

## **Monitoring of Merapi Volcano in Indonesia using Remote Sensing Data**

Su-Kyung Kim, Changwook Lee, Minji Cho

National Institution of Meteorological Research, Korea Meteorological Administration, Korea

E-mail: yjchoikma@korea.kr

We study Merapi volcano that erupted from November 1994 to October 2010 in Indonesia. We collected LANDSAT TM and ETM+ data to understand pyroclastic flow deposit area from and monitor volcanic activity of Merapi, Indonesia from 1994 to 2012. Supervised classification is executed for atmospheric correction using COST model. While western part of this volcano represents pyroclastic flow deposit until 2005 southern part pyroclastic deposit area is stronger than western part of this volcano after 2006 eruption by LANDSAT TM and ETM+ data analysis with thermal band combination. JERS-1 and TerraSAR-X data agree to pyroclastic flow deposit area with LANDSAT data. For time series analysis, we generate interferograms with ALOS PALSAR data from 2007 to 2011. This result is very efficient to monitor volcanic activity and understand dynamic system of magma movement.