

## Curriculum Vitae

Name: Eiichi Nakakita  
Date of Birth: November 15th, 1959  
Nationality: Japanese  
Organization: Research Section of Hydrometeorological  
Disasters  
Division of Atmospheric and Hydrospheric Disasters  
Disaster Prevention Research Institute  
Kyoto University  
Position: Professor  
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### Education and Experience

1983 Mar. Graduated, Department of Civil Engineering, Kyoto University, Japan.  
1983 Apr. to 1985 Mar. Master Course, Department of Civil Engineering, Kyoto University, Japan.  
1985 Apr. to Sept. Doctor Course, Department of Civil Engineering, Graduate School of Engineering, Kyoto University, Japan.  
1985 Oct. to 1990 Dec. Research Associate, Disaster Prevention Research Institute, Kyoto University, Japan.  
1990 Nov. Doctor of Engineering, Division of Applied Systems Science, Graduate School of Engineering, Kyoto University, Japan.  
1991 Jan. to 2000 Mar. Associate Professor, Disaster Prevention Research Institute, Kyoto University, Japan.  
1992 Jan. to Nov. Visiting Associate Professor, Iowa Institute of Hydraulic Research, the University of Iowa, Iowa, U.S.A.  
2000 Apr. to 2004 Sept. Associate Professor, Graduate School of Engineering, Kyoto University, Japan.  
2004 Oct. to Date Professor, Disaster Prevention Research Institute, Kyoto University, Japan.  
2006 Apr. to 2013 Apr. Director for Planning & Strategy, Institute of Sustainability Science, Kyoto University  
2006 Apr. to 2012 Apr. Research Fellow, Institute of Sustainability Science, Kyoto

University  
2006 Apr. to 2008 Mar. Visiting Researcher, National Research Institute for Earth  
Science and Disaster Prevention (NIED), Japan  
2007 Jan. to 2008 Mar. Visiting Research Professor, Tropical Marine Science  
Institute, National University of Singapore

### Special Field of Research

Hydrometeorology, Radar Hydrology, River Hydrology

His research fields are Hydrometeorology, Water Resources Engineering, Radar Hydrology, River Hydrology. He has been especially engaged in quantitative precipitation forecast (QPF) with weather radar by combining his own developed mesoscale atmospheric numerical model. He is currently also engaged in Quantitative Precipitation Estimation (QPE) with polarimetric radar, and in global analysis of abnormal rainfall in various spatiotemporal scales taking catchment and human characteristics, and the climate change into considerations.

He has participated in disaster survey teams attached to Japan Society of Civil Engineers to such places like Venezuela in 2000, Cambodia and Vietnam (Mekong delta) in 2000, Europe (Elbe and Danube) in 2002, and New Orleans (Hurricane Katrina) in 2006. He is leading the "Integrated Assessment of Climate Change Impacts on Watersheds in a Disaster Environment", a discipline in "Extreme Event Projection" team under the "Innovative Program of Climate Change Projection for the 21st Century" (KAKUSHIN Program; FSY 2007-2011) and "Precise impact assessments on climate change" team under "Program for Risk Information on Climate Change (Sousei Program; FSY 2012-2016) launched by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT). He is also a member of committees for reacting to the climate change in the Ministry of Land, Infrastructure and Transport (MLIT), and the Ministry of the Environment and committees for utilizing weather radar into river management in the Ministry of Land, Infrastructure and Transport.

### Current research topics on precipitation

#### (1) Radar hydrology

The radar hydrology widely covers any hydrological applications of weather radars into theoretical and practical hydrology through quantitative precipitation estimation (QPE), precipitation forecast (QPF), and dynamic and stochastic analyses on

spatiotemporal precipitation distribution.

- (2) Global analysis on abnormal rainfall in various spatiotemporal scales taking catchment and human characteristics, and the global warming into considerations.

A global analysis using historically observed rainfall information over the globe has been conducted for current climate condition. Now, this topic has further come into a stage to be proceeded under series of five-year research projects on evaluations of the global warming within Disaster Prevention Research Institute (DPRI) and with Meteorological Research Institute (MRI) of Japan Meteorological Agency.

