

Curriculum Vitae

Munehiko Yamaguchi

Department of Applied Meteorology
Meteorological Research Institute
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Date of Birth

August 3, 1978

Nationality

Japan

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

2016.04 –2019.03

Senior Researcher, Typhoon Research Department, Meteorological
Research Institute, Japan Meteorological Agency

2014.01 –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

2010.08 –2013.01

Researcher, Typhoon Research Department, Meteorological Research
Institute, 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

2002.04 – 2008.07

Scientific Official, Global and Typhoon Modeling Team, Numerical
Prediction Division, Japan Meteorological Agency

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 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-present)
- 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.**, 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*. (Accepted)
2. **Yamaguchi, M.**, and S. Maeda, 2020: Increase in the Number of Tropical Cyclones Approaching Tokyo Since 1980, *J. Meteor. Soc. Japan*, **98**, 775-786.
3. Kawabata, Y., and **M. Yamaguchi**, 2020: Probability ellipse for tropical cyclone track forecasts with multiple ensembles. *J. Meteor. Soc. Japan*, **98**, 821-833.
4. **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.
5. 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>
6. 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.
7. 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
8. Fukuda, J., and **M. Yamaguchi**, 2019: Determining 70 Percent Probability-Circle Radii of Tropical Cyclone Track Forecasts with Multiple Ensembles, *SOLA*, **15**, 250-256.
9. 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.
10. 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.
11. 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.
12. **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.

13. 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.
14. 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.
15. 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.
16. 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.
17. **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.
18. **Yamaguchi, M.** and N. Koide, 2017: Tropical Cyclone Genesis Guidance Using the Early Stage Dvorak Analysis and Global Ensembles. *Wea. Forecasting*, **32**, 2133–2141.
19. 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.
20. 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.
21. 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.
22. 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.
23. **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.
24. 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.
25. **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.
26. 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.
27. **Yamaguchi, M.**, T. Nakazawa, and S. Hoshino, 2014: North Western Pacific Tropical Cyclone Ensemble Forecast Project. *Tropical Cyclone Research and*

- Review*, 3, 193-201.
28. 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.
 29. **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.
 30. **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.
 31. **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.
 32. 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.
 33. 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.
 34. 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.
 35. **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.
 36. **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.
 37. **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.
 38. 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.**, J. C. L. Chan, I.-J. Moon, K. Yoshida, and R. Mizuta, 2020: Tropical cyclone translation speed in a warmed climate, *2019 TCCIP International Workshop on Climate Change*, October 2019. (Taipei, Taiwan)
2. **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**]
3. **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)
4. **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)
5. **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-PARCI 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)
6. **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)
7. **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)
8. **Yamaguchi, M.**, 2017: Evaluating TC genesis and precipitation forecasts using S2S, *ECMWF Annual Seminar 2017*, September 2017. (Exeter, UK)
9. **Yamaguchi, M.**, 2017: Recent Progress and Challenges in Tropical Cyclone Analysis and Forecast, *ETH Seminar*, July 2017. (Zurich, Switzerland)
10. **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**]
11. **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)
12. **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**]
13. **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)
 14. **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)
 15. **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)
 16. **Yamaguchi, M.**, 2016: Tropical cyclone research-to-operation activities at MRI/JMA, *Typhoon Seminar 2015*, January 2016. (Tokyo, Japan)
 17. **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)
 18. **Yamaguchi, M.** and G. Elliotte, 2014: Advances in Forecasting Motion, *WMO 8th International Workshop on Tropical Cyclones (IWTC-8)*, December 2014. (Jeju, Korea)
 19. **Yamaguchi, M.**, 2014: Multi-model ensemble forecasts of tropical cyclones using TIGGE, *World Weather Open Science Conference*, August 2014. (Montreal, Canada) [**Keynote speaker**]
 20. **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)
 21. **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)
 22. **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)
 23. **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**]
 24. **Yamaguchi, M.**, 2013: Studies on tropical cyclone forecasting using TIGGE, *11th session of THORPEX GIFS-TIGGE working group meeting*, June 2013. (Exeter, UK)
 25. **Yamaguchi, M.**, 2013: Tropical cyclone predictability, *ECMWF training course on predictability, diagnostics and extended-range forecasting*. April 2013. (Reading, UK)
 26. **Yamaguchi, M.**, 2012: Dynamical mechanism of the growth of singular vectors for tropical cyclones, *Seminar at the National Taiwan University*, November 2012. (Taipei, Taiwan)
 27. **Yamaguchi, M.**, 2012: A study on typhoon track prediction using the TIGGE and YOTC data, *Seminar at the National Taiwan University*, November 2012. (Taipei, Taiwan)
 28. **Yamaguchi, M.**, 2012: Progress related to SWFDP in Southeast Asia, *9th Asian THORPEX Regional Committee Meeting*, November 2012. (Kunming, China)

