


	Photo	Title: Prof. & Dr.
Name:		Affiliation: Disaster Prevention Research Institute, Kyoto University
Eiichi NAKAKITA		Email: nakakita@hmd.dpri.kyoto-u.ac.jp

Biography

Date of Birth: November 15, 1959
 Graduation of university (Bachelor): March 1983
 Graduation of university (Master): March 1985
 Assistant Professor: Oct. 1985 (Disaster Prevention Research Institute, Kyoto University)
 Associate Professor: Jan. 1991 (Disaster Prevention Research Institute, Kyoto University)
 Associate Professor: April 2000 (Graduate School of Engineering, Kyoto University)
 Professor: Oct. 2004 (Disaster Prevention Research Institute, Kyoto University)

Education

Mar. 1985: Obtained a Master's Degree of Engineering from Department of Civil Engineering, Graduate School of Engineering, Kyoto University
 Nov. 1990: Obtained a Doctor Degree of Engineering from Kyoto University

Recent Work Experience

- Vice Director, Disaster Prevention Research Institute, Kyoto University (2015- 2017).
- Director for Planning & Strategy, Institute of Sustainability Science, Kyoto University (2006-2013).
- Visiting Researcher/Professor:
 1. Visiting Associate Professor: The University of Iowa, U.S.A. (1992).
 2. Visiting Researcher: National Research Institute for Earth Science and Disaster Prevention (NIED), Japan (2006-2008).
 3. Visiting Research professor: National University of Singapore (2007-2008).
 4. Visiting Professor: University Technology MARA, Malaysia (2014-2016).

Roles in Japanese Ministries

1. "River council", the Ministry of Land, Infrastructure and Transport (MLIT).
2. "Committees on utilizing weather radar into river management", MLIT.
3. "Committee on data utilization of stationary meteorological satellite", Japan Meteorological Agency (JMA).
4. "Committees on climate change and adaptation", MLIT and the Ministry of the Environment (MOE).
5. "Committees on climate change", JMA.

Roles as Principal Investigator in Big Research Projects

1. "Corroborative campaign observation of surficial hydrologic process synchronized with spaceborne and airborne remote sensors -The lake Biwa project", (Grant-in-Aid for Scientific Research (A)) (1995-2003)
2. "Scientific and integrated research by in-situ campaign observations synchronizing

<p>video-sonde and the latest polarimetric radar, heading to reduction of water related disaster” (Grant-in-Aid for Scientific Research (S)) (2009-2014).</p> <ol style="list-style-type: none"> 3. “Integrated research on state-of-the-art multi-sensors in-situ observation of storm genesis, and reduction of serious disaster due to heavy rainfall” (Grant-in-Aid for Scientific Research (S)) (2015-2020). 4. "Integrated assessment of climate change impacts on watersheds in a disaster environment", a discipline in "Team 3; Extreme event projection" under the "Innovative program of climate change projection for the 21st century (KAKUSHIN program)" (Program by the Ministry of Education, Culture, Sports. and Science and Technology (MEXT)) (2007-2011) 5. “Theme D: Precise impact assessment on climate change” in “Program for risk information on climate change (SOUSEI Program)” (Program by MEXT) (2012-2017). 6. “Theme D: Integrated hazard prediction” in “Integrated research program for advancing climate models (TOUGOU Program)” (Program by MEXT) (2017-2022).
<p>Roles in Academic Associations</p>
<ol style="list-style-type: none"> 1. Chair, Committee on hydraulic engineering, Japan Society of Civil Engineers (JSCE), (2015-2017). 2. Member, Leadership team, Climate change working group, Technical divisions of innovation and professional development (IPD), International Association for Hydro-environment Engineering and Research (IAHR). 3. Member, National committee in Japan for planning and advisory of affairs related to IPCC Working Group I. 4. Board member, Asia Pacific Association of Hydrology and Water Resources (APHW). 5. Board member, Japan Society of Hydrology and Water Resources (2006-2012).
<p>Research Awards and Honors</p>
<ol style="list-style-type: none"> 1. “Prize for Encouragement”, Japan Society of Civil Engineers (JSCE), 1993. 2. “Science Award”, Japan Society of Hydrology and Water Resources (JSHW), 2012. 3. “Gambo Award”, Meteorological Society of Japan (MSJ), 2016.
<p>Research Interests</p>
<p>Rainfall and flood predictions/Utilization of weather radars into disaster reduction /Climate change impact assessment and adaptation/Morphologic formation of river basin</p>
<p>Major Roles as Editor related to Climate Change</p>
<ol style="list-style-type: none"> 1. Special Collection on “Program for Risk Information on Climate Change (SOUSEI)”, Hydrological Research Letters, JSHW, 2017. 2. Special Issue on “Recent Development on Climate Models and Future Climate Projections”, Journal of the Meteorological Society of Japan. Ser. II Vol. 90A (2012). 3. Special Issue on “Innovative Program for Climate Change Projection for the 21 Century (Kakushin)”, Hydrological Processes, 2012. 4. Special Collection on “Innovative Program for Climate Change Projection for the 21 Century (Kakushin)”, Hydrological Research Letters, JSHW, 2009.
<p>Major Publications in Recent Ten Years</p>

