

CURRICULUM VITAE

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Abstract

Toshio Koike received the Bachelor, Master, and Doctor of Engineering, in 1980, 1982, and 1985, respectively, from the University of Tokyo, Japan. He was at the University of Tokyo, as a research associate in 1985 and a lecturer from 1986 to 1987, and at the Nagaoka University of Technology, Japan as an associate professor from 1988 to 1999 and a professor in 1999. In 1999, he joined the Department of Civil Engineering, the University of Tokyo, where he held the position of Professor until 2017. He is also working as Advisor to the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT). Since October 2014, he has been appointed as Director, International Centre for Water Hazard and Risk Management under the auspices of UNESCO (ICHARM), Public Works Research Institute (PWRI) in Tsukuba, Ibaraki, Japan.

His research interest includes the water cycle and climate sciences and their applications to water resources management, which can be classified into the following three components, establishment of satellite remote sensing, development of the data integration and information fusion system, and development of the hydrological down-scaling methods including satellite-based data assimilation. Aside from his scientific contributions to water cycle and climate sciences and water resources management, he has been leading the international water cycle science projects and the inter-governmental science and technology cooperation.

He implemented the Coordinated Enhanced Observing Period (CEOP), which was an element of World Climate Research Programme (WCRP) initiated by Global Energy and Water Cycle Experiment (GEWEX), as Lead Scientist. He was Co-Chair of Coordinated Energy and Water Cycle Observations Project (CEOP) of GEWEX from 2008 to 2010 and has been working as Co-Chair of WCRP Data Advisory Council (WDAC) since 2012. To give some more breakthroughs in his global data integration activities, he has initiated the project, Data Integration Analysis System (DIAS) supported by the Japanese government in 2006, and he has been leading it domestically and internationally since then. With his much passion for solving the water problems in the Asian region by utilizing the cutting-edge science and technologies, he has been leading the Asian Water Cycle Initiative (AWCI) contributing to the Group on Earth Observations (GEO) since 2005 and the similar water cycle initiative activities are now launched into the African continent (AfWCCI). He also contributed to development of the "GEO Strategic Plan 2016-2025" as Co-Chair of the Implementation Plan Working Group (IPWG). He is also chairing River Council of Japan and the Asia-Pacific Water Forum (APWF) Steering Group on Water and Climate Change.

Some of the prominent awards he has won recently include the following: "Award for Contribution to the IPCC NOBEL Peace Prize" from WMO and UNEP" in 2008, "Einstein Lecturer Award" in 2009 from Chinese Academy of Sciences, China, "Japan Water Award -International Contribution" in 2010, "Science Award" from by the Japan Society of Hydrology and Water Resources in 2015.

Date of Birth

November 25, 1956

Nationality

Japanese

EDUCATION

1982-1985 Doctor of Engineering, Department of Civil Engineering, The University of Tokyo
Dissertation topic: Modeling of Snowmelt Runoff by Using Snow Cover Area

- 1980-1982 Master of Engineering, Department of Civil Engineering, The University of Tokyo
Thesis topic: Estimation of Basin-wide Snow Water Equivalent Derived from Satellite Data
- 1976-1980 Bachelor of Engineering, Department of Civil Engineering, The University of Tokyo

EXPERIENCE

- 1985-1986: Research Associate, Department of Civil Engineering, The University of Tokyo
- 1986-1988: Assistant Professor, Department of Civil Engineering, The University of Tokyo
- 1988-1999: Associate Professor, Department of Civil Engineering, Nagaoka University of Technology
- 1999: Professor, Department of Civil Engineering, Nagaoka University of Technology
- 1999-2017: Professor, Department of Civil Engineering, The University of Tokyo
- 2006-2010: Executive Director, Earth Observation Data and Information Fusion Research Initiative (EDITORIA), The University of Tokyo
- 2007-pres. Special Adviser to Minister of Education, Culture, Sports, Science and Technology of Japan
- 2014-pres. Director, International Centre for Water Hazard and Risk Management (ICHARM)
- 2017-pres. Council Member, Science Council of Japan, Cabinet Office

AREAS OF RESEARCH INTEREST

Hydro-meteorological Variability and its Impacts on Water Resources
Remote Sensing and Satellite Hydrology
Hydrological Processes in the Monsoon Asia and their Predictability

HONORS AND AWARDS

- 1985 Incentive Award of Japan Society of Civil Engineering
- 2000 "Horiuchi" Prize from Meteorological Society of Japan.
- 2001 Best Paper Award of Japan Society of Civil Engineering
- 2003 NASA Group Achievement Award
- 2007 Pakistan-Japan Joint Seminar at Lahore collage for Women University Meraj Khalid Award 2006-7
- 2008 Award for Contribution to the IPCC Novel Peace Prize from WMO and UNEP
- 2009 "Einstein Lecturer" Award in 2009 from Chinese Academy of Sciences, China
- 2010 International Contribution Award, Japan Water Prize
- 2013 Minister Certificate from Minister of Natural Resources and Environment of Vietnam
- 2015 The Science Award by the Japan Society of Hydrology and Water Resources

PROFESSIONAL ACTIVITIES

Professional Societies

Japan Society of Civil Engineering; Meteorological Society of Japan; The Japan Society of Hydrology and Water Resources; Remote Sensing Society of Japan; American Geophysical Union (AGU)

Editorial

- 1991-2001: Editorial Board of *Annals of Hydroscience and Hydraulic Engineering*
- 1997-1998: Chief Editor, Special Issue on "Global Soil Wetness Project", Journal of Meteorological Society of Japan
- 2006-2007: Chief Editor, Special Issue on "Coordinated Enhanced Observing Period", Journal of Meteorological Society of Japan
- 2011-2012: Chief Editor, Special Issue on "Japan-China Meteorological Disaster Reduction Corporation Research Center Project (JICA/Tibet Project)", Journal of Meteorological Society of Japan

Major Contributions to International Projects:

- 1996-2001: Chief Scientist of Global Energy and Water Cycle Experiment (GEWEX) Asian Monsoon Experiment (GAME) in the Tibetan Plateau
- 1997-2001: Chairman of the GAME International Sub-panel for Remote Sensing
- 1996-2003: Validation Scientist of the ADEOS-II Project of NASDA
- 2000-2007: Project Scientist of Coordinated Enhanced Observing Period (CEOP) Asia-Australia Monsoon Project (CAMP)
- 2001-2007: Lead Scientist of Coordinated Enhanced Observing Period (CEOP)
- 2005-pres.: Lead of GEOSS Asian Water Cycle Initiative (AWCI)
- 2007-2010: Co-Chair of Coordinated Energy and Water Cycle Observation Project (CEOP)
- 2009-pres.: Lead of GEOSS African Water Cycle Coordination Initiative (AfWCCI)

COMMITTEE AND PANEL ASSIGNMENTS

- 2004-2005: Member of Group on Earth Observation (GEO) Implementation Planning Task Team (IPTT)
2005-2006: Co-Chair of GEO Architecture and Data Committee
2007-2008: Member of ICSU Strategic Committee on Information and Data (SCID)
2008-pres.: Chair of GEO National Committee of Japan
2010-2013: Chair of the Asia-Pacific Water Forum Steering Committee on Water and Climate Change
2012-pres.: Co-chair of the World Climate Research Programme (WCRP) Data Advisory Council
2012-pres.: Chair of the National Committee of International Research on Disaster Risk (IRDR), Science Council of Japan
2014-2015: Co-Chair of GEO Implementation Plan Working Group (IPWG)
2015-pres.: Chair of Committee on Disaster Risk Reduction and International Coordination, Science Council of Japan
2015-pres.: Chair of River Council of Japan

