

Curriculum Vitae for Matthew C. Wheeler

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EDUCATION AND PROFESSIONAL POSITIONS

- 2015 - Present **Bureau of Meteorology**, Melbourne, Australia
Climate Research Section
(Principal Research Scientist)
- 2008 - 2014 **Centre for Australian Weather and Climate Research**, Melbourne, Australia
A partnership between the Bureau of Meteorology and CSIRO
Climate Variability and Climate Change Program
(SPOB level -2009; Senior Research Scientist 2009-2013; Principal RS 2014-)
- 2000 - 2007 **Bureau of Meteorology Research Centre**, Melbourne, Australia
Climate Forecasting Group
(PO2 level 2000-2002; SPOC level 2002-2006; SPOB level 2006-)
- 1998 - 2000 **National Center for Atmospheric Research**, Boulder, Colorado, USA
Postdoctoral Fellow in the Advanced Study Program
- 1994 - 1998 **University of Colorado**, Boulder, Colorado, USA
Ph.D., Astrophysical, Planetary, and Atmospheric Sciences, 1998
Thesis: [Convectively-Coupled Equatorial Waves](#)
Supervisors: Dr. George Kiladis and Professor Peter Webster
M.Sc., Astrophysical, Planetary, and Atmospheric Sciences, 1996
Certificate, Program in Atmospheric and Oceanic Sciences, 1995
- 1996 - 1998 **NOAA Aeronomy Laboratory**, Boulder, Colorado, USA
Research assistant to Dr. George Kiladis in the Tropical Dynamics and Climate Group
- 1994 - 1995 **NOAA-CIRES Climate Diagnostics Center**, Boulder, Colorado, USA
Research assistant to Dr. George Kiladis
- 1993 **National Center for Atmospheric Research**, Boulder, Colorado, USA
Research assistant to Dr. Gerald Meehl
- 1990 - 1992 **Macquarie University**, Sydney, Australia
Bachelor of Technology (Atmospheric Science). GPA: 4.00/4.00

RESEARCH INTERESTS

Intraseasonal to interannual variability of the atmosphere/ocean climate system and its role in weather and climate prediction, with particular specialisation in equatorial waves, the Madden-Julian oscillation, the Australian monsoon, mechanisms of rainfall variability, and subseasonal to seasonal prediction. Techniques development for the analysis of atmospheric and oceanic data, especially spectral analysis and methods of prediction. Observational analysis, theoretical interpretation, and numerical modelling.

COMMITTEES, PROFESSIONAL ACTIVITIES, AND SERVICE

- 2016-2018: Associate Editor, Journal of Southern Hemisphere Earth System Science (JSHESS).
- 2016-2018: Ex-officio member, JSHESS Supervisory Board.
- 2016-present: Science Steering Committee for Years of Maritime Continent.
- 2015-present: AMOS Awards Committee.
- 2015-present: Editorial board member, World Scientific Series on Asia-Pacific Weather and Climate.
- 2015-2017: Member of Backbone Task Team, Tropical Pacific Observing System-2020.
- 2013-present: WGNE Madden-Julian Oscillation Task Force (Co-chair for 2013-2014).
- 2013-2014: Ex-officio member, Working Group on Numerical Experimentation (WGNE).
- 2012-2018: Associate Investigator, ARC Centre of Excellence for Climate System Science.
- 2010-2012: Scientific organising committee, 10th AMS International Conference on Southern Hemisphere Meteorology and Oceanography.
- 2010: Co-organiser, CLIVAR AAMP and YOTC MJO Task Force Workshop on Modelling Monsoon Intraseasonal Variability, Busan, Korea.
- 2010: Working group member, Tropical Cyclone Activity on Intraseasonal Time Scales, 7th WMO IWTC Report.
- 2009-2012: Co-chair, WCRP/WWRP/THORPEX YOTC Madden-Julian Oscillation Task Force.
- 2008-2012: Editor, Monthly Weather Review. Gold Star list in 2009 and 2011.
- 2008: Convener, special session on the Asian-Australian Monsoon, AGU Western Pacific Geophysics meeting, Cairns, Australia.
- 2007-2010: Member of Science Planning Group for the Year of Tropical Convection (YOTC).
- 2007-2016: Executive Committee, World Weather Research Program (WWRP) Monsoon Panel.
- 2006-2008: Contributing scientist, US-CLIVAR MJO Working Group.
- 2006: Working group member, Short-term Climate Prediction of TC Activity and Intensity, 6th WMO IWTC Report.
- 2005-2008: International committee member, AMS Tropical Meteorology and Tropical Cyclones Committee.
- 2004-2008: Associate Editor, Journal of Climate.
- 2004-2006: Contributing Author (Sec 3.7.1.2) and Expert Reviewer (WG1) for IPCC AR4 2007.
- 2004-2005: Associate Editor, Monthly Weather Review.
- 2002: Convener, special session on the MJO, AGU Western Pacific Geophysics meeting, Wellington, NZ.
- 2002-2003: BMRC seminar coordinator.
- 1995: Comprehensive exams committee, APAS Department, University of Colorado.
- 1994: Rapporteur, TOGA COARE International Data Workshop, Toulouse, France.
- Reviewer for the *Journal of the Atmospheric Sciences*, *Monthly Weather Review*, *Journal of Climate*, *Journal of the Meteorological Society of Japan*, *Dynamics of Atmospheres and Oceans*, *Geophysical Research Letters*, *Journal of Geophysical Research*, *Reviews of Geophysics*, *Quarterly Journal of the Royal Meteorological Society*, *Tellus A*, *Meteorology and Atmospheric Physics*, *Journal of Atmospheric and*

Oceanic Technology, Theoretical and Applied Climatology, Australian Meteorological Magazine, Journal of Southern Hemisphere Earth System Science.

Reviewer of scientific proposals/reports for: NSF, DOE, NOAA, NRC (USA); NERC (UK); CFACS (Canada); and ANR (France).

OTHER EDUCATION AND DISTINCTIONS

2013: [Priestley Medal](#), awarded by the Australian Meteorological and Oceanographic Society.

1999: AMS short course on Tropical-Extratropical Interaction and Prediction, Denver, USA.

1997: CIRES Graduate Research Fellowship, University of Colorado, USA.

1997: Best Student Paper, 11th Conference on Atmospheric and Oceanic Fluid Dynamics, Tacoma, USA.

1995-1996: University Fellowship, University of Colorado at Boulder, USA.

1993: Coupled Climate System Modelling Graduate Summer School, Macquarie University.

1991: B.Tech in Atmospheric Science Prize, Macquarie University.

1991: Clean Air Society Prize for Urban Climatology, Macquarie University.

1991: Frederick Chong Prize for 200-level Mathematics, Macquarie University.

1990: Le Fevre Memorial Prize for 100-level Physical Chemistry, Macquarie University.

1989: Dux (valedictorian) of South Grafton High School.

