

Curriculum Vitae

Munehiko Yamaguchi

Department of Applied Meteorology Research
Meteorological Research Institute
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Educational Background

- B.S. in Meteorology, Meteorology College (Affiliated organization of the Japan Meteorological Agency), 2002
- M.S. in Meteorology and Physical Oceanography, University of Miami, 2010
 - Thesis Title: Initial Condition Sensitivity and Dynamical Mechanisms of Perturbation Growth in Tropical Cyclones
- Ph.D. in Geophysics, Tohoku University, 2011
 - Thesis Title: On the Use of Singular Vectors for Tropical Cyclone Track Forecasts

Professional Experience

- 2019.04 – Present
Senior Researcher, Department of Applied Meteorology,
Meteorological Research Institute, Japan Meteorological Agency
- 2021.10 – 2023.09
Scientific Officer, World Weather Research Division, Science and
Innovation Department, World Meteorological Organization
- 2016.04 – 2019.03
Senior Researcher, Typhoon Research Department, Meteorological
Research Institute, Japan Meteorological Agency
- 2010.08 – 2016.03
Researcher, Typhoon Research Department, Meteorological Research
Institute, Japan Meteorological Agency
- 2013.01 – 2014.01
Visiting Scientist, Predictability Division, European Centre for
Medium Range Weather Forecasts
- 2002.04 – 2010.07
Scientific Official, Global and Typhoon Modeling Team, Numerical
Prediction Division, Japan Meteorological Agency
- 2008.08 – 2010.07
Graduate Research Assistant, Division of Meteorology and Physical
Oceanography, Rosenstiel School of Marine and Atmospheric
Science, University of Miami

Research Interests

Tropical cyclone track, intensity, and genesis forecasts. Aircraft observations.
Ensemble forecasts. Tropical cyclone and global warming.

Award

- Journal of the Meteorological Society of Japan Award, 2023
 - Kawabata, Y., U. Shimada, and M. Yamaguchi, 2023: The 30-year (1987–2016) Trend of Strong Typhoons and Genesis Locations Found in the Japan Meteorological Agency's Dvorak Reanalysis Data, *J. Meteor. Soc. Japan*, **101**, 435-443.
- Journal of the Meteorological Society of Japan Editors' Highlights, 2023
 - Kawabata, Y., U. Shimada, and M. Yamaguchi, 2023: The 30-year (1987–2016) Trend of Strong Typhoons and Genesis Locations Found in the Japan Meteorological Agency's Dvorak Reanalysis Data, *J. Meteor. Soc. Japan*, **101**, 435-443.
- Journal of the Meteorological Society of Japan Award, 2020
 - Kawabata, Y., and M. Yamaguchi, 2020: Probability ellipse for tropical cyclone track forecasts with multiple ensembles. *J. Meteor. Soc. Japan*, **98**, 821-833.
- Journal of the Meteorological Society of Japan Editors' Highlights, 2020
 - Kawabata, Y., and M. Yamaguchi, 2020: Probability ellipse for tropical cyclone track forecasts with multiple ensembles. *J. Meteor. Soc. Japan*, **98**, 821-833.
- Japan Meteorological Agency Director-General Award (Group award), 2019
 - Implementation of five-day typhoon intensity forecast
- Meteorological Research Institute (MRI/JMA) Director-General Award (Group award), 2019
 - Implementation of five-day typhoon intensity forecast
- SOLA Best Paper Award 2018, Meteorological Society of Japan, 2019
 - Ito, K., H. Yamada, M. Yamaguchi, T. Nakazawa, N. Nagahama, K. Shimizu, T. Ohigashi, T. Shinoda, and K. Tsuboki, 2018: Analysis and Forecast Using Dropsonde Data from the Inner-Core Region of Tropical Cyclone Lan (2017) Obtained during the First Aircraft Missions of T-PARCII. *SOLA*, **14**, 105-110.
- Syono Award, Meteorological Society of Japan, 2015
 - Research and development of typhoon forecasting technique using a singular vector method and ensemble approaches.
- Certificate of Appreciation from WMO, 2015
 - Contribution to the WMO THORPEX Programme
- Meteorological Research Institute (MRI/JMA) Director-General Award (Group award), 2014
 - Research and development of TIGGE products and international contribution to meteorological disaster reduction operations
- Japan Meteorological Agency Director-General Award (Group award), 2010
 - Implementation of five-day typhoon track forecasts
- MPO Best Paper Award, Division of Meteorology and Physical Oceanography, University of Miami, 2010
 - Yamaguchi, M., and S. J. Majumdar, 2010: Using TIGGE data to diagnose initial perturbations and their growth for tropical cyclone ensemble forecasts, *Mon. Wea. Rev.*, **138**, 3634–3655.