- (3) Macroscopic understanding of generation processes of entire river drainage-basin through erosion processes, and of relationship between stochastic geomorphologic quantity and erosion processes.

This is a scientific research-oriented research. So far, a method of randomly generating virtual drainage-basin based on assumed erosion processes has been developed and some preliminary studies on relationship between geomorphologic quantity and erosion processes have been done.

#### List of principal publications

Souma, Kazuyoshi, Kenji Tanaka,2 Tadashi Suetsugi,1 Kengo Sunada,Kazuhisa Tsuboki,Taro Shinoda, Yuqing Wang, Atsushi Sakakibara, Koichi Hasegawa, Qoosaku Moteki, and Eiichi Nakakita, A comparison between the effects of artificial land cover and anthropogenic heat on a localized heavy rain event in 2008 in Zoshigaya, Tokyo, Japan, Journal of Geophysical Research, Atmosphere, Vol.118, No.11, pp.600–11,610, doi:10.1002/jgrd.50850, 2013.

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Yoon, Seongsim and Eiichi Nakakita, The development of rain-based urban flood forecasting method for river management practice using X-MP radar observation, Advances in River Engineering, JSCE, Vol.19, pp. 223-238 ,2013, June.

Yu, Wansik, Eiichi Nakakita, and Kosei Yamaguchi, Assessment of probabilistic flood forecasting using ensemble NWP rainfall with 30hr forecast time during typhoon events, Advances in River Engineering, JSCE, Vol.19, pp. 235-240 ,2013, June.

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Suzuki, Hiroto, Eiichi Nakakita, and Hideo Takahashi, A study on capture performance of heavy rain by rain gauges installed discretely, Journal of Japan Society of Civil Engineers, Ser. B1 (Hydraulic Engineering), Japan Society of Civil Engineers, Vol.57, pp.295-300, 2013.

Yamaguchi, Kosei , Eiichi Nakakita, and Michinobu Nonaka, An evaluation on capture ratio of ground raingauge data by a development of the huge rain-gauge, Journal of Japan Society of Civil Engineers, Ser. B1 (Hydraulic Engineering), Japan Society of Civil Engineers, Vol.57, pp.307-312, 2013.

Nakakita, Eiichi, Ryuta Nishiwaki, Hiroyuki Yamabe, and Kosei Yamaguchi, Research on the prognostic risk of baby cell for guerilla-heavy rainfall considering by vorticity with Doppler velocity, Journal of Japan Society of Civil Engineers, Ser. B1 (Hydraulic Engineering), Japan Society of Civil Engineers, Vol.57, pp.325-330, 2013.

Kazuyoshi Souma, Kenji Tanaka, Tadashi Suetsugi, Kazuhisa Tsuboki, Taro Shinoda, Atsushi Sakakibara, Koichi Hasegawa, Qoosaku Moteki, and Eiichi Nakakita, The effect of realistic initial land surface state on a localized heavy rainfall in Tokyo in

2008, Journal of Japan Society of Civil Engineers, Ser. B1 (Hydraulic Engineering), Japan Society of Civil Engineers, Vol.57, pp.343-348, 2013.

Takada, Nozomu, Yuusuke Tanaka, Shuichi Ikebuchi, and Eiichi Nakakita, Study on improvement of nowcast by extraction of convective cell based on horizontal scale, Journal of Japan Society of Civil Engineers, Ser. B1 (Hydraulic Engineering), Japan Society of Civil Engineers, Vol.57, pp.349-354, 2013.

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Batuer Abudoureyimu, Shingo AWADZU, Yoshinobu KIDO and Eiichi NAKAKITA, Impact Assessment on Groundwater Environment in Kyoto Basin by Climate Change, Journal of Japan Society of Civil Engineers, Ser. B1 (Hydraulic Engineering), Japan Society of Civil Engineers, Vol.56, pp.577-582, 2012.

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Japan Society of Civil Engineers, Ser. B1 (Hydraulic Engineering), Japan Society of Civil Engineers, Vol.56, pp.361-366, 2012.

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