Tracks of western disturbances transiting over Pakistan and north India in ERA-Interim reanalysis data (1979-2015)**

[Register/Login for access](#)  
[Explore](#)  
[More Info](#)

**BITMAP: Tracks of western disturbances transiting Pakistan and north India from various CMIP5 Historical experiments**

[Register/Login for access](#)  
[Explore](#)  
[More Info](#)

**BITMAP: Tracks of western disturbances transiting Pakistan and north India from various CMIP5 RCP45 experiments**

[Register/Login for access](#)  
[Explore](#)  
[More Info](#)

**CLIMAX** **DIALOGO BERMEJO**

**Datos Oficiales**

**Red Comunitaria**

**Pronóstico Diario SMN**

**Pronóstico semanal CLIMAX**

**Dataset**

**NERC** **INTEGRATE: climate model simulations data to study the Asian climate response to Atlantic Multidecadal Oscillation (AMO) using the Intermediate General Circulation Model version 4 (IGCM4)**

[Register/Login for access](#)
[Explore](#)
[See Related Documents](#)

**East Asia 1150 Year Composite Reconstruction of Multidecadal Temperature Changes**

**Originator:**  
Wang, J.L.; Yang, B.; Osborn, T.J.; Ljungqvist, F.C.; Zhang, H.; Luterbacher, J.

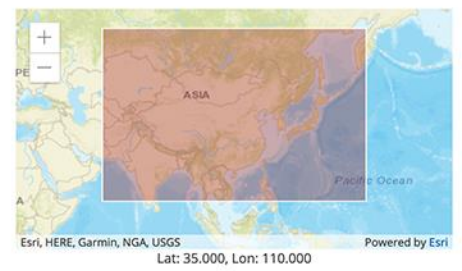
**Citation Information:**  
Jianglin Wang, Bao Yang, Timothy J. Osborn, Fredrik Charpentier Ljungqvist, Huan Zhang, Juerg Luterbacher. 2018. Causes of East Asian Temperature Multidecadal Variability Since 850 CE. Geophysical Research Letters, 45(24), 13485-13494. doi: 10.1029/2018GL080725

**NOAA Study Page:**  
<https://www.ncdc.noaa.gov/paleo/study/27372>

**JSON Metadata:**  
<https://www.ncdc.noaa.gov/paleo-search/study/search.json?xmlId=67495>

**DIF Metadata:**  
<http://www1.ncdc.noaa.gov/pub/data/metadata/published/paleo/dif/xml/noaa-recon-27372.xml>

**ISO Metadata:**  
<http://www1.ncdc.noaa.gov/pub/data/metadata/published/paleo/iso/xml/noaa-recon-27372.xml>



**PANGAEA**  
Data Publisher for Earth & Environmental Science

**Citation:** Carré, Matthieu; Azzoug, Moufok; Zaharias, Paul; Camara, Abdoulaye; Cheddadi, Rachid; Chevalier, Manuel; Fiorillo, Denis; Gaye, Amadou T.; Janicot, Serge; Khodri, Myriam; Lazar, Alban; Lazareth, Claire E.; Mignot, Juliette; Mitma Garcia, Nancy; Patris, Nicolas; Perrot, Océane; Wade, Malick (2018): Mollusk shell  $\delta^{18}O$  in the past 1600 years in the Saloum Delta, Senegal. PANGAEA, <https://doi.org/10.1594/PANGAEA.892303>.

**Climate mean state and trends**

- \* BIOME 6000 Update : <https://researchdata.reading.ac.uk/99/>
- \* Global Lake Status Database Update
- \* Reading Paleofire Database
- Collaboration with the Global Paleofire Working Group of PAGES ([http://www.pastglobalchanges.org/index.php?option=com\\_content&view=article&id=224&Itemid=248](http://www.pastglobalchanges.org/index.php?option=com_content&view=article&id=224&Itemid=248)) to produce an updated version of the Global Charcoal Database
- \* SISAL (Speleothem Isotopes Synthesis and AnaLysis Working Group) : <https://researchdata.reading.ac.uk/242/>
- \* Mollusk data as a proxy for Sahel precipitation (Carré et al. 2019)
- \* Tropical ocean multi proxy synthesis