International service

- Member of Working Group on Predictability, Dynamics and Ensemble

Forecasting (PDEF), World Weather Research Programme, World Meteorological Organization (2015-2021)

- Co-chair of Tropical Cyclone Structure Analysis and Change Topic of WMO 9th International Workshop on Tropical Cyclones (IWTC, 2018)
- Co-chair of Tropical Cyclone Motion Topic of WMO 8th International Workshop on Tropical Cyclones (IWTC, 2014)
- Member of GIFS-TIGGE Working Group, THORPEX Asian Regional Committee (2011-2014)

Computer Skills

FORTRAN, UNIX, Parallel computing, MPI, HTML, Javascript, MATLAB, Python, Microsoft Office

Books

1. Fudeyasu, H., H. Yamada, Y. Miyamoto, K. Ito, **M. Yamaguchi**, and S. Kanada, 2018: What is known and unknown about typhoon (a Japanese-language book on TCs for the public), Beret Publishing Co., Ltd., 242pp.
2. Fudeyasu, H., K. Ito, and **M. Yamaguchi**, 2014: Typhoons' Nature (a Japanese-language book on TCs for the public), Asakura Publishing Co., Ltd., 180pp.
3. Ueno, M., and **M. Yamaguchi**, 2012: Science of Typhoons (a Japanese-language book on TCs for the public), *Bluebacks series*, Kodansha, 240pp.

Refereed Publications

1. **Yamaguchi, M.**, N. Usui, and N. Hirose, 2024: Typhoon Intensity Forecasts using TIFS with Pseudo Ocean Coupling, *SOLA*. (Accepted)
2. Woolnough, S. J., F. Vitart, A. W. Robertson, C. A. S. Coelho, R. Lee, H. Lin, A. Kumar, C. Stan, M. Balmaseda, N. Caltabiano, **M. Yamaguchi**, H. Afargan-Gerstman, V. L. Boulton, F. M. De Andrade, D. Büeler, A. Carreric, D. A. Campos Diaz, J. Day, J. Dorrington, M. Feldmann, J. C. Furtado, C. M. Grams, R. Koster, L. Hirons, V. S. Indasi, P. Jadhav, Y. Liu, P. Nying'uro, C. D. Roberts, E. Rouges, and J. Ryu, 2024: Celebrating 10 Years of the Subseasonal to Seasonal Prediction Project and Looking to the Future, *Bulletin of the American Meteorological Society*, **105**, E521-E526.
3. Jason P. Dunion, C. Davis, H. Titley, H. Greatrex, **M. Yamaguchi**, J. Methven, R. Ashrit, Z. Wang, H. Yu, A.-C. Fontan, A. Brammer, M. Kucas, M. Ford, P. Papin, F. Prates, C. Mooney, A. Kruczkiwicz, P. Chakraborty, A. Burton, M. DeMaria, R. Torn, J. L. Vigh, 2023: Recommendations for improved tropical cyclone formation and position probabilistic forecast products, *Tropical Cyclone Research and Review*, **12**, 241-258.
4. Kawabata, Y., U. Shimada, and **M. Yamaguchi**, 2023: The 30-year (1987–2016) Trend of Strong Typhoons and Genesis Locations Found in the Japan Meteorological Agency's Dvorak Reanalysis Data, *J. Meteor. Soc. Japan*, **101**, 435-443.
5. **Yamaguchi, M.**, T. Nakaegawa, and L. Magnusson, 2023: Utilizing Ensemble Reforecast Data for Reservoir Operation, *Journal of Japan Society of Hydrology & Water Resources*, **36**, 52-62.
6. Magnusson, L., D. Ackerley, Y. Bouteloup, J.-H. Chen, J. Doyle, P. Earnshaw, Y. C. Kwon, M. Köhler, S. T. K. Lang, Y.-J. Lim, M. Matsueda, T. Matsunobu, R. McTaggart-Cowan, A. Reinecke, **M. Yamaguchi**, and L. Zhou, 2022: Skill of