RESEARCH SUPPORT

- 1998-pres. Principal Investigator, JAXA Soil Moisture Standard Algorithm for AMSR/AMSR-E/AMSR2
1998-2004 Principal Investigator, Core Research of Evolutional Science and Technology (CREST):
Development of Modeling and Satellite Remote Sensing of Atmosphere-land Interaction
2003-2009 Principal Investigator, Core Research of Evolutional Science and Technology (CREST):
Development of a Physical Down Scaling Method for Water Cycle
2006-2011 Principal Investigator, Data Integration and Analysis (DIAS), *phase 1*
2011-pres. Principal Investigator, Data Integration and Analysis (DIAS), *phase 2*

CONSULTING ACTIVITIES

- 2005-2010: Executive Manager of the Japan International Cooperation Agency (JICA) Project on Japan-China Cooperative Research Center for Meteorological Disaster Mitigation
2012-2013: Executive Manager of the JICA Project on the Study of Water Security Master Plan for Metro Manila and Its Adjoining Areas, Philippines: Climate Change Impact Assessment and Hydrological Simulation
2012-2013: Executive Manager of the JICA Project on Preparatory Survey on Integrated Basin Management and Flood Control Project for Mejerda River, Tunisia: Climate Change Impact Analysis
2012-2013: Executive Manager of the JICA Project on Assessing and Integrating Climate Change Impact into the Water Resources Management Plans for Brantas and Musi River Basins, Indonesia

POST-DOCTORAL SCHOLARS AND RESEARCHERS SPONSERED

Kun Yang; Petra Koudelova; Tahkeyoshi Chibana; Mahadevan Pathemathevan; Nozomu Hirose; Tobias Graf; Kenji Taniguchi; Mirza C Raza; Souhail Bussetta; Hideyuki Fujii; Lu Hui; Hiroyuki Tsutsui; David Kuria, Lei Wang, Tetsu Ohata; Katsunori Tamagawa; Izumi Hasegawa; Mohamed Rasmy; Yoshihiro Shibuo; Patricia Ann Jaranilla-Sanchez; Maheswor Shrestha; Asif Mumtaz Bhatti; Peter Lawford

ADVISEES

Total Number of Graduate Students Advised: 72

TEACHING EXPERIENCE

Undergraduate Courses (Institutions)

- Hydraulics (The University of Tokyo)
- River and Water Resources Planning (The University of Tokyo)
- Earth Environment (The University of Tokyo)

Graduate Courses (Institutions)

- Environmental Fluid Mechanics (The University of Tokyo)
- Special Topics on River Engineering (The University of Tokyo)

SELECTED PUBLICATIONS

Invited Lecture, Keynote Lecture in English

- 1) T. Koike: International Study for Disaster Risk Reduction and Resilience-towards integrating disaster risk reduction and sustainable development -,The Second Global Summit of Research Institutes for Disaster Risk Reduction, Uji Obaku Plaza, Uji Campus, Kyoto University, Kyoto, 19 March 2015.

- 2) T. Koike: University Partnership in International Development, Transdisciplinary Education for Disaster Risk Reduction Conference 2014, United Nations University, 31st October 2014.
- 3) T. Koike: Promoting Inter-disciplinarity & Trans-disciplinarity Toward Sustainable Development, International Seminar on Global change and Pakistan perspective (Climate, water and agriculture nexus: a futuristic approach to fight hunger), 16 September, 2014, University of Agriculture, Faisalabad, Pakistan.
- 4) T. Koike: Science and Technology Supporting Sustainable Development, The AWCI Training Workshop on Assessment of Climate Change Impact on a Watershed Hydrology including Hydrological Modeling in Cold Region Basins Islamabad, 15-17 September 2014.
- 5) T. Koike: Background to the African Water Cycle Coordination Initiative, Third GEOSS African Water Cycle Coordination Initiative (AfWCCI) Workshop, Art Suites Hotel, Morocco, February 4, 2013
- 6) T. Koike: Water Cycle Data Integration toward Better Water Resources Management under Climate Change, National University of Science and Technology, Pakistan, 11, Sep. 2012
- 7) T. Koike: GEOSS Water Cycle Integrator An Innovative Tool Contributing to Integrated Human Security and Green Growth, Research and Development Seminar, ICHARM, Tsukuba, Japan, 13 Dec. 2011
- 8) T. Koike: Climate Change and Water Cycle Variability, -Mechanism, Assessment and Adaptation-, Institute for Sustainability and Peace, United Nations University, Tokyo, 14 Mar. 2012
- 9) T. Koike: Adaptation to Climate Change - Flood and Environment Management, Hue, Vietnam, 15-19 August, 2010.
- 10) T. Koike: Hydrological Modeling and Optimization Schemes for Integrated Water Resources Management, The Fourth International Workshop on Catchment-scale Hydrological Modeling and Data Assimilation, Lhasa, 21 July 2010.
- 11) T. Koike: Roles of Data Assimilation in Global Land Hydrological Modeling, 2nd International Workshop on Energy and Water Cycle over the Tibetan Plateau and High-elevations, Lhasa, 19 July 2010.
- 12) T. Koike: Satellite remote sensing and data assimilation, the 1st African Water Cycle Symposium, Tunis, 2009
- 13) T. Koike: GEOSS and Satellite Observations, GCOM Symposium, Tokyo, 2009
- 14) T. Koike: A Flash Flood Control System Based on the Global Earth Observations System of Systems, the 8th International Conference on Hydro-science and Engineering (ICHE), Nagoya, 2008
- 15) T. Koike: Asian Water Cycle Initiative (AWCI) Contributing to Global Earth Observation System of Systems (GEOSS), Distinguished Lecture, Hydrological Science Session, the 4th Annual Meeting, Asia and Oceanic Geophysics Society (AOGS), Bangkok, 2007
- 16) T. Koike: Data Integration and Information Fusion for Understanding and Prediction of the Global Water Cycle, The 5th International Scientific Conference on Global and Energy Water Cycle, GEWEX, Costa Mesa, California, USA, 20-24 June 2005.
- 17) T. Koike: Data Integration toward Understanding of the Energy and Water Cycle in the Tibetan Plateau, The 4th Symposium on the Tibetan Plateau, Lhasa, China, August 4-7, 2004.
- 18) T. Koike: WCRP and CEOP Observational Activities, Water and Climate: Water Cycle Research and Observational Activities for Water Management and Sustainable Development, The 3rd World Water Forum in Kyoto, March 16-24, 2003.
- 19) T. Koike: CEOP and the Contribution to GCIP/GAPP, Mississippi River Climate and Hydrology Conference, New Orleans, LA, May 13-17, 2002.
- 20) T. Koike: GPM Contributions to Global Water Cycle Variation Studies and Local Water Resources Management in Asia, Second Global Precipitation Measurement (GPM) International Planning Workshop, Shinagawa Prince Hotel, Tokyo, Japan, May 20-22, 2002.
- 21) T. Koike: CEOP as the 1st Element of IGOS Water Cycle Theme, Seminar on A Mission to Aqua Planet Earth -A Challenge by IGOS-P, World Summit for Sustainable Development in Johannesburg, 26 August –September 4, 2002.
- 22) T. Koike: Coordinated Enhanced Observing Period: Observations for monsoon system studies, The Global Climate Observing System (GCOS) Regional Workshop for East and Southeast Asia, Singapore, 16-18 September 2002
- 23) T. Koike: Observation of changes in precipitation patterns and extreme weather events induced by water variation due to climate change, The eighth session of the Conference of the Parties (COP8) and the seventeenth sessions of the Subsidiary Bodies (SBSTA7) of the United Nations Framework Convention on Climate Change (UNFCCC), New Delhi, 23 October - 1 November 2002.
- 24) T. Koike: The GEWEX CEOP Project, 2nd AMIP Workshop, Toulouse, 12-15 November, 2002.