JOURNAL PAPERS, BOOKS, AND BOOK CHAPTERS (refereed)

70. [Camp, J., M.C. Wheeler, H.H. Hendon, P. Gregory, A. G. Marshall, K.J. Tory, A.B. Watkins, C. Machlachlan, and Y. Kuleshov, 2017](#): Skilful multi-week tropical cyclone prediction in ACCESS-S1 and the role of the MJO. *Submitted to Quart. J. Roy. Met. Soc.*.

69. [Jayawardena, I.M.S.P., M.C. Wheeler, W.L. Sumathipala, and B.R.S.B. Basnayake, 2017](#): Impacts of the Madden Julian oscillation (MJO) on rainfall in Sri Lanka. *For submission to Journal of Meteorological Society of Japan*.

68. [Ghelani, R.P.S., E.C.J. Oliver, N.J. Holbrook, M.C. Wheeler, P.J. Klotzbach 2017](#): Joint modulation of intraseasonal rainfall in tropical Australia by the Madden-Julian Oscillation and El Nino-Southern Oscillation. *Geophys. Res. Lett.*, 44, 10754-10761. doi:10.1002/2017GL075452

67. [Drosowsky, W., and M.C. Wheeler, 2017](#): Extended-range ensemble predictions of convection in the north Australian monsoon region. *Front. Earth Sci.*, 5:28. doi:10.3389/feart.2017.00028

66. [Wheeler, M.C., H. Zhu, A.H. Sobel, D. Hudson, and F. Vitart, 2017](#): Seamless precipitation prediction skill comparison between two global models. *Quart. J. Roy. Meteor. Soc.*, 143, 374-383. doi:10.1002/qj.2928

65. [Vincent, C.L., T.P. Lane, and M.C. Wheeler, 2016](#): A local index of Maritime Continent intraseasonal variability based on rain-rates over the land and sea. *Geophys. Res. Lett.*, 43, 9306-9314. doi:10.1002/2016GL069987

64. [Lim, E.-P., H.H. Hendon, J.M. Arblaster, F. Delage, H. Nguyen, S.-K. Kin, and M.C. Wheeler, 2016](#): The impact of the Southern Annular Mode on future changes in Southern Hemisphere rainfall. *Geophys. Res. Lett.*, 43, 7160-7167. doi:10.1002/2016GL069453

63. [King, M., M.C. Wheeler, and T.P. Lane, 2016](#): 5-day wave interactions with tropical precipitation in

CMIP5 models. *J. Climate*, 29, 8611-8624.

62. [C.-P. Chang, H.-C. Kuo, N.-C. Lau, R.H. Johnson, B. Wang, and M.C. Wheeler \(eds\), 2016: The Global Monsoon System: Research and Forecast \(3rd Edition\). *World Scientific Series on Asia-Pacific Weather and Climate*, Vol. 9. ISBN 978-981-3200-90-6](#)

61. [Wheeler, M.C., H.-J. Kim, J.-Y. Lee, and J.C. Gottschalck, 2016: Real-time forecasting of modes of tropical intraseasonal variability: The Madden-Julian and boreal summer intraseasonal oscillations. In: C.-P. Chang, R. Johnson, H.-C. Kuo, N.-C.G. Lau, B. Wang, and M.C. Wheeler \(eds\), *The Global Monsoon System: Research and Forecast III*. World Scientific Series on Asia-Pacific Weather and Climate, Vol. 9.](#)

60. [King, M., M.C. Wheeler, and T.P. Lane, 2015: Association of convection with the 5-day Rossby-Haurwitz wave. *J. Atmos. Sci.*, 72, 3309-3321.](#)

59. [Wheeler, M.C., and H. Nguyen, 2015: Equatorial waves. In: Gerald R. North \(editor-in-chief\), John Pyle and Fuqing Zhang \(editors\). *Encyclopedia of Atmospheric Sciences*, 2nd edition, Vol 6, pp.102-112.](#)

58. [Arblaster, J.M., E.-P. Lim, H. Hendon, B. Trewin, M.C. Wheeler, G. Liu, K. Braganza, 2014: Understanding Australia's hottest September on record \[in "Explaining Extremes of 2013 from a Climate Perspective"\]. *Bull. Amer. Meteor. Soc.*, 95 \(9\), S37-S41.](#)

57. [Kim, D., P. Xavier, E. Maloney, M. Wheeler, D. Waliser, K. Sperber, H. Hendon, C. Zhang, R. Neale, Y.-T. Hwang, and H. Liu, 2014: Process-oriented MJO simulation diagnostic: Moisture sensitivity of simulated convection. *J. Climate*, 27, 5379-5395.](#)

56. [Kiladis G.N., J. Dias, K.H. Straub, M.C. Wheeler, S.N. Tulich, K. Kikuchi, K.M. Weickmann, and M.J. Ventrice, 2014: A comparison of OLR and circulation based indices for tracking the MJO. *Mon. Wea. Rev.*, 142, 1697-1715.](#)

55. [Zhu, H., M.C. Wheeler, A.H. Sobel, and D. Hudson, 2014: Seamless precipitation prediction skill in the tropics and extratropics from a global model. *Mon. Wea. Rev.*, 142, 1556-1569. \[Media item\]\(#\)](#)

54. [Hoell, A., M. Barlow, M.C. Wheeler, and C. Funk, 2014: Disruptions of El Nino Southern Oscillation teleconnections by the Madden Julian oscillation. *Geophys. Res. Lett.*, 41, doi:10.1002/2013GL058648.](#)

53. [Drosowsky, W., and M.C. Wheeler, 2014: Predicting the onset of the north Australian wet season with the POAMA dynamical prediction system. *Wea. Forecasting*, 29, 150-161.](#)

52. [Marshall, A.G., D. Hudson, M.C. Wheeler, O. Alves, H.H. Hendon, M.J. Pook, and J.S. Risbey, 2014: Intra-seasonal drivers of extreme heat over Australia in observations and POAMA-2. *Clim. Dyn.*, doi:10.1007/s00382-013-2016-1.](#)

51. [Brown, J.N., J.R. Brown, C. Langlais, R. Colman, J. Risbey, B.F. Murphy, A. Moise, A. Sen Gupta, I. Smith, L. Wilson, S. Narsey, M. Grose, and M.C. Wheeler, 2013: Exploring qualitative regional climate projections: a case study for Nauru. *Climate Res.*, 58, 165-182. doi:10.3354/cr01190.](#)

50. [Marshall, A.G., D. Hudson, H.H. Hendon, M.J. Pook, O. Alves, and M.C. Wheeler, 2013: Simulation and prediction of blocking in the Australian region and its influence on intra-seasonal rainfall in POAMA-2. *Climate Dyn.*, doi:10.1007/s00382-013-1974-7.](#)

49. [Ventrice, M.J., M.C. Wheeler, H.H. Hendon, C.J. Schreck, C.D. Thorncroft, 2013: A modified multivariate Madden Julian Oscillation index using velocity potential. *Mon. Wea. Rev.*, 141, 4197-4210.](#)

48. [Chand, S.S., K.J. Tory, J.L. McBride, M.C. Wheeler, R.A. Dare, and K.J.E. Walsh, 2013: The different impact of positive-neutral and negative-neutral ENSO regimes on Australian tropical cyclones. *J. Climate*, 26, 8008-8016.](#)

47. [Zhang, C., J. Gottschalck, E.D. Maloney, M.W. Moncrieff, F. Vitart, D.E. Waliser, B. Wang, and M.C. Wheeler, 2013: Cracking the MJO Nut. *Geophys. Res. Lett.*, 40, 1223-1230.](#)

46. [Lee, J.-Y., B. Wang, M.C. Wheeler, X. Fu, D.E. Waliser, and I.-S. Kang, 2013: Real-time multivariate indices for the boreal summer intraseasonal oscillation over the Asian summer monsoon region. *Clim. Dyn.*,](#)

40, 493-509.