- Medium-Range Forecast Models Using the Same Initial Conditions. *Bull. Amer. Meteor. Soc.*, **103**, E2050–E2068.
7. Liang, M., J. C. L. Chan, J. Xu, and **M. Yamaguchi**, 2022: Numerical Prediction of Tropical Cyclogenesis Part II: Identification of large-scale physical processes under the monsoon shear line synoptic pattern, *Q. J. R. Meteorol. Soc.*, **148**, 1965-1982.
 8. Tang, K., J. C. L. Chan, and **M. Yamaguchi**, 2021: Large Tropical Cyclone Track Forecast Errors of Global Numerical Weather Prediction Models in western North Pacific Basin, *Tropical Cyclone Research and Review*, **10**, 151-169.
 9. Yamada, H., K. Ito, K. Tsuboki, T. Shinoda, T. Ohigashi, **M. Yamaguchi**, T. Nakazawa, N. Nagahama, and K. Shimizu, 2021: The Double Warm-Core Structure of Typhoon Lan (2017) as Observed through the First Japanese Eyewall-Penetrating Aircraft Reconnaissance, *J. Meteor. Soc. Japan*, **99**, 1297-1327.
 10. Liang, M., J. C. L. Chan, J. Xu, and **M. Yamaguchi**, 2021: Numerical Prediction of Tropical Cyclogenesis Part I: Evaluation of Model Performance, *Q. J. R. Meteorol. Soc.*, **147**, 1626-1641.
 11. Kawase, H., **M. Yamaguchi**, Y. Imada, S. Hayashi, A. Murata, T. Nakaegawa, T. Miyasaka, and I. Takayabu, 2021: Enhancement of extremely heavy precipitation induced by Typhoon Hagibis (2019) due to historical warming, *SOLA*, **17**, 7-13.
 12. **Yamaguchi, M.**, and S. Maeda, 2020: Slowdown of typhoon translation speeds in mid-latitudes in September influenced by the Pacific Decadal Oscillation and global warming, *J. Meteor. Soc. Japan*, **98**, 1321-1334.
 13. **Yamaguchi, M.**, and S. Maeda, 2020: Increase in the Number of Tropical Cyclones Approaching Tokyo Since 1980, *J. Meteor. Soc. Japan*, **98**, 775-786.
 14. Kawabata, Y., and **M. Yamaguchi**, 2020: Probability ellipse for tropical cyclone track forecasts with multiple ensembles. *J. Meteor. Soc. Japan*, **98**, 821-833.
 15. **Yamaguchi, M.**, J. C. L. Chan, I.-J. Moon, K. Yoshida, and R. Mizuta, 2020: Global warming changes tropical cyclone translation speed, *Nature Communications*, **11**, 47.
 16. Tang, K., J. C. L. Chan, and **M. Yamaguchi**, 2020: Effects of the Outer Size on Tropical Cyclone Track Forecasts, *Meteorological Applications*, **27**.
<https://doi.org/10.1002/met.1888>
 17. Shimada, U., **M. Yamaguchi**, and S. Nishimura, 2020: Is the Number of Tropical Cyclone Rapid Intensification Events in the Western North Pacific Increasing?, *SOLA*, **16**, 1-5.
 18. Fudeyasu, H., R. Yoshida, **M. Yamaguchi**, H. Eito, C. Muroi, S. Nishimura, K. Bessho, Y. Oikawa, and N. Koide, 2020: Development Conditions for Tropical Storms over the Western North Pacific Stratified by Large-scale Flow Patterns, *J. Meteor. Soc. Japan*, **98**, 61-72
 19. Fukuda, J., and **M. Yamaguchi**, 2019: Determining 70 Percent Probability-Circle Radii of Tropical Cyclone Track Forecasts with Multiple Ensembles, *SOLA*, **15**, 250-256.
 20. Titley, H. A., **M. Yamaguchi**, L. Magnusson, 2019: Current and potential use of ensemble forecasts in operational TC forecasting: results from a global forecaster survey, *Tropical Cyclone Research and Review*, **8**(3), 166-180.
 21. Magnusson, L., J. D. Doyle, W. A. Komaromi, F. Zhang, R. Torn, C. K. Tang, C. L. Chan, and **M. Yamaguchi**, 2019: Advances in understanding difficult cases of track forecasts, *Tropical Cyclone Research and Review*, **8**(3), 109-122.
 22. Camargo, S. J., J. Camp, R. L. Elsberry, P. A. Gregory, P. J. Klotzbach, C. J. Schreck III, A. H. Sobel, M. J. Ventrice, F. Vitart, Z. Wang, M. C. Wheeler, **M.**

