4th International Conference of **H**ydrology delivers **E**arth **S**ystem **S**ciences to **S**ociety

Climate Extremes and Global Energy, Water, and Carbon Cycles: Improving and Integrating Knowledge across Disciplines

@ Tokyo, Japan, 16-19 May 201

AIM

Across various disciplines, a number of community-wide initiatives (such as GSWP, ISIMIP, HAPPI, ILAMB, etc.) have developed to synthesize and advance knowledge of climate change impacts, land surface processes, and global energy and water cycles. They have achieved significant scientific progress and made indispensable contributions to the development of Earth-system sciences in recent decades. Now, there is a growing need to exchange and collaborate between these different initiatives and disciplines, in order to solve, in particular, emerging problems related to climate and human society as a holistic system. This symposium and workshop will provide an agora to strengthen synergies between research communities of climate monitoring, modeling and impacts and to discuss how to deliver scientific achievements to our society. It will provide a chance for early career researchers as well those from developing countries to engage with frontier earth system science approaches to dealing with these problems. A particular scientific focus of the meeting will be on climate extremes and their impacts, acknowledging the importance of these events in a changing climate.

PROGRAM

| 16 th TUE | | <u>17th WED</u> . | | <u>18thTHU</u> . | | <u>19th FRI</u> . |
|----------------------|------------------------------------|---------------------------------|-------------|-----------------------------|-----------------------|------------------------------|
| 0900 – 1030 | | Symposium 1 | | Symposium 3 | | Symposium 5 |
| 1030 - 1100 | | Poster core-time / Coffee break | | | Coffee break | |
| 1100 - 1230 | | Symposium 2 | | Symposium 4 | | General Discussion |
| 1230 - 1400 | | Lunch | | | Loint Droject Meeting | |
| 1400 – 1530 | | Workshop 1 | Tutorial 1 | Workshop 3 | Tutorial 2 | Joint Project Meeting |
| 1530 - 1600 | Registration | Poster core-time / Coffee break | | | | |
| 1600 – 1730 | Poster introduction Ice breaker | Workshop 2 | Open Sci. 1 | Workshop 4 | Open Sci. 2 | |
| 1730 — | | | | Band | quet | |

Symposium sessions:

having consecutive 20 min. keynote presentations with following 30 min open discussion.

1. Changes of Climate Forcing and Terrestrial Feedback

| LS3MIP/CMIP6 & GSWP3/GLASS | : Hyungjun Kim (Univ. of Tokyo, Japan) |
|----------------------------|--|
| ESM-SnowMIP | : Gerhard Krinner (LGGE, France) |
| LUMIP | : Dave Lawrence (NCAR, USA) |

2. Changing Climate and Natural-Human System

ISIMIP : Jacob Schewe (PIK, Germany)

| WFaS | : Yoshihide Wada (IIASA, Austria) |
|------|-----------------------------------|
| H08 | : Naota Hanasaki (NIES, Japan) |

3. Satellite Remote Sensing and Model Integration

| WWO/NASA | : James Famiglietti (JPL/NASA, USA) |
|-----------|--|
| EORC/JAXA | : Riko Oki (EORC/JAXA, Japan) |
| DIAS | : Akiyuki Kawasaki (Univ. of Tokyo, Japan) |

4. Dealing with Uncertainties in Model Simulations

| ILAMB | : Forrest Hoffman (ORNL, USA) |
|-------|--|
| PALS | : Gab Abramowitz (Univ. of South Wales, Australia) |
| ΗΑΡΡΙ | : Daniel Mitchell (Bristol Univ.), |

5. Delivering Science to Society

Taikan Oki (Univ. of Tokyo, Japan), Murugesu Sivapalan (UIUC, USA), Joon Kim (Seoul Nat. Univ., Korea)

Workshop sessions:

having 6 talks, and each talk is in 15 min. including Q/A. The topics will extent broad range from earth system to social sciences related with climate extreme and including extreme events and global circulations.

- **1.** Climate Extreme: Atmospheric Forcing, Land Feedback and Propagation Chair: Tomohito Yamada (Hokkaido Univ., Japan), Jin-Ho Yoon (GIST, Korea)
- 2. Interaction between Nature and Society: Modeling and Policies Chair: Min-Hui Lo, (National Taiwan Univ., Taiwan), Shinichiro Nakamura (Nagoya Univ.)
- **3. Short-/mid-range Hydrologic Forecast and Data Assimilation** *Chair: David Cedric (JPL/NASA, USA), Kei Yoshimura (Univ. of Tokyo, Japan)*
- 4. Satellite Remote Sensing for Extreme Monitoring Chair: JT Reager (JPL, USA), Shinta Seto (Nagasaki Univ., Japan)

Open Science Sessions:

- 1. Open ISIMIP Session Jacob Schewe (PIK, Germany), Hyungjun Kim (Univ. of Tokyo, Japan)
- 2. Open GLASS/GEWEX Session

Gab Abramowitz (Univ. of South Wales, Austrailia), Mike Ek (NCEP, USA), Aaron Boone (Meteo-France, France), Sonia Seneviratne (ETH, Switzerland), Hyungjun Kim (Univ. of Tokyo, Japan)

Tutorial Sessions:

- 1. ILAMB Model Benchmarking Package : Description, installation, and basic operation Nathan Collier (ORNL, USA)
- 2. ILAMB Model Benchmarking Package : User issues, package design, and advanced usage Nathan Collier (ORNL, USA)

<u>Joint Project Meetings</u> are managed by each project (e.g., GSWP, ISIMIP, RivMIP, ILAMB, ESM-SnowMIP, HAPPI, and so on), and parts of meetings are possibly opened to registered observers.