45. [Chand, S.S., J.L. McBride, K.J. Tory, M.C. Wheeler, and K.J.E. Walsh, 2013:](#) Impact of different ENSO regimes on southwest Pacific tropical cyclones. *J. Climate*, 26, 600-608.
44. [Waliser, D.E., M. Moncrieff, D. Burridge, A. Fink, D Gochis, B. N. Goswami, B. Guan, P. Harr, J. Heming, H.-H. Hsu, C. Jakob, M. Janiga, R. Johnson, S. Jones, P. Knippertz, J. Marengo, H. Nguyen, M. Pope, Y. Serra, C. Thorncroft, M. Wheeler, R. Wood, and S. Yuter, 2012:](#) The "Year" of Tropical Convection (May 2008 to April 2010): Climate variability and weather highlights. *Bull. Amer. Meteor. Soc.*, 93, 1189-1218.
43. [Marshall, A.G., D. Hudson, M.C. Wheeler, H.H. Hendon, and O. Alves, 2012:](#) Simulation and prediction of the Southern Annular Mode and its influence on Australian intra-seasonal climate in POAMA. *Climate Dyn.*, doi:10.1007/s00382-011-1140-z.
42. [Wheeler, M.C., and J.L. McBride, 2012:](#) Australasian monsoon. In: W.K.M. Lau and D.E. Waliser (eds), *Intraseasonal Variability in the Atmosphere-Ocean Climate System (2nd edition)*. Springer, pages 147-198.
41. [Protat, A., J. Delanoe, P.T. May, J. Haynes, C. Jakob, E. O'Connor, M. Pope, and M.C. Wheeler, 2011:](#) The variability of tropical ice cloud properties as a function of the large-scale context from ground-based radar-lidar observations over Darwin, Australia. *Atmos. Chem. and Phys.*, doi:10.5194/acp-11-8363-2011.
40. [Hendon, H.H., K.R. Sperber, D.E. Waliser, and M.C. Wheeler, 2011:](#) Modelling monsoon intraseasonal variability: From theory to operational forecasting. *Bull. Amer. Meteor. Soc.*, 92, ES32-ES35. doi:10.1175/2011BAMS3164.1.
39. [Marshall, A.G., D. Hudson, M.C. Wheeler, H.H. Hendon, and O. Alves, 2011:](#) Assessing the simulation and prediction of rainfall associated with the MJO in the POAMA seasonal forecast system. *Climate Dyn.*, doi:10.1007/s00382-010-0948-2.
38. [Shi, L., H.H. Hendon, O. Alves, M.C. Wheeler, D. Anderson, and G. Wang, 2011:](#) On the importance of initializing the stochastic part of the atmosphere for forecasting the 1997/98 El Nino. *Climate Dyn.*, 36, doi 10.1007/s00382-010-0933-9.
37. [Rashid, H.A., H.H. Hendon, M.C. Wheeler, and O. Alves, 2011:](#) Prediction of the Madden-Julian oscillation with the POAMA dynamical prediction system. *Climate Dyn.*, 36, 649-661, doi:10.1007/s00382-010-0754-x.
36. [Hendon, H.H., E. Lim, and M.C. Wheeler, 2011:](#) Seasonal prediction of Australian summer monsoon rainfall. In: C.-P. Chang, Y.H. Ding, N.-C. Lau, R. Johnson, B. Wang, and T. Yasunari (eds), *The Global Monsoon System: Research and Forecast (2nd edition)*. World Scientific Series on Asia-Pacific Weather and Climate, Vol. 5, pages 73-84.
35. [Goswami, B.N., M.C. Wheeler, J.C. Gottschalck, and D.E. Waliser, 2011:](#) Intraseasonal variability and forecasting: A review of recent research. In: C.-P. Chang, Y.H. Ding, N.-C. Lau, R. Johnson, B. Wang, and T. Yasunari (eds), *The Global Monsoon System: Research and Forecast (2nd edition)*. World Scientific Series on Asia-Pacific Weather and Climate, Vol. 5, pages 389-408.
34. [Vitart, F., A. Leroy, and M.C. Wheeler, 2010:](#) A comparison of dynamical and statistical predictions of weekly tropical cyclone activity in the Southern Hemisphere. *Mon. Wea. Rev.*, 138, 3671-3682.
33. [Gottschalck, J., M. Wheeler, K. Weickmann, F. Vitart, N. Savage, H. Lin, H. Hendon, D. Waliser, K. Sperber, M. Nakagawa, C. Prestrelo, M. Flatau, and W. Higgins, 2010:](#) A framework for assessing operational Madden-Julian Oscillation forecasts: A CLIVAR MJO Working Group project. *Bull. Amer. Meteor. Soc.*, 91, 1247-1258.
32. [Gall, J.S., W.M. Frank, and M.C. Wheeler, 2010:](#) The role of equatorial Rossby waves in tropical cyclogenesis. Part I: Idealized numerical simulations in an initially quiescent background environment. *Mon. Wea. Rev.*, 138, 1368-1382.
31. [Camargo, S.J., M.C. Wheeler, and A.H. Sobel, 2009:](#) Diagnosis of the MJO modulation of tropical

cyclogenesis using an empirical index. *J. Atmos. Sci.*, 66, 3061-3074.