**& Inter-regional Linkages**



**Open Data  
FAIR-like Principles**



Climate  
Predictability

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Branch: master

Go to file

Code

TimOsbornClim committed 0b9ae78 on Nov 15, 2017 7 commits 1 branch 0 tags

CRUST	Add empty output folders	3 years ago
data	Add CRUST paper data files	3 years ago
CRUST_readme.pdf	Add documents	3 years ago
CRUST_structure.pdf	Add documents	3 years ago
CRUST_userguide.pdf	Add documents	3 years ago
LICENSE.md	Add license	3 years ago
README.md	Update README.md	3 years ago

## Digital Objects Sharing



$p_k = Ck^{\beta}$   
 $p(l) \propto \exp(-l/\gamma)$   
 $G = (V, E)$   
 $\sigma_{jk}(i)$   
 $\sigma_{jk}$

# pyunicorn

home | search

### Introduction

build passing

**pyunicorn** (Unified Complex Network and RecurreNce analysis toolbox) is a fully object-oriented Python package for the advanced analysis and modeling of complex networks. Above the standard measures of complex network theory such as degree, betweenness and clustering coefficient it provides some **uncommon but interesting statistics** like Newman's random walk betweenness. **pyunicorn** features novel **node-weighted (node splitting invariant) network statistics** as well as measures designed for analyzing **networks of interacting/interdependent networks**.

### About

CRUST: Climatic Research Unit  
Standardisation of Tree-ring data

[crudata.uea.ac.uk/cru/software...](http://crudata.uea.ac.uk/cru/software...)

climate dendroclimatology

tree-ring-chronologies

Readme

GPL-3.0 License

### Releases

No releases published

OSFHOME

Palaeo-Constraints on Monso... Files Wiki Analytics Registrations

Notice: Due to a recent spike in spam activities, we have increased our measures to flag spam content on... been flagged in error.

### Karstfor\_NASAdata.py (Version: 1)

Palaeo-Constraints on Monso...
OSF Storage (United States)
<b>Karstfor_NASAdata.py</b>
PLOT_NASADATA_outpu...
Sabela_PACMEDY_Repo...

```
#!/usr/bin/env python
#####
# program karstfor
#
# Author : Sabela Regueiro Sanfiz
#
# If you have any doubt, just drop me a message:
#
#
# KASTFOR - lumped parameter model
```



# Origin of seasonal predictability for summer climate over the Northwestern Pacific

Overview of attention for article published in Proceedings of the National Academy of Sciences of the United States of America, April 2013



About this Attention Score

In the top 25% of all research outputs scored by Altmetric

SUMMARY Blogs Policy documents Twitter Dimensions citations

**Title** Origin of seasonal predictability for summer climate over the Northwestern Pacific  
**Published in** Proceedings of the National Academy of Sciences of the United States of America, April 2013  
**DOI** 10.1073/pnas.1215582110  
**Pubmed ID** 23610388  
**Authors** Y. Kosaka, S.-P. Xie, N.-C. Lau, G. A. Vecchi  
**Abstract** Summer climate in the Northwestern Pacific (NWP) displays large year-to-year variability... [show]

View on publisher site

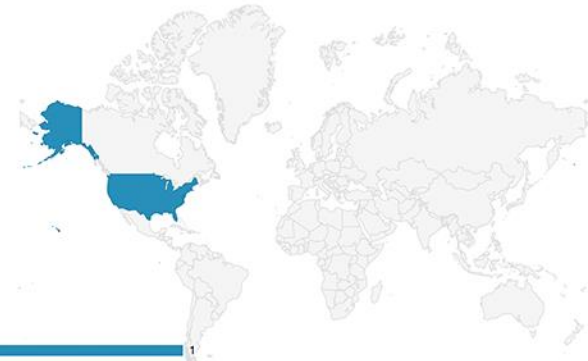
Alert me about new mentions

Mentioned by  
 1 blog  
 1 policy source  
 4 tweeters

Citations  
 141 Dimensions

Readers on  
 90 Mendeley  
 2 CiteULike

What is this page?



Geographical breakdown

Country	Count	As %
United States	1	25%
Hong Kong	1	25%
Unknown	2	50%

Demographic breakdown

Type	Count	As %
Members of the public	3	75%
Scientists	1	25%

TWITTER DEMOGRAPHICS MENDELEY READERS ATTENTION SCORE IN CONTEXT

The data shown below were collected from the profiles of 4 tweeters who shared this research output. [Click here to find out more about how the information was compiled.](#)

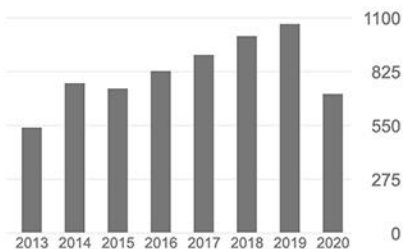


**Carolina Vera**

CIMA/FCEN/UBA-CONICET UMI-IFAECI/CNRS  
 Verified email at cima.fcen.uba.ar

Climate variability and chan...

