

James A. Giles, MB ChB (Hons) PhD

Curriculum Vitae

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Department of Neurology, Stroke Section
Washington University School of Medicine
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Education and qualifications

MB ChB (Hons)	Medicine	University of Manchester	2005-2013
PhD	Neuroscience	University of Manchester	2009-2012
MPHS	Population Health Sciences	Washington University in St. Louis	2019-2020

Fellowships

- Fellow of the Academy of the Social Sciences in Australia (elected 2020).

Employment history

2016	KNAW Visiting Professor , TU/Eindhoven, Netherlands
2003–	Professor , Department of Econometrics & Business Statistics, Monash University
2002	Visiting Senior Research Fellow , Mathematical Sciences Institute, Australian National University
2001–2003	Associate Professor , Department of Econometrics & Business Statistics, Monash University
1998	Visiting Professor , Department of Statistics, Colorado State University
1998–2000	Senior Lecturer , Department of Econometrics & Business Statistics, Monash University
1997–1998	Senior Lecturer , Department of Mathematics and Statistics, Monash University
1995–1996	Lecturer , Department of Mathematics and Statistics, Monash University
1993–1994	Lecturer , Department of Statistics, University of Melbourne
1985–1992	Statistical consultant , Department of Statistics, University of Melbourne

Academic and research leadership

- **Head**, Department of Econometrics & Business Statistics, Monash University. 2019–
- **Director**, Business & Economic Forecasting Unit, Department of Econometrics & Business Statistics, Monash University. 2001–2017.
- **Director of Consulting**, Econometrics and Business Statistics, Monash University. 2000–2014.
- **Director**, Monash University Statistical Consulting Service, 1997–1998.
- **Director**, Key Centre for Statistical Science (joint venture between Monash, Melbourne, La Trobe and RMIT universities), 1996–1998.

Awards and honours

2020	MSA Teaching Excellence Award for Business and Economics, Monash Student Association
2020	Dean's Award for Innovation in Learning and Teaching, Monash Business School
2018	Commendation for the Dean's Award for Research Impact, Monash Business School
2014	Nominee for MPA Supervisor of the Year, Monash Postgraduate Association
2010	Dean's Award for Excellence in Innovation and External Collaboration, Monash Business School
2008	Dean's award for Excellence in Research, Monash Business School
2008	Vice-Chancellor's Award for Postgraduate Supervisor of the Year, Monash University
2007	Moran Medal for Statistical Science, Australian Academy of Science
1998	Award for excellence in teaching, Monash Science Society
1990	Finalist, Channel Ten Young Achiever Awards
1988	Dwights Prize in Statistics, University of Melbourne
1987	Norma McArthur Prize in Statistics, University of Melbourne
1986	Second Maurice H. Belz Prize in Statistics, University of Melbourne

Editorial boards

2011–	Editor , <i>Journal of Statistical Software</i>
2019–	Associate Editor , <i>International Journal of Forecasting</i>
2005–2018	Editor-in-Chief , <i>International Journal of Forecasting</i>
2001–2004	Associate Editor , <i>International Journal of Forecasting</i>
2001–2004	Theory and Methods Editor , <i>Australian & New Zealand Journal of Statistics</i>

Society memberships

- Elected Member, International Statistical Institute
- Member, International Institute of Forecasters
- Member, International Association for Statistical Computing
- Member, Statistical Society of Australia
- Member, International Society for Business and Industrial Statistics

Society leadership

- Member, Pearson Prize Committee, International Statistical Institute, 2017.
- Director, International Institute of Forecasters, 2005–2018.
- Member, Scientific Program Advisory Group, Statistical Society of Australia, 2001–2004
- Secretary, Victorian branch, Statistical Society of Australia, 1993–1995.
- Central Council member, Statistical Society of Australia, 1993–1996.

Research

- Since 1991 I have authored 215 papers, chapters or books on statistical topics (listed on pages 5–13).
- My current research involves the analysis of large collections of time series, and includes visualization, forecasting, reconciliation, modelling and anomaly detection..
- I currently supervise five PhD students and two post-doctoral research fellow. I have previously supervised another 27 PhD students and 3 Masters students.
- I publish the *Hyndsight* blog on research issues which receives an average of about 2000 pageviews per day.

Public lectures

- Monash master class, *Forecasting the future of the power industry: What can you learn from smart meter data?*, Melbourne, September 2018.
- Yahoo Big Thinkers lecture, *Exploring the boundaries of predictability: what can we forecast, and when should we give up?*, California, June 2015.
- Invited speaker, *Forecasting functional time series*, Australian Frontiers of Science, Canberra, February 2008.
- Knibbs lecture, *Population forecasting and the importance of being uncertain*, Statistical Society of Australia, Canberra, November 2007.
- Belz lecture, *Forecasting and the importance of being uncertain*, Statistical Society of Australia, Melbourne, October 2006.

Major conference presentations

- Keynote speaker, International Symposium on Forecasting, online, October 2020.
- Workshop leader, *Tidy time series and forecasting in R*, rstudio::conf, San Francisco, January 2020.
- ISI short course, *High-dimensional time series analysis*, Kuala Lumpur, August 2019.
- Workshop leader, *Forecasting: principles and practice*, New York City, June 2018.
- Keynote speaker, Beijing Workshop on Forecasting, November 2017.
- Keynote speaker, ICML Time Series Workshop, Sydney, August 2017.
- Invited speaker, International Symposium on Energy Analytics, Cairns, June 2017.
- Keynote speaker, *Forecasting large collections of related time series*, German Statistical Week, Augsburg, September 2016.
- Keynote speaker, *Forecasting big time series data using R*, Chinese R conference, Nanchang, October 2015.
- Invited speaker, *Visualization and forecasting of big time series data*, ACEMS Big data workshop, QUT, February 2015.
- Workshop leader, *Forecasting: principles and practice*, University of Western Australia, September 2014.
- Workshop leader, *Functional time series in demography*, Humboldt University, Berlin, June 2014.
- Keynote speaker, *Challenges in forecasting peak electricity demand*, Energy Forum, Valais, Switzerland, June 2014.
- Workshop leader, *State space models for time series*, Australian Bureau of Statistics, May 2014.
- Keynote speaker, *Automatic time series forecasting*, “New Trends on Intelligent Systems and Soft Computing 2014,” University of Granada, Spain, February 2014.
- Keynote speaker, *Forecasting without forecasters*, International Symposium on Forecasting, Seoul, June 2013.
- Keynote speaker, *Man vs Wild Data*, Young Statisticians Conference, Melbourne, February 2013.
- Invited speaker, *Advances in automatic time series forecasting*, Australian Statistics Conference, Adelaide, July 2012.
- Workshop leader, *Statistical Forecasting: Principles and Practice*, Swiss Statistical Society, Kandersteg, June 2011.
- Keynote speaker, *Extreme Forecasting*, International Symposium on Forecasting, Hong Kong, June 2009.

