

Curriculum Vitae



Name	Yoshiaki Miyamoto
Degree	Ph.D.
Job Title	Research Scholar
Nationality	Japan
Date of Birth	1983/05/02
Gender	Male
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Research interests

- Tropical Cyclones (Air-Sea interaction, Rapid intensification, and Maximum potential intensity)
- Numerical fluid models (Nonhydrostatic global/regional models and Direct numerical simulation model with water droplets)
- Moist convection (Dynamics and General features on the globe)

Publications

Referred Papers

1. Shimada, U., K. Aonashi, and **Y. Miyamoto**, 2016: Tropical Cyclone Intensity Change and Axisymmetry Deduced from GSMaP. *Monthly Weather Review*, accepted.
2. **Miyamoto, Y.**, T. Yamaura, R. Yoshida, H. Yashiro, H. Tomita and Y. Kajikawa, 2016: Precursors of deep atmospheric convection in a subkilometer global simulation. *J. Geophysical Research —Atmospheres—*, accepted.
3. Yoshida, R., **Y. Miyamoto**, H. Tomita, and Y. Kajikawa, 2016: A Numerical Experiment for An Environmental Condition of Water Vapor for A Non-developing Disturbance Observed in PALAU2010. *Journal of Meteorological Society of Japan*, accepted.
4. Yashiro, H., Y. Kajikawa, **Y. Miyamoto**, T. Yamaura, R. Yoshida, and H. Tomita, 2016: Resolution dependency of diurnal precipitation cycle simulated by global cloud resolving model. *Scientific Online Letters on the Atmosphere*, accepted.
5. **Miyamoto, Y.**, T. Yamaura, R. Yoshida, H. Yashiro, H. Tomita and Y. Kajikawa, 2016: A simple method detecting lifecycle of deep moist convection from discretized data. *AICS technical report*, accepted.
6. Kajikawa, Y., **Y. Miyamoto**, T. Yamaura, R. Yoshida, H. Yashiro, and H. Tomita, 2016: Resolution dependence of deep convections in a global simulation from over 10-kilometer to sub-kilometer grid spacing. *Progress in Earth and Planetary Science*, **3**:16, DOI: 10.1186/s40645-016-0094-5.
7. Leinonen, J., M. D. Lebsock, S. Tanelli, K. Suzuki, H. Yashiro, and **Y. Miyamoto**, 2015: Performance assessment of a triple-frequency spaceborne cloud-precipitation radar concept using a global cloud-resolving model. *Atmos. Meas. Tech.*, **8**, 3493-3517, doi:10.5194/amt-8-3493-2015.
8. Sato, Y., S. Nishizawa, H. Yashiro, **Y. Miyamoto**, Y. Kajikawa, and H. Tomita, 2015: Impacts of cloud microphysics on trade wind cumulus: Which cloud microphysics processes contribute to the diversity in a large eddy simulation? *Progress in Earth and Planetary Science*, , accepted.

9. Nishizawa, S., H. Yashiro, Y. Sato, **Y. Miyamoto**, and H. Tomita, 2015: Influence of grid aspect ratio on planetary boundary layer turbulence in large-eddy simulations, *Geosci. Model Dev. Discuss.*, 8, 6021–6094, doi:10.5194/gmdd-8-6021-2015.
10. **Miyamoto, Y.**, and T. Takemi 2015: A triggering mechanism of rapid intensification of tropical cyclones. *Journal of the Atmospheric Sciences*, 72, 2666-2681.
11. Sato, Y., S. Nishizawa, H. Yashiro, **Y. Miyamoto**, and H. Tomita, 2015: Corrigendum: "Potential of retrieving shallow-cloud life cycle from future generation satellite observations through cloud evolution diagrams: A suggestion from a Large Eddy Simulation". *Scientific Online Letters on the Atmosphere*, 11, cl, doi:10.2151/sola.2015-015.
12. Sato, Y., **Y. Miyamoto**, S. Nishizawa, H. Yashiro, Y. Kajikawa, R. Yoshida, T. Yamaura, and H. Tomita, 2015: Horizontal distance of each cumulus and cloud broadening scales determine cloud cover. *Scientific Online Letters on the Atmosphere*, 11, 75-79.
13. **Miyamoto, Y.**, J. Ito, S. Nishizawa, and H. Tomita, 2015: A linear thermal stability analysis of discretized fluid equations. *Theoretical and Computational Fluid Dynamics*, 29, 155-169, doi: 10.1007/s00162-015-0345-x
14. **Miyamoto, Y.**, R. Yoshida, T. Yamaura, H. Yashiro, H. Tomita and Y. Kajikawa, 2015: Does convection vary in different cloudy disturbances? *Atmospheric Science Letters*, doi: 10.1002/asl2.558
15. **Miyamoto, Y.**, M. Satoh, H. Tomita, K. Oouchi, Y. Yamada, C. Kodama and J. Kinter III, 2014: Gradient wind balance in tropical cyclones in global experiments. *Monthly Weather Review*, 142, 1908-1926.
16. Sato, Y., S. Nishizawa, H. Yashiro, **Y. Miyamoto**, and H. Tomita, 2014: Potential of retrieving shallow-cloud life cycle from future generation satellite observations through cloud evolution diagrams: A suggestion from a Large Eddy Simulation. *Scientific Online Letters on the Atmosphere*, 10, 10-14.
17. **Miyamoto, Y.**, Y. Kajikawa, R. Yoshida, T. Yamaura, H. Yashiro and H. Tomita, 2013: Deep moist atmospheric convection in a sub-kilometer global simulation. *Geophysical Research Letters*. 40, 4922-4926.
18. **Miyamoto, Y.** and T. Takemi, 2013: A transition mechanism for the spontaneous axisymmetric intensification of tropical cyclones. *Journal of the Atmospheric Sciences* .70, 112-129.
19. Ito, K., Y. Ishikawa, **Y. Miyamoto** and T. Awaji, 2011: Short-time-scale processes in a mature hurricane as a response to sea surface fluctuations. *Journal of the Atmospheric Sciences* .68, 2250-2272.
20. **Miyamoto, Y.** and T. Takemi, 2011: Effects of surface exchange coefficients for high wind speeds on intensity and structure of tropical cyclones: numerical simulations for Typhoon Ioke (2006). *Theoretical and Applied Mechanics Japan*. 59, 275-283.
21. **Miyamoto, Y.** and T. Takemi, 2010: An effective radius of the sea surface enthalpy flux for the maintenance of a tropical cyclone. *Atmospheric Science Letters*, 11, 278-282.