1. Osakada, Yukari, and Eiichi Nakakita, Future Change of Occurrence Frequency of Baiu Heavy Rainfall and Its Linked Atmospheric Patterns by Multiscale Analysis, SOLA, 14, 79-85, doi:10.2151/sola.2018-014., 2018.6
2. Nakakita, Eiichi, Hiroto Sato, Ryuta Nishiwaki, Hiroyuki Yamabe and Kosei Yamaguchi, Early detection of baby-rain-cell aloft in a severe storm and risk projection for urban flash flood, Advances in Meteorology, Article ID 5962356, 2017.
3. Kim, Sunmin, Yasuto Tachikawa and Eiichi Nakakita, Statistical downscaling of AGCM60km precipitation based on spatial correlation of AGCM20km output, Hydrological Research Letters, JSHW, Vol.11, No.1, pp.73-79, 2017.
4. Takemi, Tetsuya, Yasuko Okada, Rui Ito, Hirohiko Ishikawa and Eiichi Nakakita, Assessing the impacts of global warming on meteorological hazards and risks in Japan: Philosophy and achievements of the SOUSEI program, Hydrological Research Letters, JSHW, Vol.10, No.4, pp.119-125, 2016.
5. Ryo Mizuta, Akihiko Murata, Masayoshi Ishii, Hideo Shiogama, Kenshi Hibino, Nobuhito Mori, Osamu Arakawa, Yukiko Imada, Kohei Yoshida, Toshinori Aoyagi, Hiroaki Kawase, Masato Mori, Yasuko Okada, Tomoya Shimura, Toshiharu Nagatomo, Mikiko Ikeda, Hirokazu Endo, Masaya Nosaka, Miki Arai, Chiharu Takahashi, Kenji Tanaka, Tetsuya Takemi, Yasuto Tachikawa, Khujanazarov Temur, Youichi Kamae, Masahiro Watanabe, Hidetaka Sasaki, Akio Kitoh, Izuru Takayabu and Eiichi Nakakita, Over 5000 years of ensemble future climate simulations by 60 km global and 20 km regional atmospheric models, Bulletin of the American Meteorological Society (BAMS), 2016.
5. Yu, Wansik, Eiichi Nakakita, Sunmin Kim and Kosei Yamaguchi, Improving the accuracy of flood forecasting with transpositions of ensemble NWP rainfall fields considering orographic effects, J. of Hydrology, 2016.
6. Nakakita, Eiichi, Haruka Kusano and Sunmin Kim, Prediction on appearance frequency of atmospheric characteristics causing localized heavy rainfall during Baiu season by climate change, J. of JSCE, B1 (Hydraulic Engineering), Vol.71, pp.373-378, 2015. (in Japanese with English abstract)
7. Suzuki, Kenji, Natsumi Munechika, Katsuhiko Nakagawa, Kosei Yamaguchi and Eiichi Nakakita, Simultaneous measurements of a stratiform cloud by multipoint videosonde launchings, SOLA, MSJ, 2015.
8. Yoon, Seongsim and Eiichi Nakakita, Application of an X-Band Multi-Parameter Radar Network for Rain-Based Urban Flood Forecasting, J. of Hydrologic Engineering, ASCE, 2015.
9. Yu, Wansik, Eiichi Nakakita, Sunmin Kim, and Kosei Yamaguchi, Assessment of Uncertainty Propagation of Ensemble NWP Rainfall to Flood Forecasting with Catchment Scale, Advances in Meteorology, 2015.
10. Ogawa, Mariko, Satoru Oishi, Kosei Yamaguchi and Eiichi Nakakita, Quantitative Parametric Approach to Estimating Snowflake Size Distributions Using an Optical Sensing Disdrometer, SOLA, MSJ, Vo.11, pp.134-137, 2015.
11. Oue, Mariko, Kazuhisa Tsuboki and Eiichi Nakakita, Vertical distribution of precipitation particles in Baiu frontal stratiform intense rainfall around Okinawa Island, Japan, J. of Geophysical Research – Atmospheres, 120, pp.5622-5637, 2015.
12. Yu, Wansik, Eiichi Nakakita, Sunmin Kim and Kosei Yamaguchi, Improvement of rainfall and flood forecasts by blending ensemble NWP rainfall with radar prediction considering orographic rainfall, Journal of Hydrology, Vol.531, pp.494-507, 2015.
13. Yu, Tian-You, David B. Parsons, Eiichi Nakakita, Toshitaka Tsuda and Hirohiko Ishikawa, Mitigating the Impact of Severe Weather and Climate Variability through Innovative Sensing, Modeling, and Prediction, BAMS-D-14-00027, AMS, 2014.
14. Kido, Yoshinobu, Yuki Kitagawa and Eiichi Nakakita, Stochastic assessment of the global climate change impact on groundwater environment with considering spatial resolution of GCM, J. of JSCE, B1 (Hydraulic Engineering), Vol.70, pp.1135-1140, 2014. (in Japanese with English abstract)