	All	Since 2015
Citations	8395	5265
h-index	33	27
i10-index	58	49



**Noel Keenlyside**

University of Bergen | UiB · Geophysical Institute  
 i10 41.35

About Network Publications **205** Projects **1**

205 Publications

24,952 Reads

8,663 Citations

## Career advancing metrics

- Mendeley Profile
- Google Scholar
- Research Gate
- ORCID
- Altmetrics
- Citation indices

Climate Predictability

& Inter-regional Linkages

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# What was your greatest added value?

Economic  
Enhanced knowledge Interconnected technology  
Profitability Network development Translation  
Community support cross sector governance  
Scholar exchange  
Open data Preventative Measures  
Collaborative development Scalability  
Policy Web services Early career support  
Decision support Intervention  
Marketability  
Ecosystem services Best practices  
Transdisciplinary training  
& Inter-regional Linkages Security  
Management Technology Transfer  
International partnerships  
Digital Health Systems

Climate  
Predictability

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Codevelopment of a community network of rainfall monitoring

A warmer Pacific Ocean in the following decades could accelerate the ongoing Arctic warming

Identification of worst case scenarios for renewable energy systems

Model spread relative to stratospheric response to Arctic sea ice loss is related to depth and lateral extent of the tropospheric dynamical response

Early summer moisture is the primary controlling factor for tree growth in Northwestern China

Improved predictability of high impact climate events, such as Extreme Cold Spells over Central Asia

# Outcomes

There are inconsistencies in the identification of high latitude blocking by algorithms

Distinguish influences of large scale modes of internal variability, external natural, and anthropogenic forcings on the East Asian warm season temperature

Around 50% of sea ice reduction in the past two decades might be due to interdecadal climate variability

Development of fire risk maps for Sweden

& Inter-regional Linkages

Arctic sea ice loss and its linkage to the stratosphere may lead to a nonlinear atmospheric response to global warming

The contribution of CO<sub>2</sub> fertilization to changing tree growth still needs to be explored because climate and CO<sub>2</sub> are changing simultaneously.

Climate Predictability

**BELMONT**  
FORUM





Disaster  
 Freshwater  
 Mountains  
 Services  
 Reduction  
 Ocean  
 Biodiversity  
 Food-Water-Energy  
 Vulnerability  
 Observing  
 Innovation  
 Sentinels  
 Coastal  
 Groundwater  
 Risk  
 E-infrastructure  
 Science-driven  
 Use  
 Soils  
 Ecosystem  
 Resilience  
**Change**  
 Climate-Environment-Health  
 Nexus  
**Security**  
 SDGs  
 Pathways  
 Sustainable  
**Arctic**  
**Sustainability**  
**Food**  
**Climate**

RACArctic



WASTE FEW ULL  
WASTE: FOOD - ENERGY - WATER URBAN LIVING LABS



TAPESTRY

BioDiv-Support



Arctic-Biodiver



COPERA



BAAMRGP



BIOESSHEALTH

Arctic-ERA

CONNECT

ENLARGE



WILDHEALTH



Future Bird Scenarios

FATE

CLIMTREE

HIARC

AFV

THESIS



CON-VIVA

GoST

SECBIT



TSUNAGARI



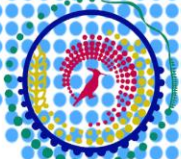
ACCEDE



SALBES



JWP



PARSEC



SMARTS2



TRUEPATH



SAHEWS



InterDec

TLSCC

METABOLIC

IFWEN

SOMBEE

BONDS

Balancing biodiversity coNServation with Development in Amazonian wetlands



AGENTS



FICESSA

Food Security Impacts of Industrial Crop Expansion in Sub-Saharan Africa

SAFGOV

Minex

design for the food energy water nexus



ABC Telecoupling



XINGU

METROPOLE

Farms4 Biodiversity

IHDBS



WWW.PIC



Reef-FUTURES

GLO CULL

URBAN LIVING LABS



MAGIC



SEAVIEW



Artisticc

Adaptation Research, a Trans-disciplinary transnational community and policy-centred approach



SecTenSusPeace



Waterproofing Data

