

CURRICULUM VITAE

NAME IN FULL: Akiyo YATAGAI

GENDER: Female

NATIONALITY: Japan

CURRENT POSITION:

1) Professor

Graduate School of Science and Technology, Hirosaki University

2) Associate Member (Term 26th and 27th; 2023-2029), Science Council of Japan

3) Co-chair, WCRP Lighthouse Activity GPEX Working Group 2 (Precipitation Data, Analysis and Integration), 2025-present



OFFICE ADDRESS:

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SCIENTIFIC ACHIEVEMENTS:

Lead developer of the APHRODITE gridded precipitation dataset, widely used for climate, hydrological and agricultural studies.

- APHRODITE Monsoon Asia precipitation/temperature data were adopted in the IPCC AR6 Interactive Atlas
- The 2012 BAMS paper has been cited more than 2000 times
- APHRODITE-related publications have received more than 6,000 citations in total.

CURRENT RESEARCH INTEREST:

- Atmospheric branch of hydrological cycle
- Accurate precipitation evaluation, especially for high mountains and cold regions
- Improving precipitation forecasts using accurate observational data by super-ensemble method and AI/ML applications
- Stable water isotopes and aerosol-precipitation interactions

EDUCATION:

Ph.D. (Science), University of Tsukuba, Japan, 1996.
M.S. (Science), University of Tsukuba, Japan, 1992.
B.S. (Geoscience), University of Tsukuba, Japan, 1990.

ACADEMIC POSITION:

Professor, Graduate School of Science and Technology, **Hirosaki University**:

April **2018** -- **present**.

Associate Professor, Graduate School of Science and Technology, Hirosaki University:
April 2016 -- March 2018.

Visiting Associate Professor, Research Institute for Humanity and Nature: April 2015 --
March 2016.

Researcher, Atmosphere Ocean Research Institute (AORI), The University of Tokyo:
July 2015 -- March 2016.

Associate Professor (project oriented), Solar Terrestrial Environment Laboratory (STEL),
Nagoya University: November 2013 -- March 2015.

Associate Professor (project oriented), Research Institute for Sustainable Humanosphere
(RISH), Kyoto University: June 2012 -- October 2013.

Researcher, University of Tsukuba: June 2011 -- March 2012

Assistant Professor, Research Institute for Humanity and Nature (RIHN):
March 2002 -- February 2011.

Research Fellow, Disaster Prevention Research Institute, Kyoto University: Oct. 2001—
February 2002.

Research Fellow, National Space Development Agency of Japan/Earth Observation
Research Center (NASDA/EORC): Oct. 1995— Sep. 2001.

TEACHING EXPERIENCE:

Hirosaki University: Apr. 2016 -- Present

Courses: Meteorology, Climate systems, Geophysical fluid dynamics,
Atmospheric thermodynamics, Precipitation climatology,
Global warming and disaster prevention

Tamil Nadu Agricultural University, **India**: August-September, 2023

Vietnam-Japan University, **Vietnam**, September, 2018

Kobe University: Apr. 2011 -- August 2011

Meiji University: Apr. 2003 -- March 2004.

AWARD:

International Award, Japan society of hydrology and water resources (2015)

SCHOLARLY LEADERSHIP:

● Current international activities

- Co-chair, WCRP GPEX WG2
- Member, WCRP AI/ML Task Team
- Secretary, Atmospheric Sciences Section, Asia Oceania Geosciences Society (AOGS)
- Associate Member, Science Council of Japan
- Board Member, Meteorological Society of Japan (Tohoku Branch)

● List of leading research project which have been accomplished or on progress related to precipitation/database activities (selected)