Books

22. Fudeyasu, H., and **Y. Miyamoto**, 2012: Intensification phase and quasi-steady state of tropical cyclones, Typhoon, *Chap. 3, Meteorological Research Note*, Edited by T. Nakazawa and H. Fudeyasu.

Submitted & Preparing papers (As the first author)

- **Miyamoto, Y.**, G. H. Bryan and R. Rotunno: Maximum potential intensity theory for tropical cyclones including the effect of air-sea interaction.

Research Grants

1. **Miyamoto, Y.:** Postdoctoral Fellowship for Research Abroad, Japan Society for the Promotion of Science, 4/1/16-3/31/18.
2. **Miyamoto, Y.:** Development of a next-generation meteorological model with explicitly solving effects of water contents. Grants-in-Aid for Specially Promoted Research, Japan Society for the Promotion of Science, 4/1/13-3/31/16, 3,000,000JPY (~\$30,000).
3. Sawada, M., Yamaguchi, M., K. Ito, **Y. Miyamoto:** Grants-in-Aid for Specially Promoted Research, Japan Society for the Promotion of Science, 4/1/13-3/31/16, 3,000,000JPY (~\$30,000).
4. **Miyamoto, Y.:** Development of a next-generation meteorological model with explicitly solving effects of water contents. Research budget, RIKEN Special postdoctoral researcher program, 4/1/13-3/31/16, 3,000,000JPY (~\$30,000).
5. **Miyamoto, Y.,** T. Takemi, H. Ishikawa, M. Horiguchi, and H. Fudeyasu: Extrapolation of typhoons which possibly trigger heavy rainfall at Kii Peninsula from the case of Typhoon TLAS (2011), Kyoto University, 4/1/12-3/31/14, 2,800,000JPY(~\$28,000).
6. **Miyamoto, Y.:** Development of a Typhoon forecasting model for improvement of forecast accuracy and damage investigation in the future, Grants-in-Aid for Specially Promoted Research, Japan Society for the Promotion of Science, 4/1/08-3/31/11, 1,800,000JPY (~\$18,000).

Professional Positions

2016 April – present	Research Scholar Rosenstiel School of Marine and Atmospheric Science, The University of Miami
	Postdoctoral Fellowship for Research Abroad Japan Society for the Promotion of Science
2013 April – 2016 March	Special Postdoctoral Researcher RIKEN Advanced Institute for Computational Science
2011 April – 2013 March	Postdoctoral Researcher RIKEN Advanced Institute for Computational Science
2011 Feb. – 2011 March	Visiting Scientist National Center for Atmospheric Research
2008 Sep. – 2009 Aug.	Visiting Scientist The University of Oklahoma, Center for Analysis and Prediction of Storms
2008 April – 2011 March	Research Fellow Japan Society for the Promotion of Science

Education

2011 March	Kyoto University Ph.D. Atmospheric Science
2008 March	Kyoto University M.S. Atmospheric Science
2006 March	Keio University B.S. Mechanical Engineering

Awards

2014 April	RIKEN Research and Technology Incentive Award
2016 Feb.	Poster Award for RIKEN Special Postdoctoral Researcher Program