- Yamaguchi**, and R. Zhan, 2019: Tropical Cyclone Prediction on Subseasonal Time-Scales, *Tropical Cyclone Research and Review*, **8**(3), 150-165.
23. **Yamaguchi, M.**, H. Owada, U. Shimada, M. Sawada, T. Iriguchi, K. D. Musgrave, and M. DeMaria, 2018: Tropical Cyclone Intensity Prediction in the Western North Pacific Basin using SHIPS and JMA/GSM, *SOLA*, **14**, 138-143.
 24. Shimada, U., H. Owada, **M. Yamaguchi**, T. Iriguchi, M. Sawada, K. Aonashi, M. DeMaria, and K. Musgrave, 2018: Further Improvements to the Statistical Hurricane Intensity Prediction Scheme Using Tropical Cyclone Rainfall and Structural Features, *Wea. Forecasting*, **33**, 1587-1603.
 25. Ito, K., H. Yamada, **M. Yamaguchi**, T. Nakazawa, N. Nagahama, K. Shimizu, T. Ohigashi, T. Shinoda, K. Tsuboki, Analysis and Forecast Using Dropsonde Data from the Inner-Core Region of Tropical Cyclone Lan (2017), 2018: Obtained during the First Aircraft Missions of T-PARCII, *SOLA*, **14**, 105-110.
 26. Ito, K., M. Sawada, and **M. Yamaguchi**, 2018: Tropical cyclone forecasts in the Western North Pacific with high-resolution atmosphere and coupled models, *Papers in Meteorology and Geophysics*, **67**, 15-34.
 27. Zhou, F., W. Duan, Z. He, and **M. Yamaguchi**, 2018: Possible sources of forecast errors generated by the global/regional assimilation and prediction system for landfalling tropical cyclones. Part II: Model uncertainty. *Advances in Atmospheric Sciences*, **35**, 1277-1290.
 28. **Yamaguchi, M.**, J. Ishida, H. Sato, and M. Nakagawa, 2017: WGNE Intercomparison of Tropical Cyclone Forecasts by Operational NWP Models: A Quarter Century and Beyond. *Bull. Amer. Meteor. Soc.*, **98**, 2337-2349.
 29. **Yamaguchi, M.** and N. Koide, 2017: Tropical Cyclone Genesis Guidance Using the Early Stage Dvorak Analysis and Global Ensembles. *Wea. Forecasting*, **32**, 2133-2141.
 30. Nakano, M., A. Wada, M. Sawada, H. Yoshimura, R. Onishi, S. Kawahara, W. Sasaki, T. Nasuno, **M. Yamaguchi**, T. Iriguchi, M. Sugi, Y. Takeuchi, 2017: Global 7-km mesh nonhydrostatic Model Intercomparison Project for improving TYphoon forecast (TYMIP-G7): Experimental design and preliminary results. *Geoscientific Model Development*, **10**, 1363-1381.
 31. Yasunaga, K., T. Miyajima, and **M. Yamaguchi**, 2016: Relationships between Tropical Cyclone Motion and Surrounding Flow with Reference to Longest Radius and Maximum Sustained Wind. *SOLA*, **12**, 277-281.
 32. Feifan Z., **M. Yamaguchi**, X. Qin, 2016: Possible sources of forecast errors generated by the global/regional assimilation and prediction system for landfalling tropical cyclones. Part I: Initial uncertainties. *Advances in Atmospheric Sciences*, **33**, 841-851.
 33. Swinbank, R., M. Kyouda, P. Buchanan, L. Froude, T. M. Hamill, T. D. Hewson, J. H. Keller, M. Matsueda, J. Methven, F. Pappenberger, M. Scheuerer, H. A. Titley, L. Wilson, and **M. Yamaguchi**, 2016: The TIGGE Project and its Achievements, *Bull. Amer. Meteor. Soc.* **97**, 49-67.
 34. **Yamaguchi, M.**, S. Lang, M. Leutbecher, M. Rodwell, G. Radnoti and N. Bormann, 2016: Observation-based evaluation of ensemble reliability. *Q. J. R. Meteorol. Soc.* **142**, 506-514.
 35. Rodwell, M. J., S. T. K. Lang, N. B. Ingleby, N. Bormann, E. Hólm, F. Rabier, D. S. Richardson and **M. Yamaguchi**, 2016: Reliability in Ensemble Data Assimilation. *Q. J. R. Meteorol. Soc.* **142**, 443-454.
 36. **Yamaguchi, M.**, F. Vitart, S. T. K. Lang, L. Magnusson, R. L. Elsberry, G. Elliott, M. Kyouda, and T. Nakazawa, 2015: Global distribution on the skill of tropical cyclone activity forecasts from short- to medium-range time scales. *Weather and Forecasting*. **30**, 1695-1709.