29. **Yamaguchi, M.**, T. Nakazawa, and S. Hoshino, 2012: On the relative benefits of Multi-Centre Grand Ensemble for tropical cyclone track prediction in the western North Pacific, *4th THORPEX Asian Science Workshop*, November 2012. (Kunming, China) [**Keynote speaker**]
30. **Yamaguchi, M.**, T. Nakazawa, and K. Aonashi, 2012: Tropical cyclone track forecasts using JMA model with ECMWF and JMA initial conditions, *4th THORPEX Asian Science Workshop*, November 2012. (Kunming, China)
31. **Yamaguchi, M.**, T. Nakazawa, and K. Aonashi, 2012: New approach to diagnose tropical cyclone track prediction errors, *30th Conference on Hurricanes and Tropical Meteorology*, April 2012. (Ponte Vedra Beach, USA)
32. **Yamaguchi, M.**, 2012: Typhoon Track Prediction - Current and Future Perspectives, *16th Annual US-Japan Meteorological Technical Exchange Meeting*, February 2012. (Yokosuka, Japan)
33. **Yamaguchi, M.**, 2011: TC ensemble forecast performance, *Training Courses on Tropical Cyclone Ensemble Forecasts*, December 2011. (Nanjing, China)
34. **Yamaguchi, M.**, 2011: GIFS-TIGGE products for SWFDP, *8th Asian THORPEX Regional Committee Meeting*, December 2011. (Tokyo, Japan)
35. **Yamaguchi, M.**, D. S. Nolan, M. Iskandarani, S. J. Majumdar, C. A. Reynolds, and M. S. Peng, 2010: Singular vectors for tropical cyclone-like vortices in a nondivergent barotropic framework, *First International Workshop on Nonhydrostatic Numerical Models*, September 2010. (Kyoto, Japan)
36. **Yamaguchi, M.**, M. Kyouda, M. Kunitsugu, and K. Kuma, 2010: The Japan Meteorological Agency and its typhoon forecasts, *Seminar at National Hurricane Center*, June 2010. (Miami, USA)
37. **Yamaguchi, M.**, and S. J. Majumdar, 2010: Using TIGGE data to diagnose initial perturbations and their growth for tropical cyclone ensemble forecasts, *29th Conference on Hurricanes and Tropical Meteorology*, May 2010. (Tucson, USA)
38. **Yamaguchi, M.**, and co-authors, 2009: Coordinated use of targeted observations during TCS08/T-PARC, *Third THORPEX International Symposium*, September 2009. (Monterey, USA)
39. **Yamaguchi, M.**, and S. J. Majumdar, 2009: Using TIGGE data to diagnose initial perturbations and their growth for tropical cyclone ensemble forecasts, *Third THORPEX International Symposium*, September 2009. (Monterey, USA)
40. **Yamaguchi, M.**, 2009: Singular vector based research at the Japan Meteorological Agency, *Seminar at the Naval Research Laboratory*, September 2009. (Monterey, USA)
41. **Yamaguchi, M.**, S. J. Majumdar, M. S. Peng, C. A. Reynolds, and D. S. Nolan, 2009: Using TIGGE data to diagnose initial perturbations and their growth for tropical cyclone ensemble forecasts, *Seminar at the Naval Postgraduate School*, September 2009. (Monterey, CA)
42. **Yamaguchi, M.**, T. Komori, T. Miyoshi, M. Nagata, and T. Nakazawa, 2009: Numerical model framework for typhoon prediction at the Japan Meteorological Agency, *The 63th Interdepartmental Hurricane Conference*, March 2009. (St. Petersburg, USA)
43. **Yamaguchi, M.**, T. Nakazawa, T. Komori, R. Sakai, K. Sato, and M. Nagata, 2008: Strategy for the deployment of dropsonde observations using sensitivity analysis guidance, *T-PARC Operations Meeting*, April 2008. (Tsukuba, Japan)
44. **Yamaguchi, M.**, and co-authors, 2007: Challenges and lessons learned from the 2007 dry run in Japan, *Planning Workshop for the THORPEX Pacific Asian Regional Campaign (T-PARC)*, December 2007. (Kauai, USA)
45. **Yamaguchi, M.**, 2007: Probabilistic Forecast Systems Overview, *Expert*

