

FY2014 (April 2014 – March 2015)

**国際誌 [International peer-reviewed journal]**

1. 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.
2. 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.
3. Yohei Sawada, Toshio Koike, and Jeffrey P. Walker, A Land Data Assimilation System for Simultaneous Forecasting of Soil Moisture and Vegetation Dynamics, *Journal of Geophysical Research – Atmospheres*, submitted
4. Yohei Sawada, and Toshio Koike (2014), Simultaneous Estimation of both Hydrological and Ecological Parameters in an Eco-Hydrological Model Assimilating Microwave Signal, *Journal of Geophysical Research – Atmospheres*, 119, 8839-8857
5. Yohei Sawada, Toshio Koike and Patricia Ann Jaranilla-Sanchez (2014), Modeling Hydrologic and Ecologic Responses using a New Eco-hydrological Model for Identification of Droughts, *Water Resources Research*, 50, 6214-6235
6. Shrestha, M., Koike, T., Hirabayashi, Y., Xue, Y., Wang, L., Rasul, G. and Ahmad, B.: Integrated simulation of snow and glacier melt in water and energy-balance based, distributed hydrological modeling framework: case study at Hunza River Basin of Pakistan Karakoram region, *Journal of Geophysical Research – Atmosphere (JGR-Atmosphere)*, 2015 (Second Revision).
7. Bhatti, A., Koike, T. and Shrestha, M.: Climate change impact assessment on mountain snow hydrology by water and energy budget based distributed hydrological model, *Journal of Hydrology*, 2014 (Under Review).
8. Asif M. Bhatti, Toshio Koike and Maheswor Shrestha, (2014), “Climate change impact assessment on mountain snow hydrology by water and energy budget - based distributed hydrological model”, *J. of Hydrology*, 2014 (Under review).
9. Yohei Sawada, Hiroyuki Tsutsui, Toshio Koike, Mohamed Rasmy, Rie Seto, and Hideyuki Fujii, A Field-Supported Algorighm for Retrieving Vegetation Water Content from Passive Microwave Observations, *IEEE Transactions on Geoscience and Remote Sensing*, (submitted)

**国内誌[Domestic peer-reviewed Journal]**

1. 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, *Journal of Japan Society of Civil Engineering (JSCE)*, Vol. 59, No.4, pp I\_103-I\_108, 2015.
2. Asif M. Bhatti, Toshio Koike and Maheswor Shrestha, (2015), “Simulating long-term hydrological processes in cold region river basin”, *Journal of Japan Society of Civil Engineers*, Vol. 71, No. 4, Ser. B1 (Hydraulic Engineering), pp I\_67 – I\_72, 2015.
3. Ralph Allen ACIERTO, Mohamed RASMY, and Toshio KOIKE: SENSITIVITY OF SINGLE-YEAR SEASONAL PRECIPITATION TO PARAMETERIZATION IN THE WEATHER RESEARCH AND FORECASTING (WRF) MODEL, *Journal of Japan Society of Civil Engineering*, pp I\_67 – I\_72, Vol. 59, 2015, March.

4. 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, pp I\_73 – I\_78, Vol. 59, 2015, March.
5. 尾花まさ子, 内田考洋, 辻本哲郎, 知花武佳 : 砂礫州水際への植物種子と土砂の堆積過程に関する実験的検討, 河川技術論文集, Vol.20, pp.187-192, 2014年6月.
6. 尾花まさ子, 片野坂暎一, 知花武佳, 辻本哲郎 : 砂礫州における礫率の空間分布を考慮した伏流水流動, 土木学会論文集B1(水工学), Vol.59, I\_1165-1170, 2015年3月.
7. 吉村耕平・小池俊雄 : 気候変化の適応策としてのダムの治水・利水容量の再配分に関する考察-紀の川流域を例として, 第59巻, pp. I\_385- I\_390, March 2015.
8. 玉川勝徳・Mohamed RASMY・小池俊雄・辻本久美子・会田健太郎・藤井秀幸・増本隆夫 : 陸面データ同化手法を用いたカンボジア・プルサット観測点での土壤水分推定手法の検討, 第59巻, pp. I\_409- I\_414, March 2015.