30. [Risbey, J.S., M.J. Pook, P.C. McIntosh, M.C. Wheeler, and H.H. Hendon, 2009:](#) On the remote drivers of rainfall variability in Australia. *Mon. Wea. Rev.*, 137, 3233-3253.
29. [CLIVAR Madden-Julian Oscillation Working Group, 2009:](#) MJO Simulation Diagnostics. *J. Climate*, 22, 3006-3030.
28. [Wheeler, M.C., H.H. Hendon, S. Cleland, H. Meinke, and A. Donald, 2009:](#) Impacts of the Madden-Julian oscillation on Australian rainfall and circulation. *J. Climate*, 22, 1482-1498.
27. [Kiladis, G.N., M.C. Wheeler, P.T. Haertel, K.H. Straub, and P.E. Roundy, 2009:](#) Convectively coupled equatorial waves. *Rev. Geophys.*, 47, RG2003, doi:10.1029/2008RG000266. [Published correction to this paper.](#)
26. [Wheeler, M.C., 2008:](#) Seasonal climate summary southern hemisphere (summer 2007-08): mature La Nina, an active MJO, strongly positive SAM, and highly anomalous sea-ice. *Aust. Meteor. Mag.*, 57, 379-393.
25. [Hendon, H.H., and M.C. Wheeler, 2008:](#) Some space-time spectral analyses of tropical convection and planetary-scale waves. *J. Atmos. Sci.*, 65, 2936-2948.
24. [Leroy, A., and M.C. Wheeler, 2008:](#) Statistical prediction of weekly tropical cyclone activity in the Southern Hemisphere. *Mon. Wea. Rev.*, 136, 3637-3654.
23. [Jiang, X., D.E. Waliser, M.C. Wheeler, C. Jones, M.-I. Lee, and S.D. Schubert, 2008:](#) Assessing the skill of an all-season statistical forecast model for the Madden-Julian oscillation. *Mon. Wea. Rev.*, 136, 1940-1956.
22. [Lo, F., M.C. Wheeler, H. Meinke, and A. Donald, 2007:](#) Probabilistic forecasts of the onset of the north Australian wet season. *Mon. Wea. Rev.*, 135, 3506-3520.
21. [Hendon, H.H., D.W.J. Thompson, and M.C. Wheeler, 2007:](#) Australian rainfall and surface temperature variations associated with the Southern Annular Mode. *J. Climate.*, 20, 2452-2467.
20. [Hendon, H.H., M.C. Wheeler, and C. Zhang, 2007:](#) Seasonal dependence of the MJO-ENSO relationship. *J. Climate*, 20, 531-543.
19. [McPhaden, M.J., X. Zhang, H.H. Hendon, and M.C. Wheeler, 2006:](#) Large scale dynamics and MJO forcing of ENSO variability. *Geophys. Res. Lett.*, 33, L16702, doi:10.1029/2006GL026786.
18. [Donald, A., H. Meinke, B. Power, A.H.N. Maia, M.C. Wheeler, N. White, R.C. Stone, and J. Ribbe, 2006:](#) Near-global impact of the Madden-Julian oscillation on rainfall. *Geophys. Res. Lett.*, 33, L09704, doi:10.1029/2005GL025155.
17. [Lin, J.-L., G.N. Kiladis, B.E. Mapes, K.M. Weickmann, K.R. Sperber, M.C. Wheeler, S.D. Schubert, A. Del Genio, L.J. Donner, S. Emori, J.-F. Gueremy, F. Hourdin, P.J. Rasch, E. Roeckner, and J.F. Scinocca, 2006:](#) Tropical intraseasonal variability in 14 IPCC AR4 climate models. Part I: Convective signals. *J. Climate*, 19, 2665-2690.
16. [Waliser, D., K. Weickmann, R. Dole, S. Schubert, O. Alves, C. Jones, M. Newman, H.-L. Pan, A. Roubicek, S. Saha, C. Smith, H. van den Dool, F. Vitart, M. Wheeler, and J. Whitaker, 2006:](#) The experimental MJO prediction project. *Bull. Amer. Meteor. Soc.*, 87, 425-431.
15. [Bessafi, M., and M.C. Wheeler, 2006:](#) Modulation of south Indian Ocean tropical cyclones by the Madden-Julian oscillation and convectively-coupled equatorial waves. *Mon. Wea. Rev.*, 134, 638-656.
14. [Wheeler, M.C., and J.L. McBride, 2005:](#) Australian-Indonesian monsoon. In: W.K.M. Lau and D.E. Waliser (eds), *Intraseasonal Variability in the Atmosphere-Ocean Climate System*. Praxis, Springer Berlin Heidelberg, pages 125-173.
13. [Maharaj, E.A., and M.C. Wheeler, 2005:](#) Forecasting an index of the Madden-oscillation. *Int. J. Climatol.*, 25, 1611-1618.

12. [Barlow, M., M. Wheeler, B. Lyon, and H. Cullen, 2005](#): Modulation of daily precipitation over southwest Asia by the Madden-Julian oscillation. *Mon. Wea. Rev.*, 133, 3579-3594.
11. [Wheeler, M.C., and H.H. Hendon, 2004](#): An all-season real-time multivariate MJO Index: Development of an index for monitoring and prediction. *Mon. Wea. Rev.*, 132, 1917-1932.
10. [Wheeler, M.C., 2002](#): Tropical meteorology: Equatorial waves. In: J. Holton, J. Curry, and J. Pyle (eds), *Encyclopedia of Atmospheric Sciences*. Academic Press, pages 2313-2325.
9. [Gettelman, A., D.J. Seidel, M.C. Wheeler, and R.J. Ross, 2002](#): Multi-decadal trends in tropical convective available potential energy. *J. Geophys. Res.*, 107(D21), 4606, doi:10.1029/2001JD001082.
8. [Wheeler, M., and K.M. Weickmann, 2001](#): Real-time monitoring and prediction of modes of coherent synoptic to intraseasonal tropical variability. *Mon. Wea. Rev.*, 129, 2677-2694.
7. [Meehl, G.A., R. Lukas, G.N. Kiladis, K.M. Weickmann, A.J. Matthews, and M. Wheeler, 2001](#): A conceptual framework for time and space scale interactions in the climate system. *Climate Dyn.*, 17, 753-775.
6. [Wheeler, M., G.N. Kiladis, and P.J. Webster, 2000](#): Large-scale dynamical fields associated with convectively coupled equatorial waves. *J. Atmos. Sci.*, 57, 613-640.
5. [Wheeler, M., and G.N. Kiladis, 1999](#): Convectively coupled equatorial waves: Analysis of clouds and temperature in the wavenumber-frequency domain. *J. Atmos. Sci.*, 56, 374-399.
4. [Meehl G.A., G.N. Kiladis, K.M. Weickmann, M. Wheeler, D.S. Gutzler, and G.P. Compo, 1996](#): Modulation of equatorial subseasonal convective episodes by tropical-extratropical interaction in the Indian and Pacific Ocean regions. *J. Geophys. Res.*, 101(D10), 15033-15049.
3. [Kiladis, G.N., and M. Wheeler, 1995](#): Horizontal and vertical structure of observed tropospheric equatorial Rossby waves. *J. Geophys. Res.*, 100(D11), 22981-22997.
2. [Gutzler, D.S., G.N. Kiladis, G.A. Meehl, K.M. Weickmann, and M. Wheeler, 1994](#): The global climate of December 1992-February 1993. Part II: Large-scale variability across the tropical western Pacific during TOGA COARE. *J. Climate*, 7, 1606-1622.
1. [Meehl, G.A., M. Wheeler, and W.M. Washington, 1994](#): Low-frequency variability and CO2 transient climate change. Part 3. Intermonthly and Interannual variability. *Clim. Dyn.*, 10: 277-303.