Peer Reviewed Papers in English

- 1) Rie Seto, Toshio Koike, and Mohamed Rasmy (2016), Heavy rainfall prediction applying satellite-based cloud data assimilation over land, *J. Geophys. Res. Atmos.*, 121, 9737-9755, doi:10.1002/2016JD025291.
- 2) Sawada, Y. and T. Koike (2016), Towards echohydrological drought monitoring and prediction using a land data assimilation system: A case study on the Horn of Africa drought (2010-2011), *J. Geophys. Res. Atmos.*, 121, 8229-8242, doi:10.1002/2015JD024705.
- 3) Sawada, Y., T. Koike, and J. P. Walker (2015), A land data assimilation system for simultaneous simulation of soil moisture and vegetation dynamics, *J. Geophys. Res. Atmos.*, 120, doi:10.1002/2014JD022895.
- 4) Shrestha, M., T. Koike, Y. Hirabayashi, Y. Xue, L. Wang, G. Rasul, and B. Ahmad (2015), Integrated simulation of snow and glacier melt in water and energy balance-based, distributed hydrological modeling framework at Hunza River Basin of Pakistan Karakoram region, *J. Geophys. Res. Atmos.*, 120, 4889-4919, doi:10.1002/2014JD022666.
- 5) Yohei Sawada, Hiroyuki Tsutsui, Toshio Koike, Mohamed Rasmy, Rie Seto, and Hideyuki Fujii, A Field-Supported Algorithm for Retrieving Vegetation Water Content from Passive Microwave Observations, *IEEE Transactions on Geoscience and Remote Sensing*, *in press*
- 6) Toshio KOIKE, Petra KOUDELOVA, Patricia Ann JARANILLA-SANCHEZ, Asif Mumtaz BHATTI, Cho Thanda NYUNT and Katsunori TAMAGAWA: 2014. River management system development in Asia based on data integration and analysis system (DIAS) under GEOSS. *Science China: Earth Sciences*, 57: 1-20, doi: 10.1007/s11430-014-5004-3.
- 7) Rasmy, M., T. Koike, X. Li, and K. Yang: Application of multi-frequency passive microwave observations and data assimilation methods for enhancing numerical weather forecast in Niger, Africa. *Remote Sens.* 2014, 6(6), 5306-5324; DOI:10.3390/rs6065306
- 8) Yohei Sawada, and Toshio Koike: Simultaneous Estimation of both Hydrological and Ecological Parameters in an Eco-Hydrological Model Assimilating Microwave Signal, *J. Geophys. Res. Atmos.*, 119, 8839-8857, doi:10.1002/2014JD021536.
- 9) Yohei Sawada, Toshio Koike and Patricia Ann Jaranilla-Sanchez: Modeling Hydrologic and Ecologic Responses using a New Eco-hydrological Model for Identification of Droughts, *Water Resources Research*, 50, 6214-6235
- 10) Shrestha, M., P. Jaranilla-Sanchez, L. Wang and T. Koike: Investigating the hydrologic response of current dam operation system to future climate in a snowy river basin (Yattajima) of Japan, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 59, pp 1_103-1_108, 2015.
- 11) Asif M. Bhatti, Toshio Koike and Maheswor Shrestha: Simulating long-term hydrological processes in cold region river basin, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 59, pp 1_67 - 1_72, 2015.
- 12) Ralph Allen ACIERTO, Mohamed RASMY, and Toshio KOIKE: Sensitivity of Single-Year Seasonal Precipitation to Parameterization in the Weather Research and Forecasting (WRF) Model, *Annual Journal of Hydraulic Engineering (JSCE)*, pp 1_67 - 1_72, Vol. 59, 2015, February.
- 13) Rasmy, M., T. Koike, P. Lawfort, M. Hara, M. Fujita, and F. Kimura: Assessment of future water resources in the Tone river basin using a combined dynamical-statistical downscaling approach. *Annual Journal of Hydraulic Engineering (JSCE)*, pp 1_73 - 1_78, Vol. 59, 2015, February.
- 14) Kumiko Tsujimoto, Toshio Koike, So Im Monichoth, Kentaro Aida, Katsunori Tamagawa, Tomoyuki Nukui and Shin-ichi Sobue: Validation of satellite precipitation products over Cambodia, *The ISTS special issue of Transactions of JSASS, Aerospace Technology Japan*, Vol. 12, No. ists29, pp. Tn_41-Tn_46, 2014.
- 15) So Im Monichoth, Kumiko Tsujimoto, Toshio Koike, Katsunori Tamagawa, Kentaro Aida, Tomoyuki Nukui, Shin-ichi Sobue and Koki Homma: Water and food security under the climate change in Cambodia, *The ISTS special issue of Transactions of JSASS, Aerospace Technology Japan*, Vol. 12, No. ists29, pp. Tn_31-Tn_39, 2014
- 16) Kumiko Tsujimoto and Toshio Koike: Land-lake breezes at low latitudes: the case of Tonle Sap Lake in Cambodia, *J. Geophys. Res. Atmos.*, Vol. 118, pp. 1-12, doi:10.1002/jgrd.50547, 2013.

- 17) Seto, R., T. Koike, and M. Rasmy: Analysis of the vertical structure of the atmospheric heating process and its seasonal variation over the Tibetan Plateau using a land data assimilation system, *J. Geophys. Res. Atmos.*, 118, doi:10.1002/2013JD020072.
- 18) Shrestha, M., Wang, L., Koike, T., Tsutsui, H., Xue, Y., and Hirabayashi, Y.: Correcting basin-scale snowfall in a mountainous basin using a distributed snowmelt model and remote sensing data, *Hydrol. Earth Syst. Sci. Discuss.*, 10, 11711-11753, doi:10.5194/hessd-10-11711-2013, 2013.
- 19) Asif M. BHATTI, Toshio KOIKE, Patricia Ann JARANILLA-SANCHEZ, Mohamed RASMY, Kohei YOSHIMURA, Bashir AHMAD: Climate change impact assessment on the hydrology of a semi-arid river basin, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol 58. pp.I_121-I_126, February 2014.
- 20) Patricia Ann JARANILLA-SANCHEZ, Toshio KOIKE, Lei WANG, Tetsu OHTA, Yukiko YAMADA, Masahide KIMOTO: Extreme Events Prediction from Seasonal Climate Forecasting and Crop Production Simulations in Pampanga River Basin, Philippines, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol 58. pp.I_139-I_144, February 2014.
- 21) Rasmy, M., M. Shrestha, T. Koike, M. Hara, M.Fujita, and F. Kimura: A combined dynamical/statistical downscaling approach for assessing future of water resources in the Tone river basin, Japan. *Annual Journal of Hydraulic Engineering (JSCE)*, Vol 58. pp.I_187-I_192, February 2014.
- 22) Cho Thanda NYUNT, Toshio KOIKE, Akio YAMAMOTO, Toshihoro NEMOTO, Masaru KITSUREGAWA: Application of Statistical Bias Correction Method to the Yoshino River Basin, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol 58. pp.I_193-I_198, February 2014.
- 23) Shrestha, M., T. Koike, L. Wang, H. Tsutsui, Y. Xue and Y. Hirabayashi: Optimizing Snowfall Correction Factor for Radar-AMeDAS Precipitation using Distributed Snow Model (WEB-DHM-S) and MODIS Snow Cover Data, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol 58. pp.I_223-I_228, February 2014.
- 24) Tsujimoto K. and T. Koike: Requisite conditions for post-monsoon rainfall in Cambodia, *Journal of Hydroscience & Hydraulic Engineering*, Vol.31, No.1, pp.1-14, 2012.
- 25) Rasmy, M., T. Koike, D. N. Kuria, C. R. MIRZA, X. Li, and K. Yang: Development of the Coupled Atmosphere and Land Data Assimilation System (CALDAS) and Its Application over the Tibetan Plateau. *Geoscience and Remote Sensing, IEEE Transactions on*, Vol.50 (11), pp-4227-4242, DOI 10.1109/TGRS.2012.2190517.
- 26) Renhe ZHANG, Toshio KOIKE, Xiangde XU, Yaoming MA, Kun YANG: A China-Japan Cooperative JICA Atmospheric Observing Network over the Tibetan Plateau (JICA/Tibet Project): An Overview, *Journal of the Meteorological Society of Japan*, Vol. 90C, pp. 1-16, 2013.1, doi:10.2151/jmsj.2012-C01.
- 27) Kenji TANIGUCHI, Toru TAMURA, Toshio KOIKE, Kenichi UENO, Xiangde XU: Atmospheric conditions and increasing temperature over the Tibetan Plateau during early spring and the pre-monsoon season in 2008, *Journal of the Meteorological Society of Japan*, Vol. 90C, pp. 17-32, 2013.1, doi:10.2151/jmsj.2012-C02.
- 28) Xingwen JIANG, Yueqing LI, Xingbing ZHAO, Toshio KOIKE: Characteristics of the summertime boundary layer and atmospheric vertical structure over the Sichuan Basin, *Journal of the Meteorological Society of Japan*, Vol. 90C, pp. 33-54, 2013.1, doi:10.2151/jmsj.2012-C03.
- 29) Jun QIN, Kun YANG, Toshio KOIKE, Hui LU, Yaoming MA, Xiangde XU: Evaluation of AIRS Precipitable Water Vapor against Ground-based GPS Measurements over the Tibetan Plateau and Its Surroundings, *Journal of the Meteorological Society of Japan*, Vol. 90C, pp. 87-98, 2013.1, doi:10.2151/jmsj.2012-C06.
- 30) Hiroyuki TSUTSUI and Toshio KOIKE: Development of Snow Retrieval Algorithm Using AMSR-E for the BJ Ground-Based Station on Seasonally Frozen Ground at Low Altitude on the Tibetan Plateau, *Journal of the Meteorological Society of Japan*, Vol. 90C, pp. 99-112, 2013.1, doi:10.2151/jmsj.2012-C07
- 31) Xiangde XU, Jibing GUO, Toshio KOIKE, Xiaohui SHI, Fucheng ZHU, Yujie LIU, Shenjun ZHANG: "Downstream effect" of winter snow cover over the eastern Tibetan Plateau on climate anomalies in East Asia, *Journal of the Meteorological Society of Japan*, Vol. 90C, pp. 113-130, 2013.1, doi:10.2151/jmsj.2012-C08.
- 32) Lei Wang, Toshio Koike, Man Wang, Jianyu Liu, Jihua Sun, Hui Lu, Hiroyuki Tsutsui, Katsunori Tamagawa, Xiangde Xu: Use of integrated observations to improve 0-36h flood forecasting: development and application of a coupled atmosphere-hydrology system in the Nanpan River Basin,