Grants

I have acquired (in most cases jointly) about \$31.9 million in external research grants since 2000. External research grants over \$50,000 are listed below.

2002	Hyndman. "Evaluation of PBS forward estimates methodology". <i>Funding from Commonwealth Department of Health and Ageing</i>	\$55,341
2004–2006	Martin, Snyder, Hyndman. "New approaches to the analysis of count time series". <i>Funding from ARC Discovery Grant</i>	\$172,317
2004–2008	Hyndman. "Analysis of NPS interventions". <i>Funding from National Prescribing Service</i>	\$120,000
2006–2010	Hyndman, Athanasopoulos. "Tourism forecasting". <i>Funding from Tourism Australia</i>	\$312,017
2007	Hyndman. "Peak energy demand forecasting for South Australia". <i>Funding from Electricity Supply Industry Planning Council</i>	\$78,045
2008–2010	Hyndman. "The price elasticity of electricity demand in South Australia and Victoria". <i>Funding from Victorian Energy Corporation</i>	\$450,000
2009–2011	Erbas, Abramson, Tang, Allen, Newbiggin, Dharmage, Hyndman. "The impact of outdoor aeroallergen exposure on asthma exacerbations in children and adolescents". <i>Funding from National Health and Medical Research Council</i>	\$454,550
2011–2013	Hyndman, Fan. "Development of electricity peak demand and energy forecasts for the SWIS". <i>Funding from Independent Market Operator (Western Australia)</i>	\$93,450
2011–2015	Hyndman. "Energy demand forecasting". <i>Funding from Australian Energy Market Operator</i>	\$864,200
2013–2016	Smith-Miles, Hyndman, Villanova, Kah. "Optimising experimental design for robust product development: a cast study for high-efficiency energy generation". <i>Funding from ARC Linkage Grant</i>	\$362,389
2014–2017	Panagiotelis, Athanasopoulos, Hyndman, Vahid. "Macroeconomic forecasting in a "Big Data" world". <i>Funding from ARC Discovery Grant</i>	\$451,034
2017–2018	Hyndman, Ben Taieb, Bergmeir. "Demand forecasting for large-scale dynamic hierarchies in a big data environment". <i>Funding from Huawei Innovation Research Program</i>	\$86,586
2017–2019	Smith-Miles, Hyndman, Munoz Acosta, Katsifolis. "Intruder Alert! Detecting and classifying events in noisy time series". <i>Funding from ARC Linkage Grant</i>	\$204,000
2017–2019	Hyndman, Cook. "RiskLab Projects: Econometrics". <i>Funding from RiskLab at Data61</i>	\$151,200
2017–2021	Bean, Burrage, de Gier, Delaigle, Forrester, Garoni, Hyndman, Kohn, Kroese, Mengersen, Pettit, Pollet, Roughan, Ryan, Sisson, Smith-Miles, Taylor, Turner, Wand, Wang. "ARC Centre of Excellence for Mathematical and Statistical Frontiers". <i>Funding from Australian Research Council</i>	\$20,000,000
2019	Hyndman, Bergmeir. "DeepForecast: Leveraging forecasts on large scales of related time series". <i>Funding from Facebook</i>	\$70,000
2019–2020	Bergmeir, Vahid, Hyndman. "Application of advanced short term power generation forecasting technology for wind and solar farms". <i>Funding from Advisian</i>	\$499,753
2019–2022	Mengersen, Hyndman, Petersen, McGree, Turner, Maxwell, Lique, Jones. "Revolutionising water-quality monitoring in the information age". <i>Funding from ARC Linkage Grant</i>	\$729,855
2020–2022	Martin, Frazier, Hyndman, Maneesoonthorn. "Loss-based Bayesian prediction". <i>Funding from ARC Discovery Grant</i>	\$393,000
2020–2024	Smith-Miles, Stuckey, Taylor, Ernst, Aickelin, Garcia de la Banda, Pearce, Wallace, Bondell, Hyndman, Alpcan, Thomas, Anjomshoa, Kirley, Tack, Costa, Fackrell, Zhang, Glazebrook, Branke, O'Sullivan, O'Shea, Cheah, Meehan, Wetenhall, Bowly, Bridge, Faka, Mareels, Coleman, Crook. "Optimisation Technologies, Integrated Methodologies, and Applications (OPTIMA)". <i>Funding from ARC Industrial Transformation Training Centre</i>	\$4,861,236
2021	McCaw, Golding, Moss, Shearer, Price, Ross, Hyndman, Dawson. "Provision of weekly data modelling and reporting, based on COVID-19 data extracted from the National Notifiable Disease Surveillance System (NDSS)". <i>Funding from Commonwealth Department of Health and Ageing</i>	\$737,960

Teaching

- In each of 2018, 2019 and 2020, student evaluations for “Applied forecasting for business and economics” gave an average rating for my teaching above 4.8 out of 5, while all students in 2018 rated “Advanced statistical modelling” at 5 out of 5. (I did not teach the latter subject in 2019 and 2020.)
- In 1998 and 2020, I received the “Excellence in teaching” award from the Monash Student Association.
- I am author of an innovative textbook with George Athanasopoulos entitled *Forecasting: principles and practice* (OTexts.org/fpp2/) which is available online and free of charge. The website has an average of over 20000 pageviews per day.

Consulting

- Since 1986, I have worked with several hundred different clients in Australia, the United States, Saudi Arabia, Israel, India, Russia, Switzerland, and the Netherlands. I have produced 253 written consulting reports (listed on pages ??-??).
- Six times I have provided expert witness in litigation cases.

Advisory boards

- Member of the Scaling committee, Victorian Tertiary Admissions Centre (1994-). This committee is responsible for producing the ATAR for VCE students.
- Member of the ATAR Technical Group for the Australasian Conference of Tertiary Admissions Centres (2003-).
- Member of the Indigenous Statistical and Information Advisory Group for the Australian Institute of Health and Welfare (2017-).
- Member of the Methodology Advisory Committee for the Australian Bureau of Statistics (2010-2018).