SELECTED OTHER PUBLICATIONS

- [Brown, J.N., et al., 2013](#): Reinvigorating Research on the Western Pacific Warm Pool - First Workshop. *CLIVAR Exchanges*, 63, pages 34-35.
- [Wheeler, M., E. Maloney, and MJO Task Force, 2013](#): Madden-Julian Oscillation (MJO) Task Force: a joint effort of the climate and weather communities. *CLIVAR Exchanges*, 61, pages 9-12.
- [Marshall, A.G., D. Hudson, M.C. Wheeler, H.H. Hendon, O. Alves, 2011](#): Evaluating key drivers of Australian intra-seasonal climate variability in POAMA-2: A progress report. *CAWCR Research Letters*, 7, pages 10-16.
- [Wheeler, M.C., 2011](#): Intraseasonal forecasting of monsoons. *WMO Technical Report*, WWRP 2011-3.
- [Timbal, B., B. Murphy, K. Braganza, H. Hendon, M. Wheeler, and C. Rakich, 2010](#): Comparing documented climate changes with those attributable to specific causes. *SEACI Final Project Report*, Project No. 1.1.2, CSIRO Land and Water, 20pp.
- [Timbal, B., J. Arblaster, K. Braganza, E. Fernandez, H. Hendon, B. Murphy, M. Raupach, C. Rakich, I. Smith, K. Whan, and M.C. Wheeler, 2010](#): Understanding the anthropogenic nature of the observed rainfall

decline across south-eastern Australia. *CAWCR Technical Report*, No. 26, 180pp. (ISBN: 978-1-921605-90-1)

[Gottschalck, J. M. Wheeler, K. Weickmann, D. Waliser, K. Sperber, F. Vitart, N. Savage, H. Lin, H. Hendon, and M. Flatau, 2008](#): Madden-Julian Oscillation Forecasting at Operational Modelling Centres. *CLIVAR Exchanges*, Vol. 13, No. 4, pages 18-19.

[Lo, F., M.C. Wheeler, and S. Lennox., 2008](#): Improving predictions of the North Australian wet season: onset and duration. *CAWCR Technical Report*, No. 1, 33pp. (ISBN: 978-1-921424-44-1)

[Donald, A., H. Meinke, S. Lennox., M. Wheeler, F. Lo, and A. de H. N. Maia, 2006](#): The MJO and agricultural decision making in northern Australia. *CLIVAR Exchanges*, Vol. 11, No. 3, pages 9 and 13.

[A.G. Marshall, O. Alves, H.H. Hendon, and M.C. Wheeler, 2006](#): A wavenumber-frequency spectral analysis of intraseasonal variability in the standard BMRC atmosphere general circulation model. *BMRC Research Report*, Australian Bureau of Meteorology, No.122, 28pp.

[B. Timbal, M. Wheeler, S. Chêne, L. Maitrepierre, and A. Leroy, 2004](#): Impact de la variabilité inter-annuelle et intra-saisonnière sur l'activité cyclonique et la pluviométrie. *Acte des Assises Française de la Recherche dans le Pacifique*, Nouméa, New Caledonia, 6pp.

[McBride, J.L., and M.C. Wheeler, 2004](#): How strong is the relationship between the MJO and the onset of the Australian monsoon? *UCLA Tropical Meteorology Newsletter*. No. 64.

INVITED PRESENTATIONS

- Jan 2018 "Equatorial waves and Peter Webster". Invited for Peter J. Webster Symposium, AMS Annual Meeting; Austin, Texas. Presented by George Kiladis.
- Jun 2017 "Australian participation in Years of Maritime Continent and research on multi-week TC prediction". Invited for the South China Sea Science Conference; Kaohsiung, Taiwan.
- Jun 2016 "A simple method for seamless verification applied to precipitation hindcasts from two global models". Invited presentation given remotely for the annual ECMWF Users Workshop.
- May 2016 "Australian proposal for the Years of the Maritime Continent (YMC): Observing convection with the RV Investigator". Invited for a special session on YMC at the Taiwan Geosciences Assembly; Taipei, Taiwan.
- Feb 2015 "[Seamless prediction: Opportunities and challenges](#)". Invited for the AMOS Workshop on the Interface of Weather and Climate; University of Melbourne, Australia.
- Feb 2014 "Real-time forecasting of modes of tropical intraseasonal variability: The Madden-Julian and Boreal Summer Intraseasonal oscillations". Plenary presentation - [Priestley Medal winner](#), AMOS National Conference; Hobart, Australia.
- Nov 2013 "[Seamless precipitation prediction skill in the tropics and extratropics from a global model](#)". Invited for the 7th Annual CAWCR Workshop; Melbourne, Australia.
- Oct 2013 "[Real-time forecasting of modes of tropical intraseasonal variability: The Madden-Julian and Boreal Summer Intraseasonal oscillations](#)". Invited review for the 5th International Workshop on Monsoons (IWM-V); Macau, China.
- Mar 2013 "The MJO and the Pacific Warm Pool". Invited (by Jaclyn Brown) for the Western Pacific Warm Pool workshop at CSIRO; Hobart, Australia.
- Nov 2012 "Intraseasonal variability of the Australasian monsoon". Invited for the 6th Annual CAWCR Workshop; Melbourne, Australia.
- Jul 2011 "[Intraseasonal TC prediction in the southern hemisphere](#)". Invited for the Symposium on Monsoons, Tropical Cyclones, and Tropical Dynamics, IUGG General Assembly; Melbourne,

Australia.