- Meeting on the Application of Probabilistic Forecast*, September 2007. (Shanghai, China)
46. **Yamaguchi, M.**, T. Komori, R. Sakai, T. Iriguchi, and T. Nakazawa, 2007: Typhoon Ensemble Prediction and Typhoon Sensitivity Analysis for T-PARC, *5th Asian THORPEX Regional Committee Meeting*, July 2007. (Tsukuba, Japan)
 47. **Yamaguchi, M.**, T. Iriguchi, and T. Nakazawa, 2007: T-PARC related activity at the Japan Meteorological Agency, *International Symposium on Global Change, Asian Monsoon and Extreme Weather and Climate*, June 2007. (Taiwan)
 48. Wu, C.-C., and co-authors, 2006: Targeted observations and data assimilation in track prediction, *Sixth International Workshop on Tropical Cyclone*, November 2006. (San Jose, Costa Rica)
 49. **Yamaguchi, M.**, T. Iriguchi, and T. Nakazawa, 2006: Observing system experiment using a singular vector method for 2004 DOTSTAR cases, *Korea-Japan-China Second Joint Conference on Meteorology*, October 2006. (Seoul, Korea)

Meetings

1. **Yamaguchi, M.**, and Hui Yu, 2019: Enhanced cooperation between research and operational fields, *Second Meeting of the Working Group on Meteorology of the Typhoon Committee*, October 2019. (Tokyo, Japan)
2. **Yamaguchi, M.**, 2019: Pilot Project for Seamless GDPFS in the Asian Pacific Aimed for Better Typhoon Forecast and Warning, *Fifth meeting of the WMO/WWRP PDEF working group*, September 2019. (Boulder, USA)
3. **Yamaguchi, M.**, 2019: Review of activities on challenge 4 -Spatio-temporal post-processing & applications-, *Fifth meeting of the WMO/WWRP PDEF working group*, September 2019. (Boulder, USA)
4. WMO World Meteorological Center Workshop, March 2019 (Beijing, China)
5. ESCAP/WMO Typhoon Committee Fifty First Session, February 2019. (Guangzhou, China)
6. **Yamaguchi, M.**, 2018: Review of activities on challenge 2, *Forth meeting of the WMO/WWRP PDEF working group*, September 2018. (Tokyo, Japan)
7. **Yamaguchi, M.**, 2019: Use of TIGGE in Tropical Cyclone Forecasting, *Forth meeting of the WMO/WWRP PDEF working group*, September 2018. (Tokyo, Japan)
8. WMO Seventeenth Session of the Commission for Atmospheric Sciences (CAS-17), October 2017. (Geneva, Switzerland)
9. WMO WWRP Science Steering Committee Tenth Meeting, October 2017. (Geneva, Switzerland)
10. **Yamaguchi, M.**, 2017: Review of research that used TIGGE, *Third meeting of the WMO/WWRP PDEF working group*, September 2017. (Bern, Switzerland)
11. **Yamaguchi, M.**, 2017: Review of activities on utilization of multi-model ensembles and post-processing, *Third meeting of the WMO/WWRP PDEF working group*, September 2019. (Bern, Switzerland)
12. **Yamaguchi, M.**, 2016: Review of activities on multi-model ensemble and calibration techniques, *Second meeting of the WMO/WWRP PDEF working group*, September 2016. (Exeter, UK)
13. *First meeting of the WMO/WWRP PDEF working group*, May 2015. (Karlsruhe, German)