Conference organization

- General Chair, International Symposium on Forecasting, 2017
- Program Chair, International Symposium on Forecasting, 2012.
- Program Co-Chair, International Symposium on Forecasting, 2004.

Publications

PhD thesis

1. Hyndman, RJ. (1992). *Continuous-time threshold autoregressive modelling* [PhD thesis]. The University of Melbourne.

Books

1. Brockwell, PJ, Davis, RA, & Hyndman, RJ. (1991). *ITSM: An interactive time series modelling package for the PC*. Springer-Verlag.
2. Brockwell, PJ, Davis, RA, & Hyndman, RJ. (1994). *ITSM for windows: A users guide to time series modelling and forecasting*. Springer-Verlag.
3. Makridakis, SG, Wheelwright, SC, & Hyndman, RJ. (1998). *Forecasting: Methods and applications* (3rd ed). John Wiley & Sons. robjhyndman.com/forecasting/
4. Hyndman, RJ, Koehler, AB, Ord, JK, & Snyder, RD. (2008). *Forecasting with exponential smoothing: The state space approach*. Springer-Verlag. robjhyndman.com/expsmooth
5. Hyndman, RJ. (2015). *Unbelievable*. CreateSpace. robjhyndman.com/unbelievable
6. Hyndman, RJ, & Athanasopoulos, G. (2018). *Forecasting: Principles and practice* (2nd ed). OTexts. OTexts.org/fpp2

Refereed research papers

1. Brockwell, PJ, Hyndman, RJ, & Grunwald, GK. (1991). Continuous time threshold autoregressive models. *Statistica Sinica*, 1, 401–410.
2. Brockwell, PJ, & Hyndman, RJ. (1992). On continuous-time threshold autoregression. *International Journal of Forecasting*, 8(2), 157–173.
3. Hyndman, RJ. (1993). Yule-Walker estimates for continuous-time autoregressive models. *Journal of Time Series Analysis*, 14(3), 281–296.
4. Hyndman, RJ. (1994). Approximations and boundary conditions for continuous-time threshold autoregressive processes. *Journal of Applied Probability*, 31(4), 1103–1109.
5. Hyndman, RJ. (1995). Highest-density forecast regions for nonlinear and non-normal time series models. *Journal of Forecasting*, 14(5), 431–441.
6. Hyndman, RJ. (1996). Computing and graphing highest density regions. *The American Statistician*, 50(2), 120–126.
7. Hyndman, RJ, Bashtannyk, DM, & Grunwald, GK. (1996). Estimating and visualizing conditional densities. *J Computational & Graphical Statistics*, 5(4), 315–336.
8. Hyndman, RJ, & Fan, Y. (1996). Sample quantiles in statistical packages. *The American Statistician*, 50(4), 361–365.
9. Grunwald, GK, Hamza, K, & Hyndman, RJ. (1997). Some properties and generalizations of non-negative Bayesian time series models. *Journal of the Royal Statistical Society. Series B*, 59(3), 615–626.
10. Hyndman, RJ, & Wand, MP. (1997). Nonparametric autocovariance function estimation. *The Australian Journal of Statistics*, 39(3), 313–324.
11. Lajbcygier, P, Flitman, A, Swan, A, & Hyndman, R. (1997). The pricing and trading of options using a hybrid neural network model with historical volatility. *NeuroVe\$ Journal*, 5, 27–41.
12. Grunwald, GK, & Hyndman, RJ. (1998). Smoothing non-Gaussian time series with autoregressive structure. *Computational Statistics and Data Analysis*, 28, 171–191.
13. Fraccaro, R, Hyndman, RJ, & Veevers, A. (2000). Residual diagnostic plots for checking for model mis-specification in time series regression. *Australian & New Zealand Journal of Statistics*, 42(4), 463–477.
14. Grunwald, GK, Hyndman, RJ, Tedesco, LM, & Tweedie, RL. (2000). Non-Gaussian conditional linear AR(1) models. *Australian & New Zealand Journal of Statistics*, 42(4), 479–495.
15. Hyndman, RJ, & Grunwald, GK. (2000). Generalized additive modelling of mixed distribution Markov models with application to Melbourne's rainfall. *Australian & New Zealand Journal of Statistics*, 42(2), 145–158.
16. Bashtannyk, DM, & Hyndman, RJ. (2001). Bandwidth selection for kernel conditional density estimation. *Computational Statistics & Data Analysis*, 36(3), 279–298.
17. Erbas, B, & Hyndman, RJ. (2001). Data visualisation for time series in environmental epidemiology. *Journal of Epidemiology and Biostatistics*, 6(6), 433–443.
18. Hyndman, RJ. (2001). It's time to move from "what" to "why." *International Journal of Forecasting*, 17(4), 567–570.
19. Predavec, M, Krebs, CJ, Danell, K, & Hyndman, RJ. (2001). Cycles and synchrony in the collared lemming (*dicrostonyx groenlandicus*) in arctic north america. *Oecologia*, 126(2), 216–224.