- ✧ Deciphering Records of Extreme Disasters: Meteorological Records and Historical Practices in Hiroshima in 1945, Principal Investigator of Publicly offered research, Grant-in-Aid for Transformative Research Areas (A), JSPS, FY2026–2027.
- ✧ Quantitative Evaluation of Mountain Snowfall on the Sea of Japan Side Based on Observational Data and Elucidation of Interannual Variation Mechanism, JSPS Grants-in-Aid for Scientific Research, FY2024–2027.
- ✧ Assessment of Environmental Impacts of Large Artificial Heat Sources Using High-Resolution Numerical Simulations, *Co-Investigator (PI: Hirohiko Ishikawa)*, Grant-in-Aid for Scientific Research (A), JSPS, FY2024–2026.
- ✧ Development of APHRODITE precipitation and application for understanding snowfall process (APHRODITE-3), Hirosaki University Institutional Fund, FY2019–2021.
- ✧ Evaluation of regional properties on the interannual variation of the snowfall, Cooperative research with Disaster Prevention Research Institute (DPRI)/Kyoto University, FY2021–2022.
- ✧ Development of APHRODITE data base and metadata database, JSPS Grants-in-Aid for Scientific Research, FY2016, 2018 and 2019.
- ✧ APHRODITE training seminar, Japan-Asia Youth Exchange Program in Science, Japan Science and Technology Agency (JST), 2018, 2020.
- ✧ APHRODITE-2: (Improvement of APHRODITE for extreme events), ERCA (Ministry of the Environment, Japan), FY2016–2019.
- ✧ Evaluation of the impacts of local precipitation to the landslides over the Himalayas, Cooperative research with Disaster Prevention Research Institute (DPRI)/Kyoto University, FY2016–2017.
- ✧ Inter-university Upper atmosphere Global Observation NETwork (IUGONET), FY2013–2015 (serve as the director to make a metadata database).
- ✧ APHRODITE-1: Asian Precipitation – Highly Resolved Observational Data

Integration Towards Evaluation of Water Resources (APHRODITE-1), Ministry of the Environment, Japan, FY2005-2010

- **Membership in national/international committees:**

- ✧ Board member of Tohoku Branch of Japan Meteorological Society; 2018-present
- ✧ Secretary of Atmospheric Section, Asia-Oceania Geoscience Society; 2019-present
- ✧ Steering Group, International Surface Temperature Initiative; 2010-2015.
- ✧ Board member of Japan Society of Hydrology and Water Resources; 2006-2008

- **Editors of scientific journal/special issues**

- ✧ Editor-in-chief of Special issue “Heavy rainfall and snowfall, and moisture transport” in *Journal of the Meteorological Society of Japan (JMSJ)* (published)
- ✧ Editor-in-chief of Special issue “Precipitation Products: Development and Application to Climate Change Studies”, Published in 2011, *Global Environmental Research*, 15-2. https://airies.wikiplus.net/journal_15-2eng.html

- **Google Scholar Information**

Akiyo YATAGAI <https://scholar.google.co.jp/citations?user=vDJZvHwAAAAJ&hl>

	All	Since 2021	(as of July 17 th , 2026)
Citations	6651*	2330	

*marked cited numbers [] in the publication list for the highly cited (> 100) papers.

PUBLICATION LIST (peer-reviewed journals, selected):

- Kurosaki, Y., A. Yatagai, and A. Sugimoto, 2025: Isotopic signatures in precipitation over the southern and central Tibetan Plateau controlled by active and break phases of the Indian monsoon. *J. Meteor. Soc. Japan*, **103**.
<https://doi.org/10.2151/jmsj.2025-038>
- Yatagai, A., M. Masuda, K. Tanaka, M. Hashimoto, and S. Yamaguchi, (2025): Evaluating winter precipitation in snowy Japanese mountains using gauge observations and model-based climatology, *J. Meteor. Soc. Japan*, **103**, DOI:10.2151/jmsj.2025-037[DOI].
- Yatagai, A. and S. Saruta (2024): Precipitation and moisture transport of the 2021 Shimokita heavy precipitation: A transformed extratropical cyclone from Typhoon#9. *Atmosphere* 2024, 15, 94. <https://doi.org/10.3390/atmos15010094>.
- Yatagai, A. and C. Kinoshita (2022): Winter Orographic Precipitation and ENSO in Sapporo, Japan, *Atmosphere*, 13(9), 1413, DOI: 10.3390/atmos13091413.
- Yatagai, A., M. Maeda, S. Khadgarai, M. Masuda and P. Xie (2020) : End of the Day (EOD) Judgment for Daily Rain-Gauge Data, *Atmosphere*, 11(8), 772, DOI: 10.3390/atmos11080772.

