

Kia ora MSSANZers,

Welcome to your Friday digest, this week featuring a range of conference/symposium announcements, a request to contribute to an on-line survey, and some job announcements.

Ngā mihi, Val

- Bridging the gap between satellite measurement capability and the needs of decision-makers in water resource management: Researchers from the Centre for Water, Climate and Land (CWCL) at the University of Newcastle is seeking participants who are involved (or partly) in making decisions (business/operational or policy-related) in water resource management sectors across Australia to complete a 15 minute online survey: <https://redcap.hmri.org.au/surveys/index.php?s=JWA4YWHAP4>. See more information below.
- The Applied Hydroclimatology Group (<http://sites.dartmouth.edu/jwinter/>) at Dartmouth is recruiting an M.S. or Ph.D. student to explore the current and future sustainability of irrigated agriculture in the United States. Irrigated crops account for over \$118 billion of US agricultural value and 80% of US consumptive water use. The successful applicant will use regional climate and crop models to advance projections of US climate, water supply, and irrigated agricultural production, as well as engage stakeholders in the Central US and conduct outreach to local high schools. A background in agricultural science, atmospheric science, or hydrology and experience with programming are preferred but not required. Interested students are encouraged to email Jonathan Winter ([jwinter@dartmouth.edu](mailto:jwinter@dartmouth.edu)), and apply ([www.dartmouth.edu/~earthsci/](http://www.dartmouth.edu/~earthsci/)) by January 15, 2020.
- Please see attached that the Crop Science Group, University of Bonn, Germany is seeking a PhD student on “Observing and modeling soil erosion by wind and water in agro-forestry systems”. The deadline is December 15, 2019.
- iEMSs is seeking proposals for sessions and workshops for the 10<sup>th</sup> International Environmental Modelling and Software society (iEMSs) Conference in Brussels, Belgium next summer (6<sup>th</sup>-10<sup>th</sup> July 2020) ([www.iemss2020.com](http://www.iemss2020.com)), See more information below. The deadline is 1 December.
- At the University of Wisconsin-Madison is seeking a PhD student for a project on “Field Scale Runoff Phosphorus Modelling”. The work will include integration between WEPP and the universities’ P risk model. Experience with soil physical and/or hydrological models is highly desirable. See below for more information.

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Dear all,

The researchers from the Centre for Water, Climate and Land (CWCL) at the University of Newcastle is seeking participants who are involved (or partly) in making decisions (business/operational or policy-related) in water resource management sectors across Australia to complete a 15 minute online survey: <https://redcap.hmri.org.au/surveys/index.php?s=JWA4YWHAP4>

DO SATELLITES HELP YOU MAKE DECISIONS?

- Bridging the gap between satellite measurement capability and the needs of decision-makers in water resource management -

This research project is being conducted by the researchers from the CWCL in collaboration with the Earth Observation Research Center at Japan Aerospace Exploration Agency (JAXA). The survey asks questions about you, your experience in using scientific data and any requests to satellite data for supporting your decision making. By participating in this survey you will have the opportunity to

share your thoughts on satellite data and help in the development, planning and management of future satellite mission.

For more information about this study and to take the survey please follow the link:

<https://redcap.hmri.org.au/surveys/index.php?s=JWA4YWHAP4>

The survey will be open until midnight 13 December 2019.

If you have any questions about the study please contact [maki.kikuchi@newcastle.edu.au](mailto:maki.kikuchi@newcastle.edu.au) This project has been approved by the University's Human Research Ethics Committee, Approval No. H-2019-0297.

Thank you for considering participation in this project.

Dr. Maki Kikuchi (Co-Investigator)  
Visiting Academic,  
Centre for Water, Climate and Land (CWCL), The University of Newcastle

Researcher,  
Earth Observation Research Center,  
Japan Aerospace Exploration Agency (JAXA)

Associate Professor Anthony Kiem (Chief Investigator) Centre for Water, Climate and Land (CWCL),  
The University of Newcastle

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This is a reminder and second call for Sessions and Workshops for the 10<sup>th</sup> international Environmental Modelling and Software society (iEMSs) Conference in Brussels, Belgium next summer (6<sup>th</sup>-10<sup>th</sup> July 2020) ([www.iemss2020.com](http://www.iemss2020.com)).

Six different topical streams have been defined as a general guide for the session and workshop proposals:

Stream A – Decision making & Public participation in Environmental modelling

Stream B – Processing and Visualizing Environmental information from Big Data, Data mining, GIS & Remote sensing

Stream C – Computational methods, workflows and integrated systems in Environmental modelling

Stream D – System identification & Uncertainty in Environmental computing

Stream E – Modelling for the Sustainable development goals under Global change

Stream F – Environmental impact of climate change, environmental pollution and other anthropogenic effects

Additional details on the streams can be found at <https://iemss2020.com/streams/>.