37. Nishimura, M. and **M. Yamaguchi**, 2015: Selective ensemble mean technique for tropical cyclone track forecasts using multi-model ensembles. *Tropical Cyclone Research and Review*, **4**, 71-78.
38. **Yamaguchi, M.**, T. Nakazawa, and S. Hoshino, 2014: North Western Pacific Tropical Cyclone Ensemble Forecast Project. *Tropical Cyclone Research and Review*, **3**, 193-201.
39. Magnusson, L., J.-R. Bidlot, S. Lang, A. Thorpe, N. Wedi, and **M. Yamaguchi**, 2014: Evaluation of medium-range forecasts for hurricane Sandy, *Mon. Wea. Rev.*, **142**, 1962-1981.
40. **Yamaguchi, M.**, T. Nakazawa, and S. Hoshino, 2012: On the Relative Benefits of a Multi-Centre Grand Ensemble for Tropical Cyclone Track Prediction in the Western North Pacific. *Q. J. R. Meteorol. Soc.*, **138**, 2019-2029.
41. **Yamaguchi, M.**, T. Nakazawa, and K. Aonashi, 2012: Tropical cyclone track forecasts using JMA model with ECMWF and JMA initial conditions, *Geophys. Res. Lett.*, **39**, L09801.
42. **Yamaguchi, M.**, D. S. Nolan, M. Iskandarani, S. J. Majumdar, M. S. Peng, and C. A. Reynolds, 2011: Singular vectors for tropical cyclone-like vortices in a nondivergent barotropic framework, *J. Atmos. Sci.*, **68**, 2273-2291.
43. Kunii, M., K. Saito, H. Seko, M. Hara, T. Hara, **M. Yamaguchi**, G. Jiandong, M. Charron, J. Du, Y. Wang, and D. Chen, 2011: Verification and intercomparison of mesoscale ensemble prediction systems in the Beijing 2008 Olympics Research and Development Project, *Tellus*, **63A**, 531-549.
44. Saito, K., M. Hara, H. Seko, M. Kunii, and **M. Yamaguchi**, 2011: Comparison of initial perturbation methods for the mesoscale ensemble prediction system of the Meteorological Research Institute for the WWRP Beijing 2008 Olympics Research and Development Project (B08RDP), *Tellus*, **63A**, 445-467.
45. Miyoshi, T., T. Komori, H. Yonehara, R. Sakai, and **M. Yamaguchi**, 2010: Impact of resolution transform of the initial condition on typhoon track forecasts, *Weather and Forecasting*, **25**, 1568-1573.
46. **Yamaguchi, M.**, and S. J. Majumdar, 2010: Using TIGGE data to diagnose initial perturbations and their growth for tropical cyclone ensemble forecasts, *Mon. Wea. Rev.*, **138**, 3634-3655.
47. **Yamaguchi, M.**, T. Iriguchi, T. Nakazawa, and C.-C. Wu, 2009: An observing system experiment for Typhoon Conson (2004) using a singular vector method and DOTSTAR data, *Mon. Wea. Rev.*, **137**, 2801-2816.
48. **Yamaguchi, M.**, R. Sakai, M. Kyoda, T. Komori, and T. Kadowaki, 2009: Typhoon Ensemble Prediction System developed at the Japan Meteorological Agency, *Mon. Wea. Rev.*, **137**, 2592-2604.
49. Wu, C.-C., J.-H. Chen, S. Majumdar, M. Peng, C. Reynolds, S. Aberson, R. Buizza, **M. Yamaguchi**, S.-G. Chen, T. Nakazawa, and K.-H. Chou, 2009: Inter-comparison of Targeted Observation Guidances for Tropical Cyclones in the Western North Pacific, *Mon. Wea. Rev.*, **137**, 2471-2492.