15. 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. 223-228, 2013.
16. 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.
17. Oku, Yuichiro and Eiichi Nakakita, Future change of the potential landslide disasters as evaluated from precipitation data simulated by MRI-AGCM3.1, *Hydrological Processes*, Vol.27, pp.3332-3340, 2013.
18. Chaffe, P.L.B. K. Takara, Y. Yamashiki, Apip, P. Luo, R.V. Silva and E. Nakakita, Mapping of Japanese areas susceptible to snow cover change, *Hydrological Sciences Journal*, 2013.
19. Suzuki, Kenji, Midori Matsuo, Eri Nakano, Shunsuke Shigeto, Kosei Yamaguchi and Eiichi Nakakita, Graupel in the different developing stages of Baiu monsoon clouds observed by videosondes, *Atmospheric Research*, pp.100-110, 2013.
20. Souma, Kazuyoshi, Kenji Tanaka, Tadashi Suetsugi, 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, *J. of Geophysical Research, Atmosphere*, Vol.118, 2013.
21. Sato, Yoshinobu, Toshiharu Kojiri, Yuri Michihiro, Yasushi Suzuki and Eiichi Nakakita, Assessment of climate change impacts on river discharge in Japan using the super-high-resolution MRI-AGCM. *Hydrological Processes* (Published online: DOI:10.1002/hyp.9828), 2013.
22. Nakakita, Eiichi, Toshiya Miyake, Kyoungjun Kim and Risako Konoshima, Fundamental study on future change of localized heavy rainfall during Baiu due to climate change using a regional climate model, *J. of JSCE, B1 (Hydraulic Engineering)*, Vol.68, pp.427-432, 2012. (in Japanese with English abstract).
23. Nakakita, Eiichi, Tomohiro Yoshikai and Sunmin Kim, Application of Error-Ensemble prediction method to a short-term rainfall prediction model considering orographic rainfall, *Weather Radar and Hydrology, IAHS Publ.*, 351, pp.317-322, 2012.
24. Kimura, Makoto, Yoshinobu Kido, and Eiichi Nakakita, Study on real-time flood forecasting method for locally heavy rainfall with high-resolution X-band polarimetric radar information, *Weather Radar and Hydrology, IAHS Publ.*, 351, pp.454-459, 2012.
25. Sato, Yoshinobu, Toshiharu Kojiri, Yuri Michihiro, Yasushi Suzuki and Eiichi Nakakita, Estimates of Climate Change Impact on River Discharge in Japan Based on a Super-High-Resolution Climate Model, *Terr. Atmos. Ocean. Sci.*, Vol.23, No. 5, pp.527-540, October 2012.
26. Suzuki, Kenji, Kensaku Shimizu, Tadayasu Ohigashi, Kazuhisa Tsuboki, Satoru Oishi, Seiji Kawamura, Katsuhiko Nakagawa, Kosei Yamaguchi and Eiichi Nakakita, Development of a New Videosonde Observation System for In-situ Precipitation Particle Measurements, *SOLA*, Vol.8, pp.001-004, 2012.
27. Kim, Sunmin, Yasuto Tachikawa, Eiichi Nakakita, Kazuaki Yorozu and Michihiro Shiiba, Climate change impact on river flow of the Tone River Basin, Japan, *Annual J. of Hydraulic Engineering, JSCE*, Vol.55, pp.S85-S90, 2011.
28. Kim, Sunmin, Yasuto Tachikawa, Eiichi Nakakita and Kaoru Takara, Hydrologic Evaluation on the AGCM20 Output Using Observed River Discharge Data, *Hydrological Research Letter*, Vol.4, pp.35-39, 2010.
29. Yamashiki, Yosuke, Masato Kato, Kaoru Takara, Eiichi Nakakita, Michio Kumagai and Chunmeng Jiao, Sensitivity Analysis on Lake Biwa under the A1B SRES climate change scenario using Biwa-3D Integrated Assessment Model: part I -projection of lake temperature-, *Hydrological Research Letters*, Vol.4, pp.45-49, 2010.
30. Kim, Sunmin, Eiichi Nakakita, Yasuto Tachikawa and Kaoru Takara, Precipitation changes in Japan under the A1B climate change scenario, *Annual Journal of Hydraulic Engineering, JSCE*, Vol.54, pp.127-132, 2010.

31. Takara, Kaoru, Sunmin Kim, Yasuto Tachikawa and Eiichi Nakakita, Assessing climate change impact on water resources in the Tone River basin, Japan, using super-high-resolution atmospheric model output, J. of Disaster Research, Vol.4, No.1, pp12-23, 2009.
32. Nakakita, Eiichi and Lisako Konoshima, Estimating global distribution of spatial and temporal correlation length of point rainfall intensity using low frequent observations from space, Advances in Geosciences 2007, Vol.11, 10pp., 2008.
33. Nakakita, Eiichi, Syunsuke Okane and Lisako Konoshima, Method of correcting variance of point monthly rainfall directly estimated using low frequent observation from space, Advances in Geosciences 2006, Vol.6, pp.35-45, 2007.