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EDUCATIOIN

Ph.D. in Earth Sciences, Ohio State University, Columbus, USA **Mar. 2011**

- Dissertation: "Wetland hydrodynamics using interferometric synthetic aperture radar, remote sensing, and modeling"

M.Sc. in Earth System Sciences, Yonsei University, Seoul, Korea **Aug. 2003**

- Thesis: "Observation of the ground subsidence in Gaeun area using permanent scatterer interferometric synthetic aperture radar"

B.Sc. in Geology, Yonsei University, Seoul, Korea **Feb. 1998**

WORK EXPERIENCE

Senior Research Scientist, Korea Ocean Satellite Center, KIOST **Mar. 2020-Present**

- Spatio-temporal variability of coastal wetlands using Synthetic Aperture Radar
- Development of satellite-based system on monitoring and predicting ship distribution in the contiguous zone

Chief Research Scientist, NASA GSFC & SSAI (Science Systems and Applications, Inc.) **Jul. 2016-Mar. 2020**

- A West Africa LDAS for forecasting extreme hydrological Events
- Hydrologic modeling for monitoring water availability

Lead Research Scientist, NASA GSFC & SSAI (Science Systems and Applications, Inc.) **Jan. 2015-Jun. 2016**

- LIS (Land Information System) modeling
- Precipitation analysis associated with hydrological modeling
- Water balance and resource studies using satellite observations
- Radar flood mapping

Research Associate, NASA GSFC & University of Maryland **Jan. 2014-Jan. 2015**

- CREST hydrological model
- Radar application on ecosystem and hazard

NPP Fellow, NASA GSFC & ORAU (Oak Ridge Associated Universities) **Jan. 2011-Jan. 2014**

- Advisor: Michael Jasinski
- 2D floodplain hydrodynamic LISFLOOD model
- Interferometric SAR application to wetland

Graduate Research Assistant, The Ohio State University **Jun. 2005-Dec. 2010**

- Associated with Byrd Polar Research Center (BPRC)
- L-band repeat-pass interferometric SAR applications to the Amazon and Congo Wetlands
- Delineation of flood inundation using Landsat and MODIS optical imagery
- Demonstration of sea level rise using SRTM topography
- Development of MATLAB computer programs for SWOT mission orbit design

Research Assistant, Yonsei University **Sep. 2003-May 2005**

- Associated with Natural Science Research Institute (NSRI)
- Application of permanent scatterer differential interferometric synthetic aperture radar to coal mining area

Graduate Research Assistant, Yonsei University **Sep. 2001-Aug. 2003**

- A study of seismology, remote sensing, and GIS for subsurface structure, landslide, and ground subsidence in coal mining areas.
- Performed fieldwork including ground water, gravity, GPS.

PEER REVIEWED PUBLICATIONS

Jung, H.C., D.H. Kang, E. Kim, Y. Yoon, A. Getirana, S. Kumar, C.D. Peters-Lidard, E. Hwang, Towards a Soil Moisture Drought Monitoring System for South Korea, *Journal of Hydrology*, 589, https://doi.org/10.1016/j.jhydrol.2020.125176, 2020.

Jung, H.C., A. Getirana, K.R. Arsenault, K. Sujay, I. Maigary, Improving Surface Soil Moisture Estimates in West Africa through GRACE Data Assimilation, *Journal of Hydrology*, 575, 192-201, 2019.

Jung, H.C., A. Getirana, K.R. Arsenault, T. Holmes, A. McNally, Uncertainties on evapotranspiration estimates over West Africa, *Remote Sensing*, 11, 892, doi:10.3390/rs11080892, 2019.

Jung, H.C., A. Getirana, F. Policelli, A. McNally, K.R. Arsenault, S. Kumar, T. Tadesse, and C.D. Peters-Lidard, Upper Blue Nile Basin Water Budget from a Multi-Model Perspective, *Journal of Hydrology*, 555, 535-546, 2017.

AWARDS

NASA Hydrospheric and Biospheric Sciences (HOBI) Annual Award for Scientific/Technical support, September, 2016, September. 2019..

Spieker Book Award-Distinguished Senior Ph.D. Student, School of Earth Sciences, Ohio State University, May, 2010.

Outstanding Student Award, Department of Earth System Sciences, Yonsei University, Spring, 1994, 95, 96, 97, 02, 03, Fall, 2001, 02.

PROFESSIONAL ACTIVITIES

Proposal/Program Reviewer for NASA Soil Moisture Active-Passive (SMAP) Science Definition Team (NNH15ZDA001N-SUSMAP) (1), NASA Postdoctoral Program (1), ISPRS Technical Commission III Symposium. (1)

Journal Reviewer for Remote Sensing of Environment (3), Water Resources Research (1), Journal of Hydrometeorology (1), Journal of Hydrology (3), Remote Sensing (4), Journal of Selected Topics in Applied Earth Observations and Remote Sensing (1), International Journal of Remote Sensing (1), International Journal of Digital Earth (1), Journal of Earth System Science (1), ISPRS Journal of Photogrammetry and Remote Sensing (1), Journal of Arid Environments (1), Sensors (1), Remote Sensing Letters (1), IEEE Geoscience and Remote Sensing Letters (1), Journal of Earth Science & Climatic Change (1), Natural Hazards (1), Journal of Sensors (2), Geosciences Journal (1),

Memberships in American Geophysical Union (2005-Present), SWOT Satellite Mission (2005-Present)