Selected non-reviewed publications

1. Fukuda, J., and **M. Yamaguchi**, 2019: Determining Probability-Circle Radii of Tropical Cyclone Track Forecasts with Multiple Ensembles, RSMC Tokyo – Typhoon Center Technical Review, **21**, 1-19.
<http://www.jma.go.jp/jma/jma-eng/jma-center/rsmc-hp-pub-eg/techrev/text21-1.pdf>
2. **Yamaguchi, M.**, H. Titley, and L. Magnusson, 2018: Current and potential use of ensemble forecasts in operational TC forecasting, Sub-topic report of WMO 9th International Workshop on Tropical Cyclones (IWTC-9)

https://www.wmo.int/pages/prog/arep/wwrp/tmr/documents/IWTC-9_Subtopic_6-3.pdf

3. **Yamaguchi, M.**, G. Elliott, R. L. Elsberry, and H.-C. Tsai, 2015: Advances in tropical cyclone track forecasts with uncertainty prediction guidance. *WMO Bulletin.*, **64(2)**, 40.
4. Elliott, G., and **M. Yamaguchi**, 2014: Advances in Forecasting Motion, Topic report of WMO 8th International Workshop on Tropical Cyclones (IWTC-8). http://www.wmo.int/pages/prog/arep/wwrp/new/documents/Topic1_AdvancesinForecastingMotion.pdf
5. Gill, J., J. Rubiera, Claire Martin, I. Cacic, K. Mylne, C. Dehui, G. Jiafeng, T. Xu, **M. Yamaguchi**, A. K. Foamouhoue, E. Poolman, and J. Guiney, 2008: Guidelines on communicating forecast uncertainty, *World Meteorological Organization*, **4122**, 22pp.
6. Komori, T., **M. Yamaguchi**, R. Sakai, and Y. Takeuchi, 2007: WGNE Intercomparison of Tropical Cyclone Forecasts with Operational Global Models: Quindecennial Report, *World Climate Research Programme*. Science Highlights, 4pp.