Please consider submitting a proposal for the iEMSs2020 Conference, containing the topic title, the names of the organisers, a brief description (~100 words) of the session and an indication of which

of the 6 streams you prefer to patronize. Please send your session or workshop proposals to [sessions@iemss2020.com](mailto:sessions@iemss2020.com) by 1<sup>st</sup> December 2019.

We look forward to welcoming you to the Capital of Europe next summer!

Best Regards,

Ann van Griensven & Jiri Nossent  
2020 iEMSS Conference Conveners  
Department of Hydrology and Hydraulic Engineering  
Vrije Universiteit Brussel

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#### PhD Assistantship Opportunity **Field Scale Runoff Phosphorus Modelling**

The Dept. of Soil Science at the University of Wisconsin-Madison is seeking a motivated and enthusiastic PhD graduate student to integrate Water Erosion Prediction Program (WEPP) runoff and erosion outputs into Wisconsin's field-scale phosphorus runoff risk model. The project will use an existing database that includes edge-of-field measurements, with particular focus on using WEPP's snowmelt hydrology model to address runoff and phosphorus losses from frozen and thawing soils. Experience with soil physical and/or hydrological models is highly desirable. Ability to work with a diverse group of researchers and computer programmers is required.

Assistantship starts August 2020 but could be available as early as January 2020 if the right candidate is found.

For more information, contact Dr. Francisco Arriaga [farriaga@wisc.edu](mailto:farriaga@wisc.edu). Use "Field Scale Runoff Phosphorus Modelling" in the subject line.

From February 15, 2020 onwards, the **Crop Science Group** at the University of Bonn seeks to employ, for **up to 3 years (max.)**.

## 1 Doctoral Student (65%) (TV-L 13)

The successful candidate will be involved in the BMBF-funded research project “Digital Agricultural Knowledge and Information System (DAKIS)”. DAKIS contributes to the vision for spatially and functionally diversified agricultural systems. These systems will be small-scale, and landscape-specific, as well as tailored to the demands of society by effectively integrating requirements for agricultural goods and services into farm planning. The Crop Science group at the University of Bonn is contributing to DAKIS with process-based dynamic models and by supporting field data collection using novel and established remote and surface observation techniques.

Specifically, the research of the PhD student will focus on “Modeling soil erosion by wind and water in agro-forestry systems”. The experimental site is located in Brandenburg, Germany. The main tasks of the successful candidate will be to 1) conduct ground- and aircraft-based monitoring of the test site 2) to develop a model for the simulation of soil erosion by wind and water using the modeling framework of SIMPLACE ([www.simplace.net](http://www.simplace.net)).

- Your tasks:
- Regular ground and aircraft-based monitoring of the DAKIS test sites and field data collection
  - Model soil erosion by developing suitable modules within the SIMPLACE framework
  - Publishing results in peer reviewed journals
- Your profile:
- Master degree in agriculture, forestry, soil science or related disciplines, preferably with a background in agro-forestry/crop production, biodiversity, remote sensing and/or good expertise in using simulation models
  - Experiences and interest in developing process-based, numerical models especially related to soil erosion and in object-oriented computer programming are a strong plus
  - Expertise in R, XML and Python scripting is desirable
  - An interest in interdisciplinary and collaborative research
- We offer:
- Participation in the multi-disciplinary international research hub of “Digital Agricultural Knowledge and Information System (DAKIS)”
  - An open, stimulating and interdisciplinary work environment where good ideas are encouraged and supported
  - The opportunity of conducting research towards a PhD and of receiving the support necessary to do successfully
  - Enrolment in the Theodor Brinkmann Graduate School of the Agricultural Faculty
  - 65% TVL E13 on the salary scale

The University of Bonn is committed to diversity and equal opportunity. It is certified as a family-friendly university and aims to increase the number of women employed in areas where women are under-represented and to promote their careers. To that end, it urges women with relevant qualifications to apply. Applications will be handled in accordance with the *Landesgleichstellungsgesetz* (State Equality Act).

Applications from suitable candidates with a certified disability or equivalent status are particularly welcome. Female candidates are encouraged to submit their applications. Applicants please submit (1) A letter of motivation including your specific research interest (max. 1 page), (2) a curriculum vitae including a list of publications, (3) a copy of your Master degree, (4) the names and contact details of two referees (position, professional address and e-mail) in a single pdf file should be sent till **15-12-2019** to Dr. Muhammad Habib-ur-Rahman (Email: [mhabibur@uni-bonn.de](mailto:mhabibur@uni-bonn.de)). For further information concerning our research group you can visit our website at [http://www.lap.uni-bonn.de/home?set\\_language=en](http://www.lap.uni-bonn.de/home?set_language=en).