#### [国際学会,ワークショッピング,シンポジウム発表 \[International Conference, Workshop, Symposium\]](#)

1. Toshio Koike: Case Studies on Co-designing Projects with Stakeholders, Transdisciplinary Education for Disaster Risk Reduction: Launching the International Network for Advancing Transdisciplinary Education, Sendai, Miyagi, 15 March 2015 (Oral Presentation)
2. Ralph Allen ACIERTO, Mohamed RASMY, and Toshio KOIKE: SENSITIVITY OF SINGLE-YEAR SEASONAL PRECIPITATION TO PARAMETERIZATION IN THE WEATHER RESEARCH AND FORECASTING (WRF) MODEL, Journal of Japan Society of Civil Engineering, Vol. 59, 2015, March.
3. Shrestha, M., T. Koike, Y. Xue, L. Wang, and Y. Hirabayashi: Energy balance based snow and glacier melt runoff modeling in the river basins of Nepal Himalaya and Pakistan Karakoram regions, IGS Symposium, 1 – 6 March, 2015, Kathmandu, Nepal (Oral Presentation)
4. Asif M. Bhatti, Toshio Koike and Maheswor Shrestha, Assessing the potential impact of climate variability on the hydrology in Hokkaido, Japan, AGU 14-20 December, 2014, San Francisco, USA.
5. Yohei Sawada and Toshio Koike, Development of a new land data assimilation system for improvement of forecasting both soil moisture and vegetation dynamics, *American Geophysical Union Fall Meeting*, San Francisco, USA, 15-19 December 2014 (Poster).
6. Shrestha, M., T. Koike, Y. Xue, L. Wang, and Y. Hirabayashi: Integrated simulation of snow and glacier melt runoff in a distributed biosphere hydrological modeling framework at Upper Indus Basin, Karakoram region, AGU Fall meeting, 15 – 19 December, 2014, San Francisco, USA (Poster Presentation)
7. Shrestha, M.: Distributed hydrological modeling in cold region watersheds, AWCI training workshop on assessment of climate change impact on a watershed hydrology including hydrological modeling in cold region basins, Islamabad, Pakistan, 15 September, 2014 (Oral Presentation)
8. Yohei Sawada and Toshio Koike, Improving the Performance of an Eco-Hydrological Model to Estimate Soil Moisture and Vegetation Dynamics by Assimilating

Microwave Signal, CAHMDA-VI & HEPEX-DAFOH Workshop, The University of Texas at Austin, USA, 8-12 September 2014 (Oral)