REGISTRATION and CALL FOR ABSTRACTS

Registration of HESSS4 should be done through the conference web page

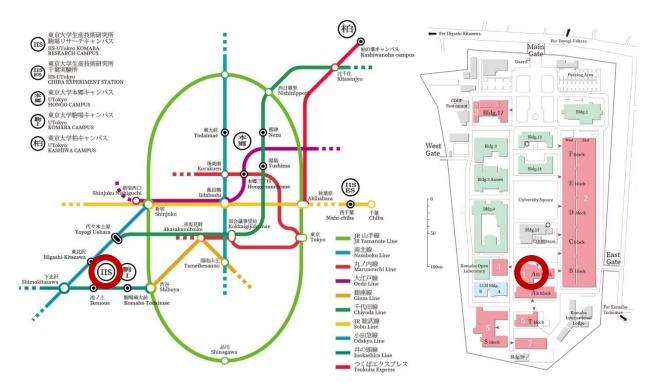
(<u>http://www.gewexevents.org/events/hesss4/</u>). Registration of HESSS4 will close 20th April, and the early registration fee is 10,000 JPY. After 20th April or on-site registration, it will be 15,000 JPY. There is limited budget to support travels. Mostly, students and early-career scientists originated from developing countries will take priority. To request travel support, early registration by 31th March is requested.

We encourage submissions of contributed abstracts on various scientific issues related with broad field of researches such as hydro-meteorology/climatology, boundary layer meteorology, remote sensing, water resource and quality, or climate change impacts on society, for oral/poster presentations. The contributed abstracts will be assigned into appropriate subject as either oral or poster presentation through evaluation processes.

LOGISTICS

Venue and Access:

Building An, Institute of Industrial Science, The University of Tokyo, 4-6-1 Komaba, Meguro-ku, Tokyo, 153-8505, Japan (<u>https://goo.gl/maps/mAYeK1W3juB2</u>)



Odakyu Line / Tokyo Metro-Chiyoda Line (from Shinjuku area) 8-min walk from Higashi-Kitazawa Station or 12-min walk from Yoyogi Uehara Station

Keio Inokashira Line (from Shibuya area)

10-min walk from Komaba-Todaimae Station or 10-min walk from Ikenoue Station

Airport Limousine

Haneda – Shibuya : <u>https://www.limousinebus.co.jp/en/bus_services/haneda/shibuya.html</u> Haneda – Shinjuku : <u>https://www.limousinebus.co.jp/en/bus_services/haneda/shinjuku.html</u> Narita – Shibuya : <u>https://www.limousinebus.co.jp/en/bus_services/narita/shibuya.html</u> Narita – Shinjuku : <u>https://www.limousinebus.co.jp/en/bus_services/narita/shinjuku.html</u>

Also, railway and metro are available (e.g., Narita Express, Skyliner, Tokyo Monorail, Keikyu), and their connections from/to the airports are searchable through Google Map or Japan Transit Planer (https://world.jorudan.co.jp/mln/en/).

Hotels:

Conference rate will be available at two hotels (30 rooms each) in Shibuya area for 14 – 20th May. 1) Shibuya Excel Hotel Tokyu: 18,000JPY (<u>http://www.tokyuhotelsjapan.com/en/hotel/TE/TE_SHIBU/</u>) 2) Tokyu Stay Shibuya Shin-Minamiguchi: 14,000JPY (<u>http://www.tokyustay.co.jp/e/hotel/SIM/</u>)

If you need reservation on above rate, please contact the conference secretariat by 20th April.

There are many other options available at Shibuya and Shinjuku area where are the most convenient area to access the venue.

ORGANIZING COMMITTEE

Scientific Committee:

Hyungjun Kim, Jacob Schewe, Gab Abramowitz, Michael Ek, Aaron Boone, Sonia Seneviratne, Forrest Hoffman, James Famiglietti, Toshiyuki Nakaegawa and Taikan Oki

Local Organizing Committee:

Ayako Kurosawa, Yuki Tsukada, Yukihiko Onuma, Tomoko Nitta, Dai Yamazaki, Takao Yoshikane, Toshiyuki Nakaegawa, Kei Yoshimura and Hyungjun Kim @ hesss4.tokyo@gmail.com

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