China, Journal of the Meteorological Society of Japan, Vol. 90C, pp. 131-144, 2013.1, doi:10.2151/jmsj.2012-C09.

- 33) Lingen BIAN, Zhiqiu GAO, Yongfeng MA, Toshio KOIKE, Yaoming MA, Yueqing LI, Jihua SUN, Zeyong HU, Xiangde XU: Seasonal Variation in Turbulent Fluxes over Tibetan Plateau and its Surrounding Areas, Journal of the Meteorological Society of Japan, Vol. 90C, pp. 157-171, 2013.1, doi:10.2151/jmsj.2012-C11.
- 34) Ichiro Kaihotsu, Tosio Koike, Hideyuki Fujii, Tsutomu Yamanaka, Oyunbaatar Dambaravjaa, Azzaya Dorgorsuren, Kazuaki Shiraishi: Validation of the soil moisture measurement algorithm of AMSR-E, Remote Sensing and Hydrology (Proceedings of a symposium held at Jackson Hole, Wyoming, USA, September 2010), IAHS Publ. 352, pp.38-41, 2012.09
- 35) David Ndegwa Kuria, Toshio Koike, Moses Karoki Gachari, Cyrus Raza Mirza : A Coupled Data Assimilation Framework utilizing multifrequency passive microwave remote sensing in retrieval of land surface variables and integrated atmospheric variables: development and application over the Tibetan Plateau, International Journal of Remote Sensing 07/2012; 33(24). DOI:10.1080/01431161.2012.701346.
- 36) Jaranilla-Sanchez, P.A., T. Koike, C.T. Nyunt, M. Rasmy, I. Hasegawa, A. Matsumura, D. Ogawada: Hydrological Impacts of a Changing Climate on Floods and Droughts in Philippine River Basins, JSCE, Annual Journal of Hydraulic Engineering (JSCE), Vol.57, No.4 , pp. I_13-I_18, February 2013.
- 37) Nyunt, C.T., P.A.J. Sanchez, A. Yamamoto, T. Nemoto, M., Kitsuregawa and T. Koike : Bias correction method for climate change impact assessments in the Philippines, Annual Journal of Hydraulic Engineering (JSCE), Vol 57, No.4, pp I_19_I_24, February 2013.
- 38) Rasmy, M., T. Koike, P.A.Jaranilla-Sanchez, C.T.Nyunt, M. Hara, M. Fujita and H. Kawase : Identifying Gaps and Opportunities Between Statistical and Dynamical Downscaling Approaches Over Shikoku Island, Japan, Annual Journal of Hydraulic Engineering (JSCE), Vol.57, No.4 , pp. I_133-I_138, February 2013.
- 39) Felix MUTUA, Mohamed RASMY, and Toshio KOIKE: IMPROVING EXTREME RAINFALL EVENT PREDICTION USING MICROWAVE SATELLITE DATA ASSIMILATION, Annual Journal of Hydraulic Engineering (JSCE), Vol. 57 No.4, , pp. I_115-I_120, February 2013.
- 40) Shrestha, M., T. Koike, L. Wang, and K. Yoshimura: LONG-TERM (1948-2006) SIMULATION OF SNOW DEPTH AT YAGISAWA DAM SITE USING JP10 REANALYSIS AND ENERGY BALANCE SNOW MODEL (WEB-DHM-S), Annual Journal of Hydraulic Engineering (JSCE), Vol 57, No.4, pp I_175-I_183, February 2013.
- 41) Wang, F., L. Wang, T. Koike, H. Zhou, K. Yang, A. Wang, and W. Li: Evaluation and application of a fine-resolution global data set in a semiarid mesoscale river basin with a distributed biosphere hydrological model, J. Geophys. Res. Atmos., 116, D21, doi:10.1029/2011JD015990.
- 42) Hui Lu, Toshio Koike, Kun Yang, Zeyong Hu, Xiangde Xue, Mohamed Rasmy, David Kuria, Katsunori Tamagawa: Improving land surface soil moisture and energy flux simulations over the Tibetan plateau by the assimilation of the microwave remote sensing data and the GCM output into a land surface model. Int. J. Appl. Earth Observ. Geoinf., 17, 43-54, doi:10.1016/j.jag.2011.09.006.
- 43) Shrestha, M., L. Wang, T. Koike, Y. Xue, and Y. Hirabayashi: Modeling the spatial distribution of snow cover in the Dudhkoshi region of Nepal Himalaya, J. Hydrometeor., doi: 10.1175/JHM-D-10-05027.1., Vol 13, 204-222, 2012.
- 44) Rasmy, M., T. Koike, D. N. Kuria, C. R. MIRZA, S. Boussetta, H. Lu, and X. Li, 2011: Development of a satellite land and atmosphere coupled data assimilation system in Tibetan Plateau, IEEE Transactions on Geosciences and Remote Sensing, pp.2847-2862, VOL. 49, NO. 8, AUGUST 2011.
- 45) D Kuria, T Koike: Convective cloud discrimination using multi-frequency microwave signatures of the AMSR-E sensor: evaluation over the Tibetan Plateau, International journal of remote sensing, Vol.32, Issue 12, pp. 3451-3460.
- 46) David Kuria, Toshio Koike, Moses Gachari, S Boussetta: A Land Data Assimilation System utilizing low frequency passive microwave remote sensing: a case study of the Tibetan Plateau, International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies, Vol.2, pp.303-324.