- Masuda, M., A. Yatagai, K. Kamiguchi and K. Tanaka (2019) : Daily adjustment for wind-induced precipitation undercatch of daily gridded precipitation in Japan, *Earth and Space Sciences*, DOI:10.1029/2019EA000659.
- Yatagai, A., K. Minami, M. Masuda and N. Sueto (2019) : Development of Intensive APHRODITE Hourly Precipitation Data for Assessment of the Moisture Transport That Caused Heavy Precipitation Events, *SOLA*, DOI:10.2151/sola.15A-008.
- Sunilkumar, K., A. Yatagai and M. Masuda (2019): Preliminary Evaluation of GPM-IMERG rainfall estimates over three distinct climate zones with APHRODITE, *Earth and Space Science*, DOI:10.1029/2018EA000503.
- Tsou C.-Y., M. Chigira, D. Higaki, G. Sato, H. Yagi, H. P. Sato, A. Wakai, V. Dangol, S. C. Amatya, A. Yatagai (2017): Topographic and geologic controls on landslides induced by the 2015 Gorkha earthquake and its aftershocks: an example from the Trishuli Valley, central Nepal, *landslides*, doi.org/10.1007/s10346-017-0913-9.
- Yatagai, A. and S. Oyama (2016): Thermospheric nocturnal wind climatology observed by Fabry-Perot Interferometers over the Asia-Oceania region, *Journal of the Meteorological Society of Japan*, **94**, 525-536.
- Yatagai, A., T. N. Krishnamurti, V. Kumar, A. K. Mishra and A. Simon (2014): Use of APHRODITE rain-gauge based precipitation and TRMM3B43 products for improving Asian monsoon seasonal precipitation forecasts, *J. Climate*, **27**, 1062-1069.
- Zhao, T. and A. Yatagai (2013): Evaluation of TRMM 3B42 product using a new gauge-based analysis of daily precipitation over China, *International Journal of Climatology*, **34**, 2749-2762.
- Yatagai, A., K. Kamiguchi, O. Arakawa, A. Hamada, N. Yasutomi and A. Kitoh (2012): APHRODITE: Constructing a Long-term Daily Gridded Precipitation Dataset for Asia based on a Dense Network of Rain Gauges: *Bull.Amer.Met.Soc.*, **93**,1401-1415, doi:http://dx.doi.org/10.1175/BAMS-D-11-00122.1. [1812 times]
- Javanmard, S., B. Jamali, A. Yatagai and E. Mahdavi (2011): Spatial and temporal analysis of precipitation over Iran, *Global Environmental Research*, **15-2**, 157-164. [242 times]
- Yasutomi, N., A. Hamada and A. Yatagai (2011): Development of long-term daily gridded temperature dataset and its application to rain/snow judgment of daily precipitation, *Global Environmental Research*, **15-2**, 165-172. [192 times]
- Kamiguchi, K., O. Arakawa, A. Kitoh, A. Yatagai, A. Hamada, and N.Yasutomi (2010): Development of APHRO_JP, the first Japanese high-resolution daily precipitation product for more than 100 years, *Hydrological Research Letters*, **4**, 60-64. [183 times]
- Yatagai, A., O. Arakawa and K. Kamiguchi, H. Kawamoto, M. I. Nodzu, A. Hamada (2009): A 44-year daily gridded precipitation dataset for Asia based on a dense network of rain gauges, *SOLA*, **5**, 137-140, doi:10.2151/sola.2009-035. [676 times]
- Krishnamurti, T.N., A.K.Mishra, A. Simon, A. Yatagai (2009): Use of a dense gauge network over India for improving blended TRMM products and downscaled weather models, *J. Meteor. Soc. Japan*, **87**, 395-416.
- Geethalakshmi, V., A. Yatagai, K. Palanisamy, and C. Umetsu (2008): Impact of ENSO and the Indian Ocean Dipole on the Northeast Monsoon Rainfall of Tamil Nadu state in India. *Hydrological Processes*, **22**. DOI:10.1002/hyp.7191
- Yatagai, A., and H. Kawamoto (2008): Quantitative estimation of orographic precipitation over the Himalayas by using TRMM/PR and a dense network of rain gauges, *SPIE*, **7148-11**, doi:10.1117/12.811943.