Conference works

1. **Yamaguchi, M.**, 2024: Introduction to Typhoon Prediction and Climate Research at the Japan Meteorological Agency, 2024, *56th Session of Typhoon Committee*, February 2024. (Kuala Lumpur, Malaysia)
2. **Yamaguchi, M.**, 2023: Introduction to the World Weather Research Programme (WWRP) Achievements and Implementation Plan 2024–2027, 2023, *Regional Conference (RECO) in the Regional Association II (Asia)*, March 2023. (Abu Dhabi, United Arab Emirates)
3. **Yamaguchi, M.**, 2023: Recent activities of WWRP and its new Implementation Plan, *Weather Modification Expert Team Meeting*, July 2023. (Berlin, Germany)
4. **Yamaguchi, M.**, 2023: Recent activities of WWRP and its new Implementation Plan, *Joint Meeting of Tropical Meteorology Research Working Group and Tropical Cyclone Probabilistic Forecast Products*, May 2023. (Miami, USA)
5. **Yamaguchi, M.**, 2022: Recent activities of WWRP and its new Implementation Plan, *Joint Meeting of Data Assimilation and Observing System and Predictability, Dynamics and Ensemble Forecasting Working Groups*, December 2022. (Reading, UK)
6. **Yamaguchi, M.**, J. C. L. Chan, I.-J. Moon, K. Yoshida, and R. Mizuta, 2020: Global warming changes tropical cyclone translation speed, *2020 JpGU*, July 2020. (Online)
7. **Yamaguchi, M.**, J. C. L. Chan, I.-J. Moon, K. Yoshida, and R. Mizuta, 2019: Tropical cyclone translation speed in a warmed climate, *2019 TCCIP International Workshop on Climate Change*, October 2019. (Taipei, Taiwan)
8. **Yamaguchi, M.**, 2019: Recent Research and Development at JMA to Improve Typhoon Forecasts, *The International Workshop on Tropical Cyclone Ocean Interaction in the Northwest Pacific 2019*, June 2019. (Jeju, Korea) [**Invited Presentation**]
9. **Yamaguchi, M.**, Y. Takaya, S. Maeda, and K. Aonashi, 2019: Comprehensive product development for monitoring and predicting severe weather events using GSMaP and ensemble forecasts, *Joint PI Meeting of Global Environment Observation Mission 2018*, January 2019. (Tokyo, Japan)
10. **Yamaguchi, M.**, H Titley, and L. Magnusson, 2018: Current and potential use of ensemble forecasts in operational TC forecasting, WMO 9th International