9. Toride, K. and T. Koike: Development of an Algorithm for Soil Moisture with High Spatial- and Temporal- Resolution, The 6th International Workshop on Catchment Hydrological Modeling and Data Assimilation (CAHMDA-VI), 8-12 September, Austin, Texas, USA, 2014. – (Oral)
10. Shrestha, M., T. Koike, L. Wang, H. Tsutsui, Y. Xue and Y. Hirabayashi: Correcting basin-scale snowfall in a mountainous basin using a distributed snowmelt model and remote-sensing data, AOGS, 28 July – 1 August, 2014, Hokkaido, Japan (Oral Presentation)
11. Shrestha, M., and T. Koike: High resolution distributed snow and glacier melt runoff model in Upper Indus Basin, GEWEX Future Science, 14-17 July, 2014, Hagg, Netherland (Poster Presentation)
12. Ralph Allen ACIERTO, Mohamed RASMY, and Toshio KOIKE: Sensitivity Analysis of Microphysics and Convection Parameterizations Using Single-year 24km Regional Climate Model Simulations over the Philippines, 7th International Scientific Conference on the Global Water and Energy Cycle, World Forum, The Hague, Netherlands, 14-17 July 2014. – (Poster)
13. Yohei Sawada, Hiroyuki Tsutsui, Mohamed Rasmy, Rie Seto, Hideyuki Fujii, and Toshio Koike, Field-Supported Verification and Improvement of an Algorithm to Retrieve Vegetation Water Content from Passive Microwave Observations, IGARSS2014, Quebec, Canada, July 13-18, 2014 (Poster)
14. Toshio Koike, Kumiko Tsujimoto, Kentaro Aida, Katsunori Tamagawa, Tetsu Ohta, and So Im Monichoth, Water - Climate - Agriculture Workbench in Cambodia, The 7th GEOSS Asia-Pacific Symposium, 26-28, May 2014, Tokyo.(Poster)
15. Patricia Ann Jaranilla-Sanchez, Maheswor Shrestha, Asif Mumtaz Bhatti, Oliver Saavedra and Toshio Koike: Climate Change Assessment and Runoff Simulation in Huong River Basin, Vietnam, The 7th GEOSS Asia-Pacific Symposium, 26-28, May 2014, Tokyo.(Poster)
16. Asif Mumtaz Bhatti, Toshio Koike, Patricia Ann Jaranilla-Sanchez and Muhammad Rasmy: Climate Change Impact Assessment on the Hydrology of a Semi Arid River Basin : Case Study of Soan River Basin, Pakistan, The 7th GEOSS Asia-Pacific Symposium, 26-28, May 2014, Tokyo.(Poster).
17. Mohamed RASMY and Toshio KOIKE: A Projection of Future Changes in Precipitation over Sri Lanka using Pseudo Global Warming Downscaling Approach, The 7th GEOSS Asia-Pacific Symposium, 26-28, May 2014, Tokyo.(Poster).
18. Patricia Ann Jaranilla-Sanchez, Katsunori Tamagawa, Kumiko Tsujimoto, Tetsu Ohta, Izumi Hasegawa and Toshio Koike: Assessing and Integrating Climate Change Impacts into the Water Resources Management Plans for Musi River Basin, The 7th GEOSS Asia-Pacific Symposium, 26-28, May 2014, Tokyo.(Poster).
19. Shrestha, M.: Snow and glacier melt runoff modeling in Upper Indus Basin of Pakistan, Inter-linkage case study in Pakistan, GEOSS AWCI Parallel session, 7<sup>th</sup> GEOSS Asia Pacific Symposium, Tokyo, Japan, 26-28 May, 2014 (Oral Presentation)
20. Shrestha, M., T. Koike, L. Wang, Y. Xue and Y. Hirabayashi: Development of an energy balance based snow and glacier melt runoff model and its application in the hydrological modelling in the Hindu Kush, Karakoram and Himalaya (HKH) regions, MAIRS Open Science Conference, Beijing, China, 7-10 April, 2014 (Oral Presentation)
21. Jaranilla-Sanchez, P, M. Shrestha, A. Bhatti, O. Saavedra, and T. Koike: Climate change assessment and runoff simulation in Huong river basin, Vietnam, MAIRS Open Science Conference, Beijing, China, 7-10 April, 2014 (Poster Presentation)

22. Kumiko Tsujimoto, So Im Monichoth, Toshio Koike, Kentaro Aida, Katsunori Tamagawa, Tetsu Ohta, Masaki Yasukawa, Koki Homma, Masaru Kitsuregawa: “Water – Climate – Agriculture” integrated system, The 7th GEOSS Asia-Pacific Symposium, 26-28, May 2014, Tokyo.(Oral).
23. Ralph Allen ACIERTO, Mohamed RASMY, and Toshio KOIKE: Analysis of microphysics and convective parameterizations in a regional climate simulation of warm season 2005 over Kanto Area, Monsoon Asia Integrated Regions Studies (MAIRS) Open Science Conference – Future in Asia, Beijing, China, 7-10 April 2014. – (Poster).
24. Makiko Obama, Takeyoshi Chibana, Tetsuro Tsujimoto: Characteristics of Subsurface Water Flow Influenced by Formation Process of Gravel Bar, Proc. of River Flow 2014, pp.1187-1193, Sep/2014, Laussane, Switzerland.