- Kitoh, A., A. Yatagai, and P. Alpert (2008): First super-high-resolution model projection that the ancient "Fertile Crescent" will disappear in this century, *Hydrological Research Letters*, **2**, 1-4. DOI:10.3178/HRL.2.1 [159 times]
- Xie, P., A. Yatagai, M. Chen, T. Hayasaka, Y. Fukushima, C. Liu and Y. Song (2007): A gauge-based analysis of daily precipitation over East Asia. *Journal of Hydrometeorology*, **8**, 607-627. [1176 times]
- Yatagai, A. (2007): Interannual variation of summertime precipitation over the Qilian Mountains in Northwest China, *Bulletin of Glaciological Research*, **24**, 1-11.
- Yatagai, A., N. Yamazaki and T. Kurino (2007): The products and validation of GAME reanalysis and JRA-25 Part 1: Surface Fluxes, *Hydrological Processes*, **21**, 2061-2073.
- Yatagai, A., P. Xie and A. Kitoh (2005): Utilization of a new gauge-based daily precipitation dataset over monsoon Asia for validation of the daily precipitation climatology simulated by the MRI/JMA 20-km-mesh AGCM, *Scientific Online Letters on the Atmosphere (SOLA)*, **1**, 193-196.
- Yatagai, A. (2003): Hydrological balance and its variability over the arid/semi-arid regions in the Eurasian Continent seen from ECMWF 15-year reanalysis data, *Hydrological Processes*, **17**, 2871-2884.
- Yatagai, A. (2001): Estimation of precipitable water and relative humidity over the Tibetan Plateau from GMS-5 water vapor channel data, *Journal of Meteorological Society of Japan*, **79**, 589-598.
- Murakami, T., J. Matsumoto and A. Yatagai (1999): Similarities as well as differences between summer monsoons over Southeast Asia and the Western North Pacific. *Journal of the Meteorological Society of Japan*, **77**, 887-906.
- Suzuki, R, A. Yatagai and T. Yasunari (1998): Global vegetation index and evapotranspiration derived from assimilated Atmospheric Data over Asia. *Journal of the Meteorological Society of Japan*, **76**, 663-671.
- Yatagai, A and T. Yasunari (1998): Interannual variation of summer water vapor transport over and around the arid region in the interior of the Eurasian Continent. *Journal of the Meteorological Society of Japan*, **76**, 799-815.
- Yatagai, A. and T. Yasunari (1995): Interannual variation of summer precipitation in the arid/semi-arid regions in China and Mongolia: Their regionality and relation to the Asian Summer Monsoon. *J. Meteor. Soc. Japan*, **73**, 909-923. [142 times]
- Yatagai, A. and T. Yasunari (1994): Trends and decadal-scale fluctuations of surface air temperature and precipitation over China and Mongolia during the recent 40 year period (1951-1990). *J. Meteor. Soc. Japan*, **72**, 937-957. [157 times]