

Global Hydrological Prediction Center

[Water cycle prediction from global to municipality scales]

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<https://ghpc.iis.u-tokyo.ac.jp/>

One of the global challenges that humanity is currently facing is the issue related to water. Water is closely related to not only floods and droughts, but also climate change, food, energy, and environmental issues, and is also extremely important from the perspective of geopolitics and security. The Global Hydrological Prediction Center (GHPC) will establish a strong and systematic team in Komaba, Hongo, and Kashiwa to promote cutting-edge research on observation, process elucidation, modeling, and prediction of hydrological phenomena from river basins in municipal to the global scales, and to contribute to society using the research achievements.

Members in Global Hydrological Prediction Center

plus
Assis.Prof. 2
PD fellows 9



Prof K. Yoshimura
(Hydrometeorology)



A.Prof. D. Yamazaki
(Hydrogeography)



Prof. W. Takeuchi
(Remote Sensing)



Prof. D. Kitazawa
(Marine Engineering)



Prof. Y. Sekimoto
(GIS)



Prof. K. Oki
(Ecological Monitoring)



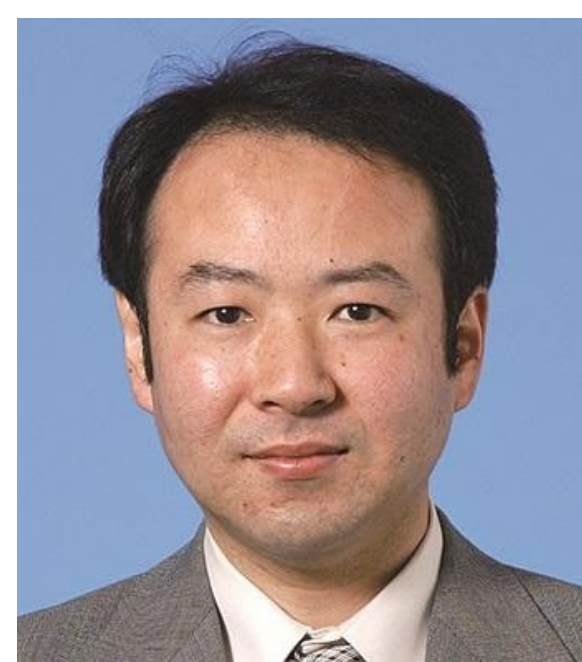
A.Prof. E. Ikoma
(Data Engineering)



A.Prof. T. Kiyota
(Geodisaster
Mitigation)



A.Prof. M. Numada
(Disaster Prevention)



A.Prof. T. Nemoto
(Data Engineering)



A.Prof. H. Kim
(RS&Hydrology)



A.Prof. T. Yoshikane
(Meteorology&AI)



Prof. T. Oki
(Sociohydrology)



Prof. M. Kiguchi
(Hydroclimatology)

**Origin: Asian Monsoon Study
Observation, Modeling, and
Prediction**

1977-2003 IIS Professor

1985-2003 IIS Professor

1999-2002 UNESCO-IHP IV Tropical Humid Region

1995-2001 World Climate Research Program Global Energy and Water Cycle Experiment (WCRP GEWEX) Asian Monsoon Experiment (GAME)

2001-2005 FOREST

2005-2008 Japan S&T Promotion Program (JEPP)

2009-2014 R&D Hydrological Modeling and water Resources System

2016-2020 Science and Technology Research Partnership for Sustainable Development

Monitoring at 36 m tower

Thai Flood Nov. 2011

Future Direction of GHPC

Time Scale: Months, Day, Hour

Horizontal Scale: 1000km, 100km, 100km, 10km, 100km

Global/Continental

Unit Basin

Seamless Flood Prediction

Knowledge Gap

HydroSOS seeks to improve water information

In order to realize flood prediction with better accuracy and longer lead time, we seamlessly downscale from the global scale to the municipality scale to predict the flooding from large rivers to municipal-sized rivers in the world.

Developed

Underway

TE-Peru

TE-SouthAfrica

TE-Japan

TE-Indochina

TE-Indonesia

Comparison with Insurance Cases