- Workshop on Tropical Cyclones (IWTC-9), December 2018. (Hawaii, USA)
11. **Yamaguchi, M.**, T. Ishibashi, T. Nakazawa, K. Ito, H. Yamada, T. Ohigashi, T. Shinoda, N. Takahashi, and K. Tsuboki, 2018: Observing System Experiment using T-PARCIII dropsondes and JMA Global Forecasting System and Development of Sensitivity Analysis Guidance for Tropical Cyclone Intensity, *2018 Japan Geoscience Union Meeting*, May 2018. (Makuhari Japan)
 12. **Yamaguchi, M.**, U. Shimada, T. Iriguchi, M. Sawada, and H. Owada, 2018: Recent Research and Development at MRI/JMA to Improve Typhoon Forecasts, *33rd AMS Conference on Hurricanes and Tropical Meteorology*, April 2018. (Ponte Vedra Beach, USA)
 13. **Yamaguchi, M.**, Y. Takaya, S. Maeda, and K. Aonashi, 2018: Comprehensive product development for monitoring and predicting severe weather events using GSMaP and ensemble forecasts, *Joint PI Meeting of Global Environment Observation Mission 2017*, January 2018. (Tokyo, Japan)
 14. **Yamaguchi, M.**, 2017: Evaluating TC genesis and precipitation forecasts using S2S, *ECMWF Annual Seminar 2017*, September 2017. (Exeter, UK)
 15. **Yamaguchi, M.**, 2017: Recent Progress and Challenges in Tropical Cyclone Analysis and Forecast, *ETH Seminar*, July 2017. (Zurich, Switzerland)
 16. **Yamaguchi, M.**, 2017: Recent Research and Development at MRI/JMA to Improve Typhoon Forecasts, *The 2017 APEC Typhoon Symposium*, May 2017. (Taipei, Taiwan) [**Invited Presentation**]
 17. **Yamaguchi, M.**, U. Shimada, T. Iriguchi, M. Sawada, and H. Owada, 2017: Recent Research and Development at MRI/JMA to Improve Typhoon Forecasts, *71st Intergovernmental Hurricane Conference*, March 2017. (Miami, USA)
 18. **Yamaguchi, M.**, 2017: The Latest Model Simulation and Observational Studies related to Tropical Cyclone in Japan, *49th session of the Typhoon Committee*, February 2017. (Yokohama, Japan) [**Technical Presentation**]
 19. **Yamaguchi, M.**, Y. Takaya, and S. Maeda, 2017: Comprehensive product development for monitoring and predicting severe weather events using GSMaP and ensemble forecasts, *Joint PI Meeting of Global Environment Observation Mission 2016*, January 2017. (Tokyo, Japan)
 20. **Yamaguchi, M.**, K. Tsuboki, T. Nakazawa, and K. Ito, 2016: Research plan of aircraft observations in Japan for the next four years, TCI Science Workshop, October 2016. (Boulder, USA)
 21. **Yamaguchi, M.**, K. Aonashi, K. Okamoto and T. Igarashi, 2016: Evaluating precipitation-related variables in the vicinity of typhoons using the NASA's Global Hawk, *Joint PI Meeting of Global Environment Observation Mission 2015*, January 2016. (Tokyo, Japan)
 22. **Yamaguchi, M.**, 2016: Tropical cyclone research-to-operation activities at MRI/JMA, *Typhoon Seminar 2015*, January 2016. (Tokyo, Japan)
 23. **Yamaguchi, M.**, K. Aonashi, K. Okamoto and T. Tashima, 2015: Evaluating precipitation-related variables in the vicinity of typhoons using the NASA's Global Hawk, *Joint PI Meeting of Global Environment Observation Mission 2014*, January 2015. (Tokyo, Japan)
 24. **Yamaguchi, M.** and G. Elliotte, 2014: Advances in Forecasting Motion, *WMO 8th International Workshop on Tropical Cyclones (IWTC-8)*, December 2014. (Jeju, Korea)
 25. **Yamaguchi, M.**, 2014: Multi-model ensemble forecasts of tropical cyclones using TIGGE, *World Weather Open Science Conference*, August 2014. (Montreal, Canada) [**Keynote speaker**]
 26. **Yamaguchi, M.**, S. Lang, M. Leutbecher, M. Rodwell, G. Radnoti and N. Bormann, 2014: Observation-based ensemble spread-error relationship, *World*

- Weather Open Science Conference*, August 2014. (Montreal, Canada)
27. **Yamaguchi, M.**, 2014: Tropical cyclone forecasts using TIGGE, JMA's NWP system and WGNE intercomparison of TC track forecasts, *Workshop on Numerical Prediction of Tropical Cyclones*, May 2014. (Taipei, Taiwan)
 28. **Yamaguchi, M.**, and co-authors, 2014: Ensemble tropical cyclone activity prediction using TIGGE data, *JMA/WMO workshop on effective tropical cyclone warning in Southeast Asia*, March 2014. (Tokyo, Japan)
 29. **Yamaguchi, M.** and co-authors, 2013: Ensemble tropical cyclone activity prediction using TIGGE data, *8th Integrated Workshop/2nd Training and Research Coordination of Typhoon Committee*, December 2013. (Macao, China) [**Keynote speaker**]
 30. **Yamaguchi, M.**, 2013: Studies on tropical cyclone forecasting using TIGGE, *11th session of THORPEX GIFS-TIGGE working group meeting*, June 2013. (Exeter, UK)
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