

2026

7.8 (wed.)**12:10**
12:50

12:10-12:15

◆ Introduction

12:15-12:40

◆ Seminar
(Presentation)

12:40-12:50

◆ Q&A

Online
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Toward Sustainable Lowlands: Visualizing Water Circulation in Saga and Indonesia Using Simple Water-Level Gauges

**Key Words****Lowlands****Simple water-level gauges****Visualization of water environments****Associate Professor Yuichiro Mishima**

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I am originally from Kitakyushu, Fukuoka, Japan. I entered Saga University in 2002 and completed the Doctoral Program at the Graduate School of Science and Engineering, Saga University, in 2011. After that, I had the opportunity to continue working at Saga University, first as a researcher at the Institute of Lowland and Marine Research from April 2011 to July 2013, and then as a lecturer in the Division of Urban Engineering, Faculty of Science and Engineering, from August 2013 to September 2025. Since October 2025, I have been working as an associate professor in the same division.

My research is based on three key interests: phosphorus recovery from wastewater, which I first encountered as an undergraduate student; the fascinating characteristics of lowland areas, where Saga University is located; and measurement and monitoring technologies that make it easier to understand the environment.

My main research focuses on monitoring water levels in the agricultural waterways known as "creeks," which spread across the Saga lowlands, with the aim of contributing to better water resource management and more advanced maintenance of these waterways. I am also conducting research on the acidification of agricultural water in lowland areas of South Kalimantan, Indonesia, with the goal of understanding its causes and exploring possible solutions.

To make broader use of the knowledge gained through these studies, I also organize international education programs for students to learn more about lowland environments. These programs provide Japanese students with opportunities for overseas training in countries such as Indonesia, Malaysia, and Thailand.

Lowlands are areas with elevations that are similar to, or lower than, the water levels of surrounding rivers and coastal waters. In such areas, even slight differences in elevation can greatly affect water flow and water levels. In southern Saga Prefecture, agricultural waterways known as "creeks" still support irrigation and drainage and, through these functions, play an important role in controlling water levels. To understand these water environments, it is important to continuously monitor changes in water levels and visualize water circulation. This seminar introduces efforts in the Saga lowlands using simple, low-cost, and easy-to-use water-level gauges that can be deployed at multiple sites. It also touches on lowland research in Indonesia, which provides useful insights for considering the subtropicalization of Kyushu, and introduces the significance of understanding water circulation as a foundation for future studies on sustainable lowlands.