- May 2011 "Overview of the MJO and convectively-coupled equatorial waves during YOTC". Invited for the YOTC International Science Symposium, held at the Chinese Meteorological Administration; Beijing, China.
- Jun 2010 "Forecasting local impacts of the MJO with the POAMA seasonal prediction system". Keynote presentation at the CLIVAR AAMP and YOTC MJO Task Force Monsoon Intraseasonal Variability Modelling Workshop. APEC Climate Center; Busan, Korea.
- Nov 2008 "The Realtime Multivariate MJO Index: Definition and recent applications to NWP models". Invited (by Professor Yukari Takayabu) for CCSR seminar series, University of Tokyo; Kashiwa, Japan.
- Oct 2008 "Intraseasonal forecasting of monsoons: Training for forecasters". Invited (by Professor C.P. Chang) for 4th International Workshop on Monsoons (IWM-IV); Beijing, China.
- Aug 2008 "Description of an MJO forecast metric". Invited lecture for Workshop on Multi-scale Predictions of the Asian and African Summer Monsoon. Abdus Salam International Centre for Theoretical Physics; Trieste, Italy.
- Nov 2007 "MJO forecasting metrics and diagnostics". Keynote presentation for the US-CLIVAR MJO WG workshop on New Approaches to Meet the Challenge of the Madden-Julian Oscillation. Beckman Center of the National Academies; Irvine, California.
- Jul 2007 "Extended range prediction of monsoon intraseasonal oscillations". Keynote presentation for the Celebrating the Monsoon conference, Indian Institute of Science; Bangalore, India.
- Feb 2006 "The MJO and high impact weather". Invited for the WWRP/THORPEX Scientific Conference on Improving the Global Prediction of High Impact Weather; Cape Town, South Africa.
- Dec 2004 "Prediction of the MJO". Invited for the 16th Annual BMRC Modelling Workshop on the past, present and future of numerical modelling; Melbourne, Australia. BMRC Research Report No.104, p.97.
- Aug 2004 "The seasonally-independent eastward propagation of the MJO". Invited for the Western Pacific Geophysics Meeting; Honolulu, Hawaii. Abstract in supplement to *Eos*, 13 July 2004, p.15.
- Nov 2003 "Techniques and experiences in real time prediction of the MJO: The BMRC perspective". Invited for the ECMWF/CLIVAR Workshop on Simulation and Prediction of Intraseasonal Variability; Reading, UK. Workshop Proceedings, p.211-219.
- Oct 2003 "Can observations of large-scale equatorial waves tell us something useful for the parameterization of convection?". Invited for the 15th Annual BMRC Modelling Workshop on current issues in the parameterization of convection; Melbourne, Australia. BMRC Research Report No.93, p.97-100.
- Nov 2002 "[The Madden-Julian oscillation and the Java floods of January/February 2002](#)". Invited for the 14th Annual BMRC Modelling Workshop on modelling and predicting extreme weather events; Melbourne, Australia. BMRC Research Report No.90, p.111-114.
- Jun 2002 "[Climate variability on multiple time scales: Monsoon bursts and El Nino clash over SE Asia](#)". Invited as representative of the World Climate Research Program (WCRP). Presented at an international science roundtable for the media, a side-event to the PrepCom4 meeting for the World Summit on Sustainable Development; Bali, Indonesia.
- Nov 2001 "[Monitoring and Predicting Tropical Intraseasonal Variability: What we're doing at BMRC](#)". Invited for the 13th Annual BMRC Modelling Workshop on understanding the climate of Australia and the Indo-Pacific region; Melbourne, Australia. BMRC Research Report No.84, p.127-130.
- Jan 2001 "[A review of synoptic to intraseasonal tropical waves with relevance to forecasting](#)". Invited for

the International Workshop on the Dynamics and Forecasting of Tropical Weather Systems; Darwin, Australia. Proceedings, p.114-137.

- Nov 1999 "Synoptic to intraseasonal modes of coherent tropical convective variability: Poor simulation, but good monitoring and empirical prediction". Invited for the Laboratory for Atmospheres seminar series at the NASA Goddard Space Flight Center; Greenbelt, Maryland.
- Sep 1999 "Synoptic to intraseasonal modes of coherent tropical convective variability". Invited (by Professor Kerry Emanuel) for the EAPS Department seminar series at the Massachusetts Institute of Technology; Boston, Massachusetts.
- Feb 1999 "Convectively coupled equatorial waves". Invited (by Professor Michio Yanai) for the atmospheric dynamics seminar series at the University of California; Los Angeles, California.
- Apr 1998 "Equatorial waves in the troposphere: Convectively coupled waves and the peak projection response to deep convective heating". Invited (by Professor Andy Majda) for the Atmospheric and Oceanic Science Colloquium series at the Courant Institute of Mathematical Sciences, New York University; New York, New York.

OTHER PRESENTATIONS AT PROFESSIONAL MEETINGS (FIRST-AUTHORED ONLY)

- "Multi-week tropical cyclone prediction in ACCESS-S1 and the role of the MJO". AMOS National Conference & AMS International Conference on Southern Hemisphere Meteorology and Oceanography; Sydney, Australia, February 2018.
- "Australian proposal for the Years of Maritime Continent (YMC) on the research vessel Investigator". AMOS National Conference & AMS International Conference on Southern Hemisphere Meteorology and Oceanography; Sydney, Australia, February 2018.
- "Multi-week prediction of tropical cyclone (TC) activity". International Workshop on Tropical-Subtropical Weather, Climate, and Oceans; Guangzhou, China, November 2017.
- "Seamless precipitation prediction skill comparison between ECMWF (T639) and POAMA (T47) systems". WGNE Workshop on Systematic Errors; Montreal, Canada, June 2017.
- "Australian YMC plans for the period late 2018 to early 2019: RV Investigator Plan A and Plan B ". Years of Maritime Continent Implementation Planning Workshop; Jakarta, Indonesia, November 2015.
- "The international Years of the Maritime Continent (YMC) project". AMOS National Conference; Brisbane, Australia, July 2015.
- "Australian plans for YMC". First International Science and Planning Workshop on Years of the Maritime Continent (YMC); Singapore, January 2015.
- "Australian interest in YMC". Years of Maritime Continent Kick-off meeting hosted by BMKG; Jakarta, Indonesia, September 2014.
- "Seamless precipitation prediction skill in a global model: Actual versus potential skill". World Weather Open Science Conference; Montreal, Canada, August 2014.
- "Extended-range forecasts of convection in the north Australian monsoon region". World Weather Open Science Conference; Montreal, Canada, August 2014.
- ["Extended-range \(~1-35 day\) forecasts of convective variability for the north Australian monsoon region"](#). 31st Conference on Hurricanes and Tropical Meteorology; San Diego, USA, April 2014. Presented by Hanh Nguyen.
- "Madden-Julian Oscillation Task Force: A joint effort of the climate and weather communities". AOGS 10th Annual Meeting; Brisbane, Australia, June 2013.
- "Impacts of the Madden-Julian Oscillation on Australian maximum and minimum temperatures and

extremes". AMOS National Conference; Melbourne, Australia, February 2013.

"Impacts of the MJO on Australian maximum and minimum temperature and extremes". COECSS First Annual Workshop; Hobart, Australia, September 2012.

"Discussion: CINDY2011/DYNAMO case studies" 1st Pan-Global Atmosphere System Studies (GASS) Conference; Boulder, USA, September 2012.

["MJO Task Force: Summary of activities and accomplishments"](#). 1st Pan-Global Atmosphere System Studies (GASS) Conference; Boulder, USA, September 2012.

"Managing climate variability in agriculture: Predicting the onset of the North Australian wet season". 10th AMS International Conference on Southern Hemisphere Meteorology and Oceanography; Noumea, New Caledonia, April 2012.

"How does the impact of the Madden-Julian oscillation on the Australian monsoon vary with the phase of ENSO?". 10th AMS International Conference on Southern Hemisphere Meteorology and Oceanography; Noumea, New Caledonia, April 2012.

["The YOTC MJO Task Force: Summary of activities and accomplishments"](#). WCRP Open Science Conference; Denver, USA, October 2011.

"Experimental dynamical multi-week prediction of the MJO". Workshop on organized tropical convection and large-scale circulation: Theory, modeling, and observations, BIRS; Banff, Canada, May 2011.

"Using the MJO for predictions of weekly TC probabilities: An improved statistical model and comparisons with ECMWF". CLIVAR AAMP and YOTC MJO Task Force Workshop on Modelling Monsoon Intraseasonal Variability, APCC; Busan, Korea, June 2010.

"Diagnosis of the MJO modulation of tropical cyclogenesis using an empirical index". 6th International GEWEX Conference; Melbourne, Australia, August 2009.