- 47) Shrestha, M., L. Wang, Y. Hirabayashi, and T. Koike: Simulation of Forest snow processes at Fraser with a energy balance based snow melt model (WEB-DHM-S), Annual Journal of Hydraulic Engineering (JSCE), Vol 56, pp I_229-I_234, February 2012.
- 48) Duran-Ballen, S.; Shrestha, M.; Wang, L., Koike, T.; Snow Cover Modeling at the Puna Tsang River Basin in Bhutan with corrected JRA-25 Temperature, Annual Journal of Hydraulic Engineering (JSCE), Vol 56, pp I_235-I_240, February 2012.
- 49) Cho Thanda NYUNT, Hiroki YAMAMOTO, Akio YAMAMOTO, Toshihoro NEMOTO4, Masaru KITSUREGAWA and Toshio KOIKE: A PPLICATION OF BIAS-CORRECTION AND DOWNSCALING METHOD TO KALU GANGA BASIN IN SRI LANKA, Annual Journal of Hydraulic Engineering (JSCE), Vol. 56, I_115-I_120, February 2012.
- 50) Patricia Ann JARANILLA-SANCHEZ, Lei WANG, Katsunori TAMAGAWA, Izumi HASEGAWA, Hiroki YAMAMOTO and Toshio KOIKE: INTEGRATED MODELING OF CLIMATE CHANGE IMPACTS IN THE YOSHINO RIVER BASIN, JAPAN FOR BASIN MANAGEMENT PLANNING, Annual Journal of Hydraulic Engineering (JSCE), Vol. 56, I_133-I_138, February 2012.
- 51) Shakil AHMAD, Kazuaki NISHII, Toru TAMURA, Tetsu OHTA, Eiji IKOMA, Masaru KITSUREGAWA and Toshio KOIKE: CHARACTERISTICS OF CLIMATOLOGICAL TROPOSPHERIC CONDITIONS DURING PRE-MONSOON AND MATURED PHASES OF PAKISTAN SUMMER MONSOON, Annual Journal of Hydraulic Engineering (JSCE), Vol. 56, I_157-I_162, February 2012.
- 52) Mart?n G?MEZ GARC?A A. and Toshio KOIKE: MULTISCALING ANALYSIS OF SATELLITE-DERIVED PRECIPITATION ESTIMATES LINKED TO IN-SITU MEASUREMENTS, Annual Journal of Hydraulic Engineering (JSCE), Vol. 56, I_169-I_174, February 2012.
- 53) Felix MUTUA, Lei WANG, Akio YAMAMOTO, Toshihoro NEMOTO, Masaru KITSUREGAWA, and Toshio KOIKE: REGIONAL CLIMATE CHANGE AND ITS IMPACTS ON FUTURE DISCHARGES AND FLOW CHARACTERISTICS OF THE NYANDO BASIN, KENYA, Annual Journal of Hydraulic Engineering (JSCE), Vol. 56, No. 4, I_205-I_210, February 2012.
- 54) Wang, L., T. Koike, K. Yang, R. Jin, and H. Li: Frozen soil parameterization in a distributed biosphere hydrological model, Hydrology and Earth System Sciences, 14, 557-571.
- 55) Wang, L., Z. Wang, T. Koike, H. Yin, D. Yang, S. He: The assessment of surface water resources for the semi-arid Yongding River Basin from 1956 to 2000 and the impact of land use change. Hydrological Processes, 24, 1123-1132.
- 56) Lu, N., J. Qin, K. Yang, Y. Gao, X. Xu, and T. Koike, 2011: On the use of GPS measurements for MODIS precipitable water vapor evaluation over southern Tibet, Journal of Geophysical Research, 116, D23117, doi:10.1029/2011JD016160.
- 57) Taniguchi, K., D. Rajan and T. Koike: Effect of the variation in the lower tropospheric temperature on the wind onset of the Indian summer monsoon, Meteorol. Atmos. Phys., Vol.106 (1-2), pp.75-94, doi:10.1007/s00703-009-0051-6, 2010
- 58) Tamura, T., and K., Koike, T.: Role of convective heating in the seasonal evolution of the Asian summer monsoon, J. Geophys. Res. Atmos., 115, D014, doi:10.1029/2009JD013418.
- 59) Tamura, T., Taniguchi, K., Koike, T.: The mechanism of upper tropospheric warming around the Tibetan Plateau at the onset phase of the Asian summer monsoon, J. Geophys. Res. Atmos., 115, D02106, doi:10.1029/2008JD011678.
- 60) Wang, L., C. T. Nyunt, T. Koike, O. Saavedra, L. C. Nguyen, T. V. Sap: Development of an integrated modeling system for improved multi-objective reservoir operation, Frontiers of Architecture and Civil Engineering in China, 4(1), 47-55.
- 61) Patricia Ann Jaranilla-Sanchez, Lei Wang, and Toshio Koike, Modeling the hydrologic responses of the Pampangga River Basin, Philippines: A quantitative approach for identifying droughts, Water Resources Research, vol 47, Issue3, March 2011, doi. 10.1029/2010WR009702.
- 62) Saavedra, O., Koike, T., Yang, K. & Yang, D.: Optimal Dam Operation during Flood Season using a Distributed Hydrological Model and a Heuristic Algorithm, Journal of Hydrologic Engineering, Vol. 15, No. 7, pp. 580-586, July 1, 2010, doi: DOI: 10.1061/ASCE HE.1943-5584.0000212.
- 63) Oliver C. Saavedra Valeriano, Toshio Koike, Kun Yang, Tobias Graf, Xin Li, Lei Wang and Xujun Han: Decision support for dam release during floods using a distributed biosphere hydrological model driven

by quantitative precipitation forecasts, *Water Resources Research*, VOL. 46, W10544, doi:10.1029/2010WR009502, 2010