#### 国内学会,ワークショップ,シンポジウム発表[Domestic Conference, Workshop, Symposium]

1. 山本淳史, 原田大輔, 知花武佳 : 山地の地形・地質が渓流の河道特性に及ぼす影響, 第 18 回応用生態工学会, 2014.
2. 浅井淳平, 原田大輔, 知花武佳 : 河川高水敷に造成されたワンドにおける形状とその維持状況との関係, 第 18 回応用生態工学会, 2014.
3. 渡辺晋, 知花武佳, 尾花まき子, 原田大輔:山地河川に見られるステッププール構造が有機物の堆積に及ぼす影響, 第 18 回応用生態工学会, pp97-98, 2014.
4. 尾花まき子, 片野坂瑛一, 知花武佳 : 磯床河川の粒度組成に着目した砂礫州の伏流水動態に関する研究, 土木学会第 69 回年次学術講演会, pp.257-258, 2014.
5. 玉川勝徳, Mohamed RASMY・小池俊雄・辻本久美子・会田健太郎・藤井秀幸・増本隆夫 : 陸面データ同化手法を用いた土壤水分推定手法のカンボジア・ブルサット観測点への適用, 2014 土壤水分ワークショップ, 東京, 2014 年 11 月 29 日.(口頭)
6. 小池俊雄 : GEOSS 相互利用性・データセンタ間統合的利用機能・地域データ統合活動支援、第 25 回科学技術交流フォーラム 宇宙利用の新しい展開—衛星と応用技術による産業創生—、東京大学武田ホール、東京、平成 26 年 10 月 20 日(ポスター)
7. 小池俊雄 : DIAS パイロットシステムの社会実装 — 「洪水・水資源管理」 — 、第 25 回科学技術交流フォーラム 宇宙利用の新しい展開—衛星と応用技術による産業創生—、東京大学武田ホール、東京、平成 26 年 10 月 20 日(ポスター)
8. 澤田洋平, 小池俊雄, マイクロ波衛星観測を利用した水文–陸上生態系結合モデルのパラメータ最適化, 日本地球惑星科学連合大会, パシフィコ横浜 28 April - 2 May 2014 (口頭)
9. 玉川勝徳, 太田哲, 生駒栄司, 絹谷弘子, 大柳美佐, 松本淳, 喜連川優, 小池俊雄: DIAS における GEWEX/AMY データアーカイブと公開, 日本地球惑星科学連合大会, パシフィコ横浜 28 April - 2 May 2014 (口頭).
10. 大柳美佐, 生駒栄司, 喜連川優, 玉川勝徳 : 河川テレメータデータ・降雨観測データを対象としたリアルタイムアーカイブシステムの構築と運用, 情報処理学会 第 77 回全国大会, 京都大学吉田キャンパス 2015 年 3 月 19 日(口頭).

#### 招待講演 [Invited lecture]

1. Toshio 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. 小池俊雄：データ統合・解析システム(DIAS)、データ統合解析システム講演会、ICHARM 棟 1 階講堂、茨城県つくば市、平成 27 年 2 月 16 日
3. 小池俊雄：持続可能な開発とレジリエンスを支える科学・技術、ナショナル・レジリエンス（防災・減災）懇談会、日本消防会館 5 階大会議室、平成 27 年 1 月 22 日。
4. Toshio Koike: University Partnership in International Development, Transdisciplinary Education for Disaster Risk Reduction Conference 2014, United Nations University, 31st October 2014.
5. 小池俊雄：水循環データ統融合による持続可能な開発目標への貢献、第 25 回科学技術交流フォーラム 宇宙利用の新しい展開—衛星と応用技術による産業創生—、東京大学武田ホール、東京、平成 26 年 10 月 20 日
6. 小池俊雄：データ統合による科学の知の深化と社会的利益の創出、日本工営株式会社中央研究所 2014 年 6 月期研究開発成果発表会 次世代による、次の革新に向けた、次なる進展～The next evolution, by next generation, to the next innovation～、日本工営株式会社中央研究所、茨城県つくば市、平成 26 年 10 月 8 日
7. 小池俊雄：水災害リスク軽減に向けた科学・技術の挑戦、土木研究所・国際シンポジウム—増え続ける水災害を生きる世界の人々とともに—、政策研究大学院大学、東京、平成 26 年 9 月 30 日
8. Toshio 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.
9. Shrestha, M.: Distributed hydrological modeling in cold region watersheds, 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.
10. Toshio 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.
11. 小池俊雄：気候の変化と水循環変動－河川・水資源管理の適応策の観点から－、ダム工学会第 24 回特別講演会、星陵会館、東京、平成 26 年 5 月 15 日
12. Shrestha, M.: Distributed Hydrological Modeling in Cold regions, Himalayan Cryosphere, Climate Research and Disaster Centre (HiCCDRC), Department of Environmental Science and Engineering, School of Science, Kathmandu University, Nepal, 11 June, 2014.

#### 解説・総説 [Comment]

1. 小池俊雄、特集＜正念場の復興加速へ学術的連携を＞防災・減災のトータルデザインは可能か、月刊「公明」4 月号、pp20-pp25、平成 27 年 3 月