"Large-scale overview of YOTC period: ENSO, MJO, CCEWs, and other". Year of Tropical Convection (YOTC) Implementation Planning Meeting, East-West Center, University of Hawaii; Honolulu, USA, July 2009.

"The MJO and its relevance for the southern hemisphere tropics and extratropics". 9th AMS International Conference on Southern Hemisphere Meteorology and Oceanography; Melbourne, Australia, February 2009.

["MJO simulation diagnostics: An activity of the US-CLIVAR MJO Working Group"](#). Workshop on Tropical Meteorology for CMIP3 Project, University of Tokyo; Kashiwa, Japan, November 2008.

["The MJO, equatorial waves, and TCs over the South Indian Ocean: Their associations and use for prediction"](#). MISMO Workshop; Yokohama, Japan, November 2008.

["Developing a plan for Australian participation in CINDY-2011"](#). MISMO Workshop; Yokohama, Japan, November 2008.

"How does the impact of the MJO on the Australian monsoon vary with the phase of ENSO?". Western Pacific Geophysics Meeting; Cairns, Australia, July 2008.

["Statistical prediction of weekly TC activity in the Southern Hemisphere: How did it perform in 2006/07 & 2007/08?"](#). Western Pacific Geophysics Meeting; Cairns, Australia, July 2008.

"Using the MJO to make statistical predictions of weekly TC activity in the Southern Hemisphere". AMOS National Conference; Geelong, Australia, January 2008.

"Using the MJO to make statistical predictions of weekly TC activity in the Southern Hemisphere". US-CLIVAR MJO Workshop; Irvine, California, November 2007.

"Monsoon magic: Predicting the onset, duration, and variability of the northern wet season". Special session on 'Managing for Climate Variability', 18th Queensland Landcare Conference; Mackay, Australia, August

2007.

"Quantifying the impact of the Madden-Julian oscillation on Australian rainfall". 17th Australia New Zealand Climate Forum; Canberra, Australia, September 2006.

"Improving prediction of the northern Australian wet season". Managing Climate Variability Program (MCVP) National Forum - 'Climate Connect 2006'; Adelaide, March 2006. Extended abstract available from MCVP.

"Experiences at BMRC in simulating and predicting the MJO". NASA/CLIVAR Workshop on Modeling, Simulation and Forecasting of Subseasonal Variability, University of Maryland; College Park, USA, June 2003. NASA/CP-2003-104606, Vol.25

"The Madden-Julian oscillation, the Java floods of January/February 2002, and other extremes in weekly rainfall". 7th AMS International Conference on Southern Hemisphere Meteorology and Oceanography; Wellington, New Zealand, March 2003. Preprints, p.156-158.

"An all-season real-time multivariate MJO index: Development of the index for monitoring and prediction". Western Pacific Geophysics Meeting; Wellington, New Zealand, July 2002.

"An all-season real-time multivariate MJO index: Development of the index for monitoring and prediction in Australia". Workshop on the prospects for improved forecasts of weather and short-term climate variability on subseasonal (2 week to 2 month) time scales; Mitchellville, Maryland, USA, April 2002. NASA/TM-2002-104606, Vol.23, p.94-97.

"Seasonal cycle of the Madden-Julian oscillation in the Australian region". AMOS National Conference; Melbourne, Australia, February 2002.

"Monitoring and predicting tropical intraseasonal atmospheric variability". 14th Australia New Zealand Climate Forum; Darwin, Australia, September 2001.

"Real-time monitoring and prediction of modes of coherent synoptic to intraseasonal tropical variability". 25th Annual Climate Diagnostics and Prediction Workshop, IRI, Lamont-Doherty Earth Observatory; New York, USA, October 2000.

"Modeling the Madden-Julian oscillation and convectively-coupled Kelvin waves". 24th Conference on Hurricanes and Tropical Meteorology; Ft. Lauderdale, USA, May 2000. Presented by Brian Mapes.

"Real-time monitoring of modes of coherent synoptic to intraseasonal tropical variability". Joint session of 17th Conference on Weather Analysis and Forecasting and 8th Conference on Climate Variations; Denver, USA, September 1999. Preprints, p.24-29.

"Large-scale dynamical fields associated with convectively-coupled equatorial waves". 23rd Conference on Hurricanes and Tropical Meteorology; Dallas, USA, January 1999. Preprints, p.356-359.

"The organization of convection and circulation variability associated with convectively-coupled equatorial waves: Cases during TOGA COARE". COARE '98 Conference; Boulder, USA, July 1998. Proceedings, p.413-414.

"Convectively-coupled equatorial waves for the Australasian region". Australasian Atmospheres and Oceans '98 Conference; Wellington, New Zealand, February 1998.

"Convectively-coupled equatorial waves". 22nd Annual Climate Diagnostics and Prediction Workshop; Berkeley, USA, October 1997. Proceedings, p.128-131.

"Convectively-coupled equatorial waves: Another analysis of clouds in the wavenumber-frequency domain". 11th Conference on Atmospheric and Oceanic Fluid Dynamics; Tacoma, USA, June 1997. Preprints, p.1-5.

"Tropospheric equatorial Rossby and mixed Rossby-gravity waves: Observations during TOGA COARE". 22nd Conference on Hurricanes and Tropical Meteorology; Fort Collins, USA, May 1997. Preprints, p.300-301.

"Tropospheric equatorial Rossby and Mixed Rossby-gravity waves: A case study". 21st Annual Climate Diagnostics and Prediction Workshop; Huntsville, USA, October 1996. Proceedings, p.142-145.

"Tropospheric equatorial Rossby waves: Observations and modelling". 20th Annual Climate Diagnostics Workshop; Seattle, USA, October 1995. Proceedings, p.362-365.

"A westward propagating near 20-day atmospheric fluctuation observed during TOGA COARE". TOGA COARE International Data Workshop; Toulouse, France, August 1994. Summary Report, p.158.

"Seasonal trends in SST and convection over the west-central equatorial Pacific during TOGA COARE: Role of intraseasonal atmospheric variability." TOGA COARE International Data Workshop; Toulouse, France, August 1994. First author was K. Weickmann. Summary Report, p.156-157.

