



Dr. Yuichi Kurashima

**National Institute of Advanced Industrial Science and Technology (AIST),
JAPAN**

Title:

IoD (Internet of Disaster)-Feasibility Study of Debris Flow Detection in Sakurajima-

Abstract:

We develop a detecting system for debris flow disaster. Our final goal is realizing a low-cost debris flow detection system with a high degree of accuracy by AI technique. This talk presents establishing of a wireless MEMS vibration sensor network for AI analysis toward the realizing a debris flow detection system. First of all, we talk about wireless MEMS vibration sensor with stand-alone power system by solar power electric generation. These our developed sensors were installed at multi points around sediment control dam in Sakurajima to capture the vibration signal from debris flow. As a result, we succeed in capturing vibration signals from a real debris flow. And also, we succeed in extracting the typical feature signal of a debris flow using these vibration signals.

Biography:

Yuichi Kurashima received his Ph.D. degree (2005), majoring in applied electronic engineering, from Tokyo University of Science. He has been working at the National Institute of Advanced Industrial Science and Technology (AIST) since 2012 after having academic positions at universities. He has worked on a wide variety of semiconductor microfabrication, mechanical polishing, and grinding technologies and so on. Since working AIST, he has been actively engaged in research on bonding for packaging of MEMS. Currently, Dr, Kurashima is the Group Leader of Integrated MEMS Research Group at AIST, where he has been active in Packaging and Integration of MEMS. He also is interested in sensing for mountains and other natural environments. As part of this effort, he developed a sensor for debris flow on Sakurajima Island several years ago.