- 64) Kuria, D., Koike, T., Lu, H., Tsutsui, H. and Graf, T.: A Coupled Land Atmosphere Radiative Transfer Model (LA-RTM) for Multi-frequency Passive Microwave Remote sensing: Development and application over Wakasa Bay and The Tibetan Plateau. *International Journal of Remote Sensing*. Volume 32, Issue 6, pp. 1779-1796 , 2011, DOI:10.1080/01431161003621627.
- 65) Maheswor SHRESTHA, Lei WANG , Toshio KOIKE, SIMULATION OF INTERANNUAL VARIABILITY OF SNOW COVER AT VALDAI (RUSSIA) USING A DISTRIBUTED BIOSPHERE HYDROLOGICAL MODEL WITH IMPROVED SNOW PHYSICS, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 55, pp73-78, 2011.
- 66) Wang, L., T. Koike, K. Yang, and P. Yeh: Assessment of a distributed biosphere hydrological model against streamflows and MODIS land surface temperature in the upper Tone River Basin, *Journal of Hydrology*, 377, 21-34.
- 67) Saavedra, O., Koike, T., Yang, D., Nyunt, C., T., Khanh, D. V. & Chau, L.C.: Flood simulation using different sources of rainfall in the Huong River, Vietnam. *Hydrological Sciences Journal*, 54(5), pp. 909-917.
- 68) Tsutsui, H. and Koike, T.: Estimation And Discussion Of Long-term Snow Depth Based On SSM/I Data, *Journal of Hydrosience and Hydraulic Engineering*, Vol.27, No.1, pp.49-60, May, 2009.
- 69) Kuria, D. and Koike, T.: Convective cloud discrimination using multi-frequency microwave signature of the AMSR-E sensor: Evaluation over the Tibetan Plateau, *International Journal of Remote Sensing*, 06/2011; 32(12):3451 – 3460. DOI: 10.1080/01431161003749451.
- 70) Wang, L., T. Koike, K. Yang, and P. Yeh: Assessment of a distributed biosphere hydrological model against streamflows and MODIS land surface temperature in the upper Tone River Basin, *Journal of Hydrology*, 377, pp. 21-34.
- 71) Wang, L., T. Koike, D. Yang, and K. Yang: Improving the hydrology of the Simple Biosphere Model 2 and its evaluation within the framework of a distributed hydrological model, *Hydrological Sciences Journal*, 54(6), 989-1006.
- 72) Qin, Jun, S-L Liang, K. Yang, I. Kaihotsu, R-G Liu, T. Koike, 2009: Simultaneous estimation of both soil moisture and model parameters using particle filtering method through the assimilation of microwave signal. *J. Geophys. Res.*, 114, D15103, doi:10.1029/2008JD011358.
- 73) Hui Lu, Toshio Koike, Hideyuki Fujii, Tetsu Ohta, Katsunori Tamagawa : Development of a Physically-based Soil Moisture Retrieval Algorithm for Spaceborne Passive Microwave Radiometers and its Application to AMSR-E, *Journal of The Remote Sensing Society of Japan*, Vol. 29, No.1, pp.253-261, Jan., 2009.
- 74) Hiroyuki TSUTSUI, Toshio KOIKE : Long-term Variation of Snow Depth in the Northern Hemisphere Based on SSM/I Data, *Journal of The Remote Sensing Society of Japan*, Vol. 29, No.1, pp.318-326, Jan., 2009.
- 75) Lei Wang, Toshio Koike, Kun Yang, Thomas J. Jackson, Rajat Bindlish, and Dawen Yang (2009):Development of a distributed biosphere hydrological model and its evaluation with the Southern Great Plains Experiments (SGP97 and SGP99), *J. Geophys. Res.*, VOL. 114, D08107, doi:10.1029/2008JD010800.
- 76) Patricia Ann Jaranilla-Sanchez, Lei Wang, Toshio Koike, ENSO influence on the 1982-2000 hydrological properties of the Pantabangan-Carranglan Watershed, Philippines, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 54, 19-24, February 2010.
- 77) Mohamed RASMY, Toshio KOIKE, Hui Lu, Xiangde Xu, Souhail BOUSSETTA, Xin Li (2010), DEVELOPMENT OF A SATELLITE BASED SEQUENTIAL LAND DATA ASSIMILATION SYSTEM COUPLED WITH A REGIONAL-SCALE ATMOSPHERIC MODEL, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 54, pp49-54 , February 2010.
- 78) Maheswor Shrestha, Lei Wang, Toshio Koike, Investigating the applicability of WEB-DHM to the Himalayan river basin of Nepal, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 54, 55-60, February 2010.

- 79) Hui Lu, Toshio Koike, Kun Yang, Xin Li, Mohamed Rasmy, Hiroyuki Tsutsui, Souhail Boussetta and Katsunori Tamagawa, Simulating of land surface soil moisture and energy flux in northern Africa using a land data assimilation system and UKMO output, Annual Journal of Hydraulic Engineering (JSCE), Vol. 54, pp. 61-66, February 2010.
- 80) Oliver C. SAAVEDRA V., Toshio KOIKE, Lei WANG, L.: Multi-Reservoir Operation Using a Distributed Biosphere Hydrological Model, Annual Journal of Hydraulic Engineering (JSCE), Vol. 54, pp.103-108, February 2010.
- 81) Tamagawa, K. Kitsuregawa, M. Ikoma, E. Ohta, T. Williams, S. Koike, T.: An Advanced Quality Control System for the CEOP/CAMP In-situ Data Management, IEEE Systems Journal, volume2 Number3, ISJEB2 (ISSN 1932-8184), October 2008.
- 82) Mirza, C. R., T. Koike, K. Yang, and T. Graf : The Development of 1-D Ice Cloud Microphysics Data Assimilation System (IMDAS) for Cloud Parameter Retrievals by Integrating Satellite Data, IEEE Transactions on Geoscience and Remote Sensing, Vol. 46, No.1, 119-129.
- 83) Taniguchi, Kenji and Toshio Koike : Seasonal Variation of Cloud Activity and Atmospheric Profiles over the Eastern Part of the Tibetan Plateau, J. Geophys. Res. Atmos., Vol.113, D10104, doi:10.1029/2007JD009321., 2008.
- 84) Souhail BOUSSETTA, Toshio KOIKE, Tobias GRAF, Kun Yang, and Mahadevan PATHMATHEVAN: Improved local atmospheric simulations by a coupled land-atmosphere satellite data assimilation system, Remote Sensing of Environment, Vol. 112, 2008; DOI 10.1016/j.rse.2007.06.002.
- 85) Wang, L., T. Koike (2009), Comparison of a distributed biosphere hydrological model with GBHM, Annual Journal of Hydraulic Engineering (JSCE), Vol. 53, pp. 103-108, February 2009.
- 86) LEI WANG, Toshio KOIKE (2009): COMPARISON OF A DISTRIBUTED BIOSPHERE HYDROLOGICAL MODEL WITH GBHM, Annual Journal of Hydraulic Engineering (JSCE), Vol. 53, pp.103-108, February 2009.
- 87) Hui LU, Toshio KOIKE, Kun YANG, XiangDe XU, Hiroyuki TSUTSUI, Yueqing LI, Xingbing ZHAO, Katsunori TAMAGAWA : SIMULATING SURFACE ENERGY FLUX AND SOIL MOISTURE AT THE WENJIANG PBL SITE USING THE LAND DATA ASSIMILATION SYSTEM OF THE UNIVERSITY OF TOKYO, Annual Journal of Hydraulic Engineering (JSCE), Vol. 53, pp.1-6, Mar., 2009.
- 88) Oliver SAAVEDRA, Toshio KOIKE : REAL-TIME DAM OPERATION DURING TYPHOON INVASION USING QUANTITATIVE PRECIPITATION FORECAST, Annual Journal of Hydraulic Engineering (JSCE), Vol. 53, pp.121-126, Mar., 2009.
- 89) Lei WANG, Toshio KOIKE : COMPARISON OF A DISTRIBUTED BIOSPHERE HYDRO- LOGICAL MODEL WITH GBHM, Annual Journal of Hydraulic Engineering (JSCE), Vol. 53, pp.103-108, Mar., 2009.
- 90) Hui LU, Toshio KOIKE, Hiroyuki TSUTSUI, David Ndegwa KURIA, Tobias GRAF, Kun YANG and Xin LI: A long term field experiment for radiative transfer model development and land surface processes remote sensing, Annual Journal of Hydraulic Engineering, JSCE, Vol. 52, pp 13-18, March, 2008.
- 91) Mirza, C. R., T. Koike, K. Yang, and T. Graf: The Development of 1-D Ice Cloud Microphysics Data Assimilation System (IMDAS) for Cloud Parameter Retrievals by Integrating Satellite Data, IEEE Transactions on Geoscience and Remote Sensing, Vol. 46, No.1, 119-129, January 2008.
- 92) Hui LU, Toshio KOIKE, Hiroyuki TSUTSUI, David Ndegwa KURIA, Tobias GRAF, Kun YANG and Xin LI: A LONG TERM FIELD EXPERIMENT FOR RADIATIVE TRANSFER MODEL DEVELOPMENT AND LAND SURFACE PROCESSES REMOTE SENSING, Annual Journal of Hydraulic Engineering (JSCE), Vol. 52, pp.13-18, Mar., 2008.
- 93) Kun Yang, Rachel T. Pinker, Yaoming Ma, Toshio Koike, Margaret M. Wonsick, Stephen J. Cox, Yuanchong Zhang, Paul Stackhouse: Evaluation of satellite estimates of downward shortwave radiation over the Tibetan Plateau, J. Geophys. Res. Atmos., Vol.113, D17204, doi:10.1029/2007JD009736, 2008.
- 94) David Kuria, Toshio Koike, Hui Lu, Hiroyuki Tsutsui and Tobias Graf: Field-supported verification and improvement of a passive microwave surface emission model for rough, bare and wet soil surfaces by incorporating shadowing effects, IEEE Transactions on Geoscience and Remote Sensing, Vol. 45, No.5, pp. 1207-1217, May 2007.