GRANTS, MANAGEMENT AND SUPERVISION

- 2016-2017 Co-supervisor of **Cameron Smith**, Ph.D. student at Federation University, Ballarat.
- 2015 Supervisor and host of **Shiromani Jayawardena**, Endeavour Fellowship awardee.
- 2013-16 Co-supervisor of **Malcolm King**, Ph.D. student at University of Melbourne. *Global-scale waves and their links with tropical convection*.
- 2011-13 Supervisor of **Wasył Drosdowsky**, CAWCR staff member. MCV Northern Australia/Monsoon Prediction project.
- 2011-13 Proposal awarded: Managing Climate Variability Program. *Northern Australia/Monsoon Prediction*. 2 years, \$500K.
- 2010 Supervisor of **Quoc-Phi Duong**, Meteo-France student at CAWCR for 5 months. [Salinity variations in the Pacific warmpool depicted in PEODAS reanalyses](#).
- 2009- Periods spent acting in leadership roles as Team Leader and Research Program Leader during absences of Harry Hendon, Rob Colman, Scott Power, and Beth Ebert.
- 2009-12 Supervisor of **Andrew Marshall**, CAWCR staff member. MCV Multi-week Prediction project.
- 2008-09 Supervisor of **Li Shi**, CAWCR staff member. Working on ENSO sensitivity in POAMA.
- 2008 Proposal awarded: Managing Climate Variability Program. *Scoping the Northern Australia Seasonal Climate Knowledge*. 6 months, \$100K multi-institution award.
- 2007 Supervisor of **Frederic Ferry**, Meteo-France student at CAWCR for 5 months. [Exploring the relationship between tropical cyclones and the Madden-Julian oscillation](#).
- 2006-08 Supervisor of **Fiona Lo**, externally-funded BMRC/CAWCR staff member.
- 2006-08 Proposal awarded: Managing Climate Variability Program. *Improving Prediction of the North Australian Wet Season*. 2 years, \$500K multi-institution award.
- 2006 Co-supervisor of **Peter Omeny**, Kenyan Meteorological Service and Masters student at University of Nairobi. *Intraseasonal prediction of east African rainfall*.
- 2004 Supervisor of **Anne Leroy**, Meteo-France student at BMRC for 5 months. [Statistical prediction of the weekly tropical cyclone activity in the Southern Hemisphere](#).

Completed management training courses/activities: *Mental Health Awareness* (2015); *Leader as Coach* (2011); *Life Styles Inventory LSI 1 and LSI 2* (2010); *CSIRO New People Leaders Program* (2009); *CAWCR Leaders Meeting* (2008); *Enhancing Leadership with Emotional Intelligence* (2008); Undertaken *Myers-Briggs Personality Profile* assessment (2008).

FIELD PROGRAM EXPERIENCE

Tropical Warm Pool - International Cloud Experiment (TWP-ICE); Darwin, Australia; 2006.

Tropical Ocean Global Atmosphere - Coupled Ocean Atmosphere Response Experiment (TOGA-COARE); Australia and Solomon Islands; 1992-1993.

TEACHING EXPERIENCE

Intraseasonal forecasting in the tropics. IWM-V Training Workshop, Macau, China, October 2013.

MJO, tropical waves, and multi-week TC prediction. 9th WMO Southern Hemisphere Training Course on TCs, Melbourne, September 2011.

MJO, tropical waves, and multi-week TC prediction. 8th WMO Southern Hemisphere Training Course on TCs, Melbourne, October 2009.

Training workshop lecturer. Climate Variability and Predictions for the Indian Ocean Basin: Africa and Asia. Hanoi, Vietnam, June 2009.

The use and intricacies of space-time spectra and cross-spectra. FRACAS meeting at Melbourne University, February 2009.

Intraseasonal forecasting of monsoons. IWM-IV Training Workshop, Beijing, China, October 2008.

Statistical intraseasonal TC prediction. 7th WMO Southern Hemisphere Training Course on TCs, Melbourne, September 2007.

Monsoons and monsoon variability. Monash University course GES2860/ATM2250, September 2006 and September 2007.

MJO, Southern Annular Mode (SAM), and Indian Ocean influences on Australia. Bureau of Meteorology Climate Course, December 2005.

Equatorial waves and the MJO. Monash University winter school on tropical meteorology, July 2003.

Tropical meteorology. Bureau of Meteorology Advanced Forecasters Course, November 2002.

Influence of large-scale tropical waves on TCs. 5th WMO Southern Hemisphere Training Course on TCs, Melbourne, September 2002.

Intraseasonal variability. Bureau of Meteorology Climate Course, May 2002.

Equatorial waves. Bureau of Meteorology Forecasting Course, May 2001.

SERVICE TO OPERATIONS AND APPLICATIONS WORK

2014: Scientific adviser for production of MJO "climate dog" video clip explaining the MJO to farmers (www.tiny.cc/mojoclimatedog).

2012-15: Implementation of the Northern Rainfall Onset prediction product into Bureau operations.

2012-13: Lead contact for the joint WGNE/MJO Task Force activity to collect and display real-time forecasts of the Boreal Summer Intraseasonal Oscillation on the APCC web pages.

2011-12: Member of DYNAMO (Dynamics of the MJO) forecast team, contributing to the Week 1 and Week 2 forecasts of large-scale tropical rainfall and TC activity.

2010: Implementation of the Real-time Multivariate MJO index and other tropical monitoring tools into Bureau operations.

- 2009: Improvements to Leroy-Wheeler TC activity prediction scheme are implemented at Meteo-France.
- 2008: Lead contact for the joint WGNE/CLIVAR MJO Working Group activity to collect and display real-time forecasts of the MJO on the NCEP-NOAA web pages.
- 2007: Leroy-Wheeler TC activity prediction scheme goes operational at Meteo-France.
- 2007: Wheeler-Hendon MJO index endorsed by the US-CLIVAR MJO Working Group as an international standard for forecast model evaluation.
- 2004-11: Member of the Joint Committee on Climate Operations and Research (JCCOR; previously NBIC).
- 2004-08: Forecast contributor, MJO Experimental Prediction Project hosted by NOAA-CDC.
- 2002-03: Member of NCC-BMRC focus team on status of 2002/03 El Nino.
- 2001-present: Regular presenter and contributor to the monthly Seasonal Climate Outlook meeting.
- 2001-10: Development and maintenance of the Research Centre's Current Climate Charts web pages, including the Real-time Multivariate MJO (RMM) pages.
- 1999: Wheeler-Weickmann "Coherent Tropical OLR Modes" web-page becomes operational.

MEDIA EXPERIENCE

- Interviewed for [article](#) in CliMag, Edition 24 (page 10), May 2013.
- Interviewed for [article](#) in CliMag, Edition 21 (pages 8-9), September 2011.
- Media training course with the Bureau of Meteorology, August 2009.
- Interviews on ABC national radio and SBS national TV news (regarding TCs and climate), January 2008.
- Interviewed for [article](#) in CliMag, Edition 13 (page 4), June 2007.
- Interviews on Indonesian radio and TV (with interpreters, on the MJO), June 2002.
- Media release, "Advance Warning of Storms and Cyclones with New Technique", June 2002.

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

- American Geophysical Union, 2002-2014.
- American Meteorological Society, 1994-2000, 2005-present.
- Australian Meteorological and Oceanographic Society, 1992-present.

OTHER WORK-RELATED SERVICE

- Union delegate for Professionals Australia, participating in EA bargaining for 2016-2018.
- CAWCR/R&D web-site committee, 2009-present; Chair of committee 2013-2014.
- Web-master for Climate Forecasting Group (BMRC), 2001-2007.
- Senior Emergency Floor Warden, 9th floor, 2006-present.
- Emergency Warden, 2003-2006.

Member of various awards committees for Bureau and AMOS awards.