20. Cai, T, Hyndman, RJ, & Wand, MP. (2002). Mixed model-based hazard estimation. *J Computational & Graphical Statistics*, 11(4), 784–798.
21. Hyndman, RJ, Koehler, AB, Snyder, RD, & Grose, S. (2002). A state space framework for automatic forecasting using exponential smoothing methods. *International Journal of Forecasting*, 18(3), 439–454.
22. Hyndman, RJ, & Yao, Q. (2002). Nonparametric estimation and symmetry tests for conditional density functions. *Journal of Nonparametric Statistics*, 14(3), 259–278.
23. Racine, JS, & Hyndman, RJ. (2002). Using R to teach econometrics. *Journal of Applied Econometrics*, 17(2), 175–189.
24. Hall, PG, & Hyndman, RJ. (2003). Improved methods for bandwidth selection when estimating ROC curves. *Statistics & Probability Letters*, 64(2), 181–189.
25. Hyndman, RJ, & Billah, MB. (2003). Unmasking the theta method. *International Journal of Forecasting*, 19(2), 287–290.
26. Rateau, F, Laumonier, B, & Hyndman, RJ. (2003). Normative data for the Rosner test of visual analysis skills on an Australian population. *Optometry and Vision Science*, 80(6), 431–436.
27. Hall, PG, Hyndman, RJ, & Fan, Y. (2004). Nonparametric confidence intervals for receiver operating characteristic curves. *Biometrika*, 91(3), 743–750.
28. Hyndman, RJ. (2004). The interaction between trend and seasonality. *International Journal of Forecasting*, 20(4), 561–563.
29. Smith, L, Hyndman, RJ, & Wood, SN. (2004). Spline interpolation for demographic variables: The monotonicity problem. *Journal of Population Research*, 21(1), 95–98.
30. Snyder, RD, Koehler, AB, Hyndman, RJ, & Ord, JK. (2004). Exponential smoothing models: Means and variances for lead-time demand. *European Journal of Operational Research*, 158(2), 444–455.
31. Billah, MB, Hyndman, RJ, & Koehler, AB. (2005). Empirical information criteria for time series forecasting model selection. *Journal of Statistical Computation and Simulation*, 75(10), 831–840.
32. Erbas, B, & Hyndman, RJ. (2005). Sensitivity of the estimated air pollution-respiratory admissions relationship to statistical model choice. *International Journal of Environmental Health Research*, 15(6), 437–448.
33. Hyndman, RJ, King, ML, Pitrun, I, & Billah, MB. (2005). Local linear forecasts using cubic smoothing splines. *Australian & New Zealand Journal of Statistics*, 47(1), 87–99.
34. Hyndman, RJ, Koehler, AB, Ord, JK, & Snyder, R. (2005). Prediction intervals for exponential smoothing using two new classes of state space models. *Journal of Forecasting*, 24(1), 17–37.
35. Shenstone, L, & Hyndman, RJ. (2005). Stochastic models underlying croston's method for intermittent demand forecasting. *Journal of Forecasting*, 24(6), 389–402.
36. Booth, H, Hyndman, RJ, Tickle, L, & de Jong, P. (2006). Lee-Carter mortality forecasting: A multi-country comparison of variants and extensions. *Demographic Research*, 15(9), 289–310.
37. de Gooijer, JG, & Hyndman, RJ. (2006). 25 years of time series forecasting. *International Journal of Forecasting*, 22(3), 443–473.
38. Hyndman, RJ. (2006). Another look at forecast-accuracy metrics for intermittent demand. *Foresight: The International Journal of Applied Forecasting*, 4, 43–46.
39. Hyndman, RJ, & Koehler, AB. (2006). Another look at measures of forecast accuracy. *International Journal of Forecasting*, 22(4), 679–688.
40. Kostenko, AV, & Hyndman, RJ. (2006). A note on the categorization of demand patterns. *The Journal of the Operational Research Society*, 57(10), 1256–1257.
41. Mandryk, JA, Mackson, JM, Horn, FE, Wutzke, SE, Badcock, C-A, Hyndman, RJ, & Weekes, LM. (2006). Measuring change in prescription drug utilization in Australia. *Pharmacoepidemiology and Drug Safety*, 15(7), 477–484.
42. Meyer, D, & Hyndman, RJ. (2006). The accuracy of television network rating forecasts: The effects of data aggregation and alternative models. *Model Assisted Statistics and Applications*, 1(3), 147–155.
43. Wang, X, Smith-Miles, KA, & Hyndman, RJ. (2006). Characteristic-based clustering for time series data. *Data Mining and Knowledge Discovery*, 13(3), 335–364.
44. Ye, A, & Hyndman, RJ. (2006). Projection pursuit estimator for multivariate conditional densities (chinese). *J. Fuzhou Univ. Nat. Sci. Ed.*, 34(6), 794–797.
45. Zhang, X, King, ML, & Hyndman, RJ. (2006). A Bayesian approach to bandwidth selection for multivariate kernel density estimation. *Computational Statistics & Data Analysis*, 50(11), 3009–3031.
46. Erbas, B, Chang, J-H, Dharmage, SC, Ong, EK, Hyndman, RJ, Newbigin, E, & Abramson, MJ. (2007). Do levels of airborne grass pollen influence asthma hospital admissions? *Clinical and Experimental Allergy*, 37(11), 1641–1647.