- 95) S. Boussetta, T. Koike, T. Graf, K. Yang, M. Pathmathevan: Development of a coupled land-atmosphere satellite data assimilation system for Improved local atmospheric simulations, *Remote Sensing of Environment*, DOI 10.1016/j.rse.2007.06.002.
- 96) Lu Hui, Koike Toshio, Ohta Tetsu, Kuria David Ndegwa, Tsutsui Hiroyuki, Graf Tobias, Fujii Hideyuki, Tamagawa Katsunori,: Development of a soil moisture retrieval algorithm for spaceborne passive microwave radiometers and its application to AMSR-E and SSM/I: *Geoscience and Remote Sensing Symposium, 2007. IGARSS 2007. IEEE International*, pp: 1177 - 1180, 23-28 July 2007.
- 97) Kun YANG, Mohamed RASMY, Surendra RAUNIYAR, Toshio KOIKE, Kenji TANIGUCHI, Katsunori TAMAGAWA, Petra KOUDELOVA, Masaru KITSUREGAWA, Toshihiro NEMOTO, Masaki YASUKAWA, Eiji IKOMA, Michael G. BOSILOVICH and Steve WILLIAMS: Initial CEOP-based Review of the Prediction Skill of Operational General Circulation Models and Land Surface Models, *Journal of the Meteorological Society of Japan*, Vol.85A, 99-116, February 2007.
- 98) Kun YANG, Takahiro WATANABE, Toshio KOIKE, Xin LI, Hideyuki FUJII, Katsunori TAMAGAWA, Yaoming Ma and Hirohiko Ishikawa: Auto-calibration System Developed to Assimilate AMSR-E Data into a Land Surface Model for Estimating Soil Moisture and the Surface Energy Budget, *Journal of the Meteorological Society of Japan*, Vol.85A, 229-242, February 2007.
- 99) Kenji TANIGUCHI and Toshio KOIKE : Increasing Atmospheric Temperature in the Upper Troposphere and Cumulus Convection over the Eastern Part of the Tibetan Plateau in the Pre-Monsoon Season of 2004, *Journal of the Meteorological Society of Japan*, Vol.85A, 271-294, February 2007.
- 100) Hiroyuki TSUTSUI, Hiroyuki TSUTSUI and Tobias GRAF: Development of a dry-snow satellite algorithm and validation at the CEOP Reference Site in Yakutsk, *Journal of the Meteorological Society of Japan*, Vol.85A, 417-438, February 2007.
- 101) T Surendra Prasad RAUNIYAR, Mohamad RASMY, Katsunori TAMAGAWA, Kun YANG, Toshio KOIKE: PREDICTION SKILL ASSESSMENT OF NWP MODELS IN SIMULATING DIURNAL CYCLE OF PRECIPITATION, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 51, pp.97-102, February 2007.
- 102) Mohamed RASMY, Surendra Prasad RAUNIYAR, Katsunori TAMAGAWA, Kun YANG, Toshio KOIKE: ASSESSMENT OF ENERGY BUDGET IN WEATHER FORECASTING GENERAL CIRCULATION MODELS, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 51, pp.1-6, February 2007.
- 103) Mirza, C. R., Toshio Koike, Kun Y., and Tobias G.: Retrieving cloud parameters over oceans from AMSR-E data by developing an 1-D Cloud Microphysics Data Assimilation System (CMDAS), *Journal of Hydrosience & Hydraulic Engineering, JHHE*, Vol. 51, pp. 57-72, May 2006.
- 104) Kun Yang, Toshio Koike, Paul Stackhouse, Colleen Mikovitz, Stephen J. Cox: An assessment of satellite surface radiation products for highlands with Tibet instrumental data, *Geophys. Res. Lett.*, 33, 22, doi:10.1029/2006GL027640, 2006.
- 105) Kun Yang, Toshio Koike and Baisheng Ye : Improving estimation of hourly, daily, and monthly solar radiation by importing global data sets, *Agricultural and Forest Meteorology*, Volume 137, Issues 1-2, 1 March 2006, Pages 43-55.
- 106) Marco Tedesco, Edward J. Kim, Don Cline, Tobias Graf, Toshio Koike, Richard Armstrong, Mary J. Brodzik, Janet Hardy: Comparison of local scale measured and modelled brightness temperatures and snow parameters from the CLPX 2003 by means of a dense medium radiative transfer theory model, *Hydrological Processes*, Volume 20, Issue 4, 15 March 2006, Pages: 657-672.
- 107) Tobias GRAF, Toshio KOIKE, Hideyuki FUJII: TOWARDS THE DEVELOPMENT OF A LAND DATA ASSIMILATION SYSTEM FOR SNOW, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 50, pp. 1-6, February, 2006.
- 108) Hui LU, Toshio KOIKE, Nozomu HIROSE, Masato MORITA, Hideyuki FUJII, David Ndegwa KURIA, Tobias GRAF, Hiroyuki TSUTSUI: A BASIC STUDY ON SOIL MOISTURE ALGORITHM USING GROUND-BASED OBSERVATIONS UNDER DRY CONDITION, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 50, pp. 7-12, February, 2006.
- 109) Oliver SAAVEDRA, Toshio KOIKE, Dawen YANG: APPLICATION OF A DISTRIBUTED HYDROLOGICAL MODEL COUPLED WITH DAM OPERATION FOR FLOOD CONTROL PURPOSES, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 50, pp. 61-66, February, 2006.

- 110) Taniguchi, K., and T. Koike : Comparison of definitions of Indian summer monsoon onset: Better representation of rapid transitions of atmospheric conditions, *Geophys. Res. Lett.*, 33, L02709, doi:10.1029/2005GL024526.
- 111) Yang, K. and T. Koike: A general model to estimate hourly and daily solar radiation for hydrological studies, *Water Resources Research*, 41, W10403, 10.1029/2005WR003976.
- 112) Boussetta, S., T. Koike, M. Pathmathevan, K. Yang: Investigation of the effect of a coupled land-atmosphere satellite data assimilation system on land-atmosphere processes, *Predictions in Ungauged Basins: Promises and Progress*, IAHS publ. 303, 2005.
- 113) Yang, K., and T., Koike: Comments on "Estimating soil water content from soil temperature measurements by using adaptive Kalman filter", *Journal of Applied Meteorology*, Vol. 44, No.4, pages 546–550, 2005.
- 114) Yang, K., T. Koike, B. Ye, and L. Bastidas: Inverse analysis of the role of soil vertical heterogeneity in controlling surface soil state and energy partition, *J. Geophys. Res. Atmos.*, 110, D08101, doi:10.1029/2004JD005500.
- 115) Souhail BOUSSETTA, Toshio KOIKE, Mahadevan PATHMATHEVAN, and Kun YANG: A basic study on the development of a satellite data assimilation OF A land-atmosphere coupled system, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 49, pp. 283-288, February, 2005.
- 116) Cyrus Raza MIRZA, T. Koike, Yang, K., Graf, T.: Development of 1-D Cloud Microphysics Data Assimilation System (CMDAS) by using AMSR-E Data, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 49, pp. 289-294, February, 2005.
- 117) Tobias Graf, Toshio Koike, Hideyuki Fujii, Richard Armstrong, Mary J. Brodzik, Marco Tedesco and Edward J. Kim: Integrated Snow Observation during the Cold Land Processes Field Experiment and its Application for the Development of Radiative Transfer Model for Snow, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 49, pp.325-330, February, 2005.
- 118) Bashir AHMAD, Dawen YANG, Toshio KOIKE, Hiroshi Ishidaira , Li Chong and Tobias GRAF: Remote sensing based snowmelt runoff model coupled with distributed hydrological model in upper yellow river basin, *Annual Journal of Hydraulic Engineering (JSCE)*, Vol. 49, pp. 331-336, February, 2005.
- 119) Dawen Yang, Chong Li, Heping Hu, Zhidong Lei, Shixiu Yang, Tetsuya Kusuda, Toshio Koike, Katumi Musiaka: Analysis of water resources variability in the Yellow River of China during the last half century using historical data, *Water Resources Research*, VOL. 40, W06502, doi:10.1029/2003WR002763, 2004.
- 120) Dawen Yang, Toshio Koike, Hiroshi Tanizawa: Application of a distributed hydrological model and weather radar observations for flood management in the upper Tone River of Japan, *Hydrological Processes*, Volume 18, Issue 16 , pp. 3119 - 3132, 2004.
- 121) Yang, K., T. Koike, H. Ishikawa, and Y. Mao: Analysis of the surface energy budget at a site of GAME/Tibet using a single-source model, *Journal of the Meteorological Society of Japan*, 82, pp.131-153, 2004.
- 122) Yang, K., T. Koike, H. Fujii, T. Tamura, X. Xu, L. Bian, and M. Zhou: The daytime evolution of the atmospheric boundary layer and convection over the Tibetan Plateau: observations and simulations, *Journal of the Meteorological Society of Japan*, Vol. 82 (6), pp. 1777-1792, 2004.
- 123) T. Koike : The Coordinated Enhanced Observing Period - an initial step for integrated global water cycle observation, *WMO Bulletin*, Vol.53, No.2, pp.115-121, 2004.
- 124) Graf, T., T. Koike and K. Nishimura: Correcting solid precipitation from gauge observations using passive microwave brightness temperature data, *Annual Journal of Hydraulic Engineering*, JSCE, Vol. 48, pp. 259-264, 2004
- 125) Koudelova, P. and T. Koike: Estimation of Rainfall Rate in Eastern Tibet using Ground-based Radar Observations: Method Development, *Annual Journal of Hydraulic Engineering*, JSCE, Vol. 48, 2004
- 126) Yang, K., T. Koike, D. Yang, 2003: Surface Flux Parameterization in the Tibetan Plateau, *Boundary-layer Meteorology* 106 (2): 245-262.
- 127) Mahadevan PATHMATHEVAN, Toshio KOIKE, Xin LI: A New Satellite-Based Data Assimilation Algorithm to Determine Spatial and Temporal Variations of Soil Moisture and Temperature Profiles, *Journal of the Meteorological Society of Japan*, Vol. 81, No. 5, pp.1111-1135, 2003.
- 128) Yang, K. and Koike, T., 2002: Estimating Surface Solar Radiation from Upper-air Humidity, *Solar Energy*, 72(2), 177-186.

- 129) Yang, K., T. Koike, H. Fujii, K. Tamagawa, N. Hirose (2002) Improvement of Surface Flux Parameterizations with a Turbulence-Related Length, *Quarterly Journal of Royal Meteorological Society* 128, Part B, No.584, 2073-2088.
- 130) Hirose, N., T. Koike, and H. Ishidaira (2002) Study on Spatially Averaged Evaporation under Soil Moisture Heterogeneity Affected by Permafrost Micro-topography, *Journal of the Meteorological Society of Japan*, Vol.80, No.2, 191-203
- 131) Uyeda, H., H. Yamada, J. Horikomi, R. Shirooka, S. Shimizu, L. Liu, K. Ueno, H. Fujii and T. Koike, 2001: Characteristics of Convective Clouds Observed by a Doppler Radar at Naqu on Tibetan Plateau during the GAME-Tibet IOP. *J. Meteor. Soc. Japan*, 79, 1B, 463-474.
- 132) Fujii, H. and T. Koike, 2001: Development of a TRMM/TMI Algorithm for Precipitation in the Tibetan Plateau by Considering Effects of Land Surface Emissivity. *J. Meteor. Soc. Japan*, 79, 1B, 475-483.
- 133) Li, X. and T. Koike, 2001: A New Frozen Soil Parameterization in Land Surface Scheme, Present and Future of Modeling Global Environmental Change, Eds., T. Matsuno and H. Kida pp.405-414.
- 134) Yang, K., N. Tamai, and T. Koike, 2001: Analytical Solution of Surface layer Similarity Equations, *J. Applied, Meteor.*, Vol.40, No.9, 2001.
- 135) Tadono, T., Koike, T., Shi, J., Ding Y., Chen, X., Wang, S., Yang, M.: Development of an algorithm for soil moisture mapping based on single-parameter SAR images in permafrost regions including the effect of surface roughness, *Journal of Hydrosience and Hydraulic Engineering*, Vol.18, No.1, pp.29-38, 2000.
- 136) Njoku E., Koike T., Jackson, T., Paloscia, S.: Retrieval of soil moisture from AMSR data, *Microwave Radiometry and Remote Sensing of Earth's Surface and Atmosphere*, edited by Pampaloni and Paloscia, VSP 2000, pp.525-233.
- 137) Chang, A. and Koike, T.: Progress in AMSR snow algorithm development, *Microwave Radiometry and Remote Sensing of Earth's Surface and Atmosphere*, edited by Pampaloni and Paloscia, VSP 2000, pp.515-523.
- 138) Koike, T., Fujii, H., Ohta, T., Togashi, E., 2001: Development and validation of TMI algorithms for soil moisture and snow, *Remote Sensing and Hydrology 2000, IAHS Publ. 267*, 390-393
- 139) Lu, M., Koike, T., Hayakawa, N.: A distributed hydrological modeling system linking GIS and hydrological models, *IAHS Publ. No.235*, pp.141-148, 1996.
- 140) Koike, T., Seko, K., Chen, X., Tadono, T., Tamagawa, K., Igarashi, H., Takizawa, H.: Monitoring ground surface condition on Tibetan Plateau by using satellite remote sensing, *Bulletin of Glacier Research*, 12, pp. 95-104, 1994.
- 141) Ohta, T., Yabuki, H., Koike, T., Ohata, T., Zhang, Y.: Hydrological observations in the Tanggula Mountains, the Tibetan Plateau -discharge, soil moisture and ground temperature-, *Bulletin of Glacier Research*, 12, pp. 49-56, 1994.
- 142) Ueno, K., Endo, N., Ohata, T., Yabuki, H., Koike, T., Koike, M., Ohta, T., Zhang, Y.; Characteristics of precipitation distribution in Tanggula, Monsoon, 1993, *Bulletin of Glacier Research*, 12, pp. 37-47, 1994.
- 143) Koike, T. and Suhama, T.: Passive-microwave remote sensing of snow, *Annals of Glaciology*, 18, pp. 305-308, 1993.
- 144) Koike, T., Goto, I., Hayakawa, N., Wakatsuki, K.: New method to study snowfall using remote sensing, *Annals of Glaciology*, 18, pp. 317-321, 1993.
- 145) Hayakawa, N., Koike, T., Kamishima, I.: Feasibility study of a "snow dam" concept, *Annals of Glaciology*, 18, 322-323, 1993.
- 146) Hatta, S., Koike, T., Lu, M., Hayakawa, N.: Snowmelt runoff analysis using estimated distribution of snow water equivalent, *Annals of Glaciology*, 18, pp. 329-330, 1993.
- 147) Oki, T., Musiake, K., Koike, T.: Spatial rainfall distribution at a storm event in mountainous regions, estimated by orography and wind direction, *Water resources research*, vol. 27, No.3, pp.359-369, 1991.
- 148) Koike, T., Takahasi, Y., Yosino, S.: Modelling of snowmelt distribution for the estimation of basin-wide snow covered area, *IAHS Pbul. No.166*, pp.199-212, 1987.
- 149) Koike, T., Takahasi, Y., Yosino, S.: Estimation of basin-wide snow water equivalent using snow-covered area, *IAHS Pbul. No.155*, pp. 193-201, 1986.