47. Erbas, B, Hyndman, RJ, & Gertig, DM. (2007). Forecasting age-specific breast cancer mortality using functional data models. *Statistics in Medicine*, 26(2), 458–470.
48. Horn, FE, Mandryk, JA, Mackson, JM, Wutzke, SE, Weekes, LM, & Hyndman, RJ. (2007). Measurement of changes in antihypertensive drug utilisation following primary care educational interventions. *Pharmacoepidemiology and Drug Safety*, 16(3), 297–308.
49. Hyndman, RJ, & Kostenko, AV. (2007). Minimum sample size requirements for seasonal forecasting models. *Foresight: The International Journal of Applied Forecasting*, 6, 12–15.
50. Hyndman, RJ, & Ullah, S. (2007). Robust forecasting of mortality and fertility rates: A functional data approach. *Computational Statistics & Data Analysis*, 51(10), 4942–4956.
51. Kim, JH, Silvapulle, P, & Hyndman, RJ. (2007). Half-life estimation based on the bias-corrected bootstrap: A highest density region approach. *Computational Statistics & Data Analysis*, 51(7), 3418–3432.
52. Athanasopoulos, G, & Hyndman, RJ. (2008). Modelling and forecasting Australian domestic tourism. *Tourism Management*, 29(1), 19–31.
53. Gould, PG, Koehler, AB, Vahid, F, Snyder, RD, Ord, JK, & Hyndman, RJ. (2008). Forecasting time series with multiple seasonal patterns. *European Journal of Operational Research*, 191(1), 205–220.
54. Hyndman, RJ, Akram, M, & Archibald, BC. (2008). The admissible parameter space for exponential smoothing models. *Annals of the Institute of Statistical Mathematics*, 60(2), 407–426.
55. Hyndman, RJ, & Booth, H. (2008). Stochastic population forecasts using functional data models for mortality, fertility and migration. *International Journal of Forecasting*, 24(3), 323–342.
56. Hyndman, RJ, & Khandakar, Y. (2008). Automatic time series forecasting: The forecast package for R. *Journal of Statistical Software*, 26(3), 1–22.
57. Magnano, L, Boland, JW, & Hyndman, RJ. (2008). Generation of synthetic sequences of half-hourly temperature. *Environmetrics*, 19(8), 818–835.
58. Akram, M, Hyndman, RJ, & Ord, JK. (2009). Exponential smoothing and non-negative data. *Australian & New Zealand Journal of Statistics*, 51(4), 415–432.
59. Athanasopoulos, G, Ahmed, RA, & Hyndman, RJ. (2009). Hierarchical forecasts for Australian domestic tourism. *International Journal of Forecasting*, 25(1), 146–166.
60. Hyndman, RJ, & Shang, HL. (2009). Forecasting functional time series (with discussion). *Journal of the Korean Statistical Society*, 38(3), 199–221.
61. Ord, JK, Koehler, AB, Snyder, RD, & Hyndman, R. (2009). Monitoring processes with changing variances. *International Journal of Forecasting*, 25(3), 518–525.
62. de Silva, A, Hyndman, RJ, & Snyder, RD. (2009). A multivariate innovations state space Beveridge-Nelson decomposition. *Economic Modelling*, 26(5), 1067–1074.
63. Wang, X, Smith-Miles, KA, & Hyndman, RJ. (2009). Rule induction for forecasting method selection: Meta-learning the characteristics of univariate time series. *Neurocomputing*, 72(10–12), 2581–2594.
64. Erbas, B, Akram, M, Gertig, DM, English, D, Hopper, JL, Kavanagh, AM, & Hyndman, RJ. (2010). Using functional data analysis models to estimate future time trends of age-specific breast cancer mortality for the United States and England-Wales. *Journal of Epidemiology*, 20(2), 159–165.
65. Hyndman, RJ, & Fan, S. (2010). Density forecasting for long-term peak electricity demand. *IEEE Transactions on Power Systems*, 25(2), 1142–1153.
66. Hyndman, RJ, & Shang, HL. (2010). Rainbow plots, bagplots and boxplots for functional data. *J Computational & Graphical Statistics*, 19(1), 29–45.
67. Kolassa, S, & Hyndman, RJ. (2010). Free open-source forecasting using R. *Foresight: The International Journal of Applied Forecasting*, 17, 19–24.
68. de Silva, A, Hyndman, RJ, & Snyder, RD. (2010). The vector innovations structural time series framework: A simple approach to multivariate forecasting. *Statistical Modelling*, 10(4), 353–374.
69. Verbesselt, J, Hyndman, RJ, Newnham, G, & Culvenor, D. (2010). Detecting trend and seasonal changes in satellite image time series. *Remote Sensing of Environment*, 114(1), 106–115.
70. Verbesselt, J, Hyndman, RJ, Zeileis, A, & Culvenor, D. (2010). Phenological change detection while accounting for abrupt and gradual trends in satellite image time series. *Remote Sensing of Environment*, 114(12), 2970–2980.
71. Yasmeen, F, Hyndman, RJ, & Erbas, B. (2010). Forecasting age-related changes in breast cancer mortality among white and black US women. *Cancer Epidemiology*, 32(5), 542–549.
72. Athanasopoulos, G, & Hyndman, RJ. (2011). The value of feedback in forecasting competitions. *International Journal of Forecasting*, 27(3), 845–849.
73. Athanasopoulos, G, Hyndman, RJ, Song, H, & Wu, DC. (2011). The tourism forecasting competition. *International Journal of Forecasting*, 27(3), 822–844.

74. Carta, D, Villanova, L, Costacurta, S, Patelli, A, Poli, I, Vezzù, S, Scopece, P, Lisi, F, Smith-Miles, K, Hyndman, RJ, Hill, AJ, & Falcaro, P. (2011). Method for optimizing coating properties based on an evolutionary algorithm approach. *Analytical Chemistry*, 83(16), 6373–6380.
75. De Livera, AM, Hyndman, RJ, & Snyder, RD. (2011). Forecasting time series with complex seasonal patterns using exponential smoothing. *J American Statistical Association*, 106(496), 1513–1527.
76. Fan, S, & Hyndman, RJ. (2011). The price elasticity of electricity demand in South Australia. *Energy Policy*, 39(6), 3709–3719.
77. Hyndman, RJ. (2011). Giving a user! talk. *The R Journal*, 3(1), 69–71.
78. Hyndman, RJ, Ahmed, RA, Athanasopoulos, G, & Shang, HL. (2011). Optimal combination forecasts for hierarchical time series. *Computational Statistics & Data Analysis*, 55(9), 2579–2589.
79. Kim, JH, Fraser, I, & Hyndman, RJ. (2011). Improved interval estimation of long run response from a dynamic linear model: A highest density region approach. *Computational Statistics & Data Analysis*, 55(8), 2477–2489.
80. Pearce, JL, Beringer, J, Nicholls, N, Hyndman, RJ, & Tapper, NJ. (2011). Quantifying the influence of local meteorology on air quality using generalized additive models. *Atmospheric Environment*, 45(6), 1328–1336.
81. Pearce, JL, Beringer, J, Nicholls, N, Hyndman, RJ, Uotila, P, & Tapper, NJ. (2011). Investigating the influence of synoptic-scale meteorology on air quality using self-organizing maps and generalized additive modelling. *Atmospheric Environment*, 45(1), 128–136.
82. Shang, HL, Booth, H, & Hyndman, RJ. (2011). Point and interval forecasts of mortality rates and life expectancy: A comparison of ten principal component methods. *Demographic Research*, 25, 173–214.
83. Shang, HL, & Hyndman, RJ. (2011). Nonparametric time series forecasting with dynamic updating. *Mathematics and Computers in Simulation*, 81(7), 1310–1324.
84. Erbas, B, Dharmage, SC, Sullivan, MO, Akram, M, Newbigin, E, Taylor, P, Vicendese, D, Hyndman, RJ, Bardin, P, Tang, ML, & Abramson, MJ. (2012). A case-crossover design to examine the role of aeroallergens and respiratory viruses on childhood asthma exacerbations requiring hospitalization: The MAPCAH study. *Journal of Biometrics & Biostatistics*, S7(018).
85. Erbas, B, Ullah, S, Hyndman, RJ, Scollo, M, & Abramson, MJ. (2012). Forecasts of COPD mortality in Australia: 2006–2025. *BMC Medical Research Methodology*, 12(1), 17.
86. Fan, S, & Hyndman, RJ. (2012). Short-term load forecasting based on a semi-parametric additive model. *IEEE Transactions on Power Systems*, 27(1), 134–141.
87. Hyndman, RJ, Booth, H, & Yasmeen, F. (2013). Coherent mortality forecasting: The product-ratio method with functional time series models. *Demography*, 50(1), 261–283.
88. Ben Taieb, S, & Hyndman, RJ. (2014). A gradient boosting approach to the Kaggle load forecasting competition. *International Journal of Forecasting*, 30(2), 382–394.
89. Hyndman, RJ, & Athanasopoulos, G. (2014). Optimally reconciling forecasts in a hierarchy. *Foresight*, Fall 2014, 42–48.
90. Tham, R, Dharmage, S, Taylor, P, Newbigin, E, Tang, MLK, Vicendese, D, Hyndman, RJ, Abramson, MJ, & Erbas, B. (2014). Outdoor fungal spores are associated with child asthma hospitalisations — a case-crossover study. *European Respiratory Journal*, 44(Suppl 58).
91. Erbas, B, Dharmage, SC, Tang, ML, Akram, M, Allen, KJ, Vicendese, D, Davies, JM, Hyndman, RJ, Newbigin, EJ, Taylor, PE, Bardin, PG, & Abramson, MJ. (2015). Do human rhinovirus infections and food allergy modify grass pollen-induced asthma hospital admissions in children? *Journal of Allergy and Clinical Immunology*, 136(4), 1118–1120.e2.
92. Hyndman, RJ. (2015). Discussion of “high-dimensional autocovariance matrices and optimal linear prediction.” *Electronic J. Statistics*, 9(1), 792–796.
93. Hyndman, RJ, Mesgaran, MB, & Cousens, RD. (2015). Statistical issues with using herbarium data for the estimation of invasion lag-phases. *Biological Invasions*, 17(12), 3371–3381. robjhyndman.com/lagphase
94. Ben Taieb, S, Huser, R, Hyndman, RJ, & Genton, MG. (2016). Forecasting uncertainty in electricity smart meter data by boosting additive quantile regression. *IEEE Transactions on Smart Grid*, 7, 2448–2455.
95. Bergmeir, C, Hyndman, RJ, & Benitez, JM. (2016). Bagging exponential smoothing methods using STL decomposition and Box-Cox transformation. *International Journal of Forecasting*, 32(2), 303–312.
96. Hong, T, Pinson, P, Fan, S, Zareipour, H, Troccoli, A, & Hyndman, RJ. (2016). Probabilistic energy forecasting: Global energy forecasting competition 2014 and beyond. *International Journal of Forecasting*, 32(3), 896–913.
97. Hyndman, RJ, Lee, A, & Wang, E. (2016). Fast computation of reconciled forecasts for hierarchical and grouped time series. *Computational Statistics & Data Analysis*, 97, 16–32.
98. Pearce, JL, Hyer, M, Hyndman, RJ, Loughnan, M, Dennekamp, M, & Nicholls, N. (2016). Exploring the influence of short-term temperature patterns on temperature-related mortality: A case-study of Melbourne, Australia. *Environmental Health*, 15(1), 107.

99. Athanasopoulos, G, Hyndman, RJ, Kourentzes, N, & Petropoulos, F. (2017). Forecasting with temporal hierarchies. *European Journal of Operational Research*, 262(1), 60–74.
100. Goodwin, P, Petropoulos, F, & Hyndman, RJ. (2017). A note on upper bounds for forecast-value-added relative to naïve forecasts. *Journal of the Operational Research Society*, 68, 1082–1084.
101. Kang, Y, Hyndman, RJ, & Smith-Miles, K. (2017). Visualising forecasting algorithm performance using time series instance spaces. *International Journal of Forecasting*, 33(2), 345–358.
102. Shang, HL, & Hyndman, RJ. (2017). Grouped functional time series forecasting: An application to age-specific mortality rates. *J Computational & Graphical Statistics*, 26(2), 330–343.
103. Steponavičė, I, Hyndman, RJ, Smith-Miles, K, & Villanova, L. (2017). Dynamic algorithm selection for Pareto optimal set approximation. *Journal of Global Optimization*, 67, 263–282.
104. Studdert, DM, Zhang, Y, Rodden, JA, Hyndman, RJ, & Wintemute, GJ. (2017). Handgun acquisitions in California after two mass shootings. *Annals of Internal Medicine*, 166(10), 698–706.
105. Tham, R, Vicendese, D, Dharmage, SC, Hyndman, RJ, Newbigin, E, Lewis, E, O’Sullivan, M, Lowe, AJ, Taylor, P, Bardin, P, Tang, ML, Abramson, MJ, & Erbas, B. (2017). Associations between outdoor fungal spores and childhood and adolescent asthma hospitalisations. *Journal of Allergy and Clinical Immunology*, 139, 1140–1147.e4.
106. Bergmeir, C, Hyndman, RJ, & Koo, B. (2018). A note on the validity of cross-validation for evaluating autoregressive time series prediction. *Computational Statistics & Data Analysis*, 120, 70–83. robjhyndman.com/publications/cv-time-series/
107. Dokumentov, A, Hyndman, RJ, & Tickle, L. (2018). Bivariate smoothing of mortality surfaces with cohort and period ridges. *Stat*, 7(e199).
108. Hyndman, RJ, Lin, XA, & Pinson, P. (2018). Visualizing big energy data: Solutions for this crucial component of data analysis. *IEEE Power and Energy Magazine*, 16(3), 18–25.
109. Petropoulos, F, Hyndman, RJ, & Bergmeir, C. (2018). Exploring the sources of uncertainty: Why does bagging for time series forecasting work? *European Journal of Operational Research*, 268(2), 545–554.
110. Wang, J, Athanasopoulos, G, Hyndman, RJ, & Wang, S. (2018). Crude oil price forecasting based on internet concern using an extreme learning machine. *International Journal of Forecasting*, 34(4), 665–677.
111. Leigh, C, Alsibai, O, Hyndman, RJ, Kandanaarachchi, S, King, OC, McGree, JM, Neelamraju, C, Strauss, J, Talagala, PD, Turner, RS, Mengersen, K, & Peterson, EE. (2019). A framework for automated anomaly detection in high frequency water-quality data from in situ sensors. *Science of the Total Environment*, 664, 885–898. robjhyndman.com/publications/water-quality-2/
112. Leigh, C, Kandanaarachchi, S, McGree, JM, Hyndman, RJ, Alsibai, O, Mengersen, K, & Peterson, EE. (2019). Predicting sediment and nutrient concentrations in rivers using high frequency water quality surrogates. *PLOS ONE*, 14, e0215503. robjhyndman.com/publications/water-quality/
113. Panagiotelis, A, Athanasopoulos, G, Hyndman, RJ, Jiang, B, & Vahid, F. (2019). Macroeconomic forecasting for Australia using a large number of predictors. *International Journal of Forecasting*, 35(2), 616–633. robjhyndman.com/publications/ausmacrocast
114. Talagala, PD, Hyndman, RJ, Leigh, C, Mengersen, K, & Smith-Miles, K. (2019). A feature-based procedure for detecting technical outliers in water-quality data from in situ sensors. *Water Resources Research*, 55, 8547–8568. robjhyndman.com/publications/oddwater/
115. Wickramasuriya, SL, Athanasopoulos, G, & Hyndman, RJ. (2019). Optimal forecast reconciliation for hierarchical and grouped time series through trace minimization. *J American Statistical Association*, 114(526), 804–819.
116. Clark, S, Hyndman, RJ, Pagendam, D, & Ryan, LM. (2020). Modern strategies for time series regression. *International Statistical Review*, 88, S179–S204.
117. Forbes, J, Cook, D, & Hyndman, RJ. (2020). Spatial modelling of the two-party preferred vote in Australian federal elections: 2001–2016. *Australian & New Zealand Journal of Statistics*, 62(2), 168–185. robjhyndman.com/publications/elections/
118. Hyndman, RJ. (2020). A brief history of forecasting competitions. *International Journal of Forecasting*, 36(1), 7–14. robjhyndman.com/publications/forecasting-competitions
119. Kandanaarachchi, S, & Hyndman, RJ. (2020). Dimension reduction for outlier detection using DOBIN. *J Computational & Graphical Statistics*. robjhyndman.com/publications/dobin
120. Kandanaarachchi, S, Hyndman, RJ, & Smith-Miles, K. (2020). Early classification of spatio-temporal events using time-varying models. *PLOS ONE*, 15, e0236331. robjhyndman.com/publications/eventstream
121. Kandanaarachchi, S, Muñoz, MA, Hyndman, RJ, & Smith-Miles, K. (2020). On normalization and algorithm selection for unsupervised outlier detection. *Data Mining and Knowledge Discovery*, 34, 309–354. robjhyndman.com/publications/normalization-outliers/
122. Kang, Y, Hyndman, RJ, & Li, F. (2020). GRATIS: GeneRAting Time series with diverse and controllable characteristics. *Statistical Analysis and Data Mining*, 13(4), 354–376. robjhyndman.com/publications/gratis/

123. Makridakis, S, Hyndman, RJ, & Petropoulos, F. (2020). Forecasting in social settings: The state of the art. *International Journal of Forecasting*, 36(1), 15–28. robjhyndman.com/publications/forecasting-sofa
124. Montero-Manso, P, Athanasopoulos, G, Hyndman, RJ, & Talagala, TS. (2020). FFORMA: Feature-based forecast model averaging. *International Journal of Forecasting*, 36(1), 86–92. robjhyndman.com/publications/fforma/
125. Talagala, PD, Hyndman, RJ, Smith-Miles, K, Kandanaarachchi, S, & Muñoz, MA. (2020). Anomaly detection in streaming nonstationary temporal data. *J Computational & Graphical Statistics*, 20, 13–27. robjhyndman.com/publications/oddstream/
126. Vicendese, D, Marvelde, LT, McNair, PD, Ben Taieb, S, Hyndman, RJ, & Thomas, R. (2020). Hospital characteristics, rather than surgical volume, predict length of stay following colorectal cancer surgery. *Australian and New Zealand Journal of Public Health*, 44, 73–82.
127. Wang, E, Cook, D, & Hyndman, RJ. (2020). A new tidy data structure to support exploration and modeling of temporal data. *J Computational & Graphical Statistics*, 29, 466–478. robjhyndman.com/publications/tsibble
128. Wang, E, Cook, D, & Hyndman, RJ. (2020). Calendar-based graphics for visualizing people's daily schedules. *J Computational & Graphical Statistics*, 29, 490–502. robjhyndman.com/publications/calendar-vis
129. Wickramasuriya, SL, Turlach, BA, & Hyndman, RJ. (2020). Optimal non-negative forecast reconciliation. *Statistics & Computing*, 30(5), 1167–1182. robjhyndman.com/publications/nnmint/
130. Ben Taieb, S, Taylor, JW, & Hyndman, RJ. (2021). Hierarchical probabilistic forecasting of electricity demand with smart meter data. *J American Statistical Association*. robjhyndman.com/publications/hpf-electricity/
131. Eckert, F, Hyndman, RJ, & Panagiotelis, A. (2021). Forecasting Swiss exports using Bayesian forecast reconciliation. *European J Operational Research*, 291, 693–710. robjhyndman.com/publications/swiss-exports/
132. Li, H, & Hyndman, RJ. (2021). Assessing longevity inequality in the US: What can be said about the future? *Insurance, Mathematics and Economics*. robjhyndman.com/publications/us-longevity/
133. Panagiotelis, A, Gamakumara, P, Athanasopoulos, G, & Hyndman, RJ. (2021). Forecast reconciliation: A geometric view with new insights on bias correction. *International Journal of Forecasting*, 37(1), 343–359. robjhyndman.com/publications/hierarchical-geometry
134. Roach, C, Hyndman, RJ, & Ben Taieb, S. (2021). Nonlinear mixed effects models for time series forecasting of smart meter demand. *Journal of Forecasting*.
135. Talagala, PD, Hyndman, RJ, & Smith-Miles, K. (2021). Anomaly detection in high-dimensional data. *J Computational & Graphical Statistics*. robjhyndman.com/publications/stray/

Book chapters

1. Axford, RL, Grunwald, GK, & Hyndman, RJ. (1995). Information technology in research. In E Hovenga, M Kidd, & B Cesnik (Eds.), *Health informatics: An overview*. Churchill Livingstone.
2. Hyndman, RJ. (2002). ARIMA processes. In H Daellenbach & R Flood (Eds.), *The informed student guide to management science* (pp. 27–28). Cengage Learning Business Press.
3. Hyndman, RJ. (2002). Box-Jenkins modelling. In H Daellenbach & R Flood (Eds.), *The informed student guide to management science* (pp. 42–43). Cengage Learning Business Press.
4. Hyndman, RJ, & Snyder, RD. (2002). Kalman filter. In H Daellenbach & R Flood (Eds.), *The informed student guide to management science* (p. 162). Cengage Learning Business Press.
5. Hyndman, RJ, & Shang, HL. (2008). Bagplots, boxplots and outlier detection for functional data. In S Dabo-Niang & F Ferraty (Eds.), *Functional and operatorial statistics* (pp. 201–207). Springer.
6. Hyndman, RJ. (2010). Business forecasting methods. In M Lovric (Ed.), *International encyclopedia of statistical science* (pp. 185–187). Springer.
7. Hyndman, RJ. (2010). Forecasting overview. In M Lovric (Ed.), *International encyclopedia of statistical science* (pp. 536–539). Springer.
8. Hyndman, RJ. (2010). Moving averages. In M Lovric (Ed.), *International encyclopedia of statistical science* (pp. 866–869). Springer.
9. Booth, H, Hyndman, RJ, & Tickle, L. (2014). Prospective life tables. In A Charpentier (Ed.), *Computational actuarial science with R* (pp. 323–348). Chapman & Hall/CRC.
10. Hyndman, RJ. (2015). Another look at forecast-accuracy metrics for intermittent demand. In M Gilliland, L Tashman, & U Sglavo (Eds.), *Business forecasting: Practical problems and solutions* (pp. 204–211). John Wiley & Sons.
11. Hyndman, RJ. (2015). Measuring forecast accuracy. In M Gilliland, L Tashman, & U Sglavo (Eds.), *Business forecasting: Practical problems and solutions* (pp. 177–184). John Wiley & Sons.
12. Steponavičė, I, Shirazi-Manesh, M, Hyndman, RJ, Smith-Miles, K, & Villanova, L. (2016). On sampling methods for costly multi-objective black-box optimization. In PM Pardalos, A Zhigljavsky, & J Žilinskas (Eds.), *Advances in stochastic and deterministic global optimization* (pp. 273–296). Springer.

13. Vicendese, D, Marvelde, LT, McNair, PD, Ben Taieb, S, Hyndman, RJ, & Thomas, R. (2019). Predicting the whole distribution with methods for depth data analysis demonstrated on a colorectal cancer treatment study. In H Nguyen (Ed.), *Statistics and data science* (Vol. 1150, pp. 162–182). Springer.
14. Athanasopoulos, G, Gamakumara, P, Panagiotelis, A, Hyndman, RJ, & Affan, M. (2020). Hierarchical forecasting. In P Fuleky (Ed.), *Macroeconomic forecasting in the era of big data* (pp. 689–719). Springer. robjhyndman.com/publications/hierarchical-forecasting
15. Hyndman, RJ. (2021). Quantile forecasting with ensembles and combinations. In M Gilliland, L Tashman, & U Sglavo (Eds.), *Business forecasting: The emerging role of artificial intelligence and machine learning*. John Wiley & Sons.

Papers in refereed conference proceedings

1. Hyndman, RJ. (1987). Calculating the odds. In M Walker (Ed.), *Faces of gambling, proceedings of the second national conference of the national association for gambling studies* (1986) (pp. 139–152).
2. Hyndman, RJ. (1999). Nonparametric additive regression models for binary time series. *Proceedings, 1999 Australasian Meeting of the Econometric Society*.
3. Erbas, B, & Hyndman, RJ. (2001). Statistical methodological issues in studies of air pollution and respiratory disease. In B Klein & L Korsholm (Eds.), *New trends in statistical modelling: Proceedings of the 16th international workshop on statistical modelling* (pp. 179–186). University of Southern Denmark, Denmark. July 2001.
4. Hyndman, RJ, & Ullah, S. (2005). Robust forecasting of mortality and fertility rates: A functional data approach. *Proceedings, 55th Session of the International Statistical Institute*.
5. Wang, X, Smith-Miles, KA, & Hyndman, RJ. (2005). Dimension reduction for clustering time series using global characteristics. *Lecture Notes in Computer Science, Vol.3516. Proceedings, Computational Science – ICCS 2005: 5th International Conference, 3516, 792–795*.
6. Shang, HL, & Hyndman, RJ. (2009). Nonparametric time series forecasting with dynamic updating. *18th World IMAS/MODSIM Congress*.
7. Fan, S, & Hyndman, RJ. (2010). Short-term load forecasting based on a semi-parametric additive model. *Proceedings, 20th Australasian Universities Power Engineering Conference*.
8. Shang, HL, & Hyndman, RJ. (2010). Exploratory graphics for functional data. *Proceedings, Interface 2010: Computing Science and Statistics*.
9. Villanova, L, Falcaro, P, Carta, D, Poli, I, Hyndman, RJ, & Smith-Miles, KA. (2010). Functionalization of microarray devices: Process optimization using a multiobjective PSO and multiresponse MARS modeling. *Proceedings, 2010 IEEE Congress on Evolutionary Computation*.
10. Ben Taieb, S, & Hyndman, RJ. (2014). Boosting multi-step autoregressive forecasts. *Proceedings of the 31st International Conference on Machine Learning*, 109–117. jmlr.org/proceedings/papers/v32/taieb14.pdf
11. Hyndman, RJ, & Yasmeen, F. (2014). Common functional principal component models for mortality forecasting. In EG Bongiorno, E Salinelli, A Goia, & P Vieu (Eds.), *Contributions in infinite-dimensional statistics and related topics* (pp. 161–166).
12. Steponavičė, I, Hyndman, RJ, Smith-Miles, K, & Villanova, L. (2014). Efficient identification of the Pareto optimal set. *Learning and Intelligent Optimization: Lecture Notes in Computer Science, 8426, 341–352*.
13. Hyndman, RJ, Wang, E, & Laptev, N. (2015). Large-scale unusual time series detection. *Proceedings of the IEEE International Conference on Data Mining*, 1616–1619.
14. Ben Taieb, S, Taylor, JW, & Hyndman, RJ. (2017). Coherent probabilistic forecasts for hierarchical time series. *Proceedings of the 34th International Conference on Machine Learning, PMLR, 70, 3348–3357*.
15. Hirsch, M, Cook, D, Lajbcygier, P, & Hyndman, RJ. (2019). Revealing high-frequency trading provision of liquidity with visualization. *Proceedings of the 2nd International Conference on Software Engineering and Information Management*, 157–165. robjhyndman.com/publications/hft-liquidity
16. Severinsen, A, & Hyndman, RJ. (2019). Quantification of energy savings from energy conservation measures in buildings using machine learning. *ECEEE Summer Study Proceedings*.

Working papers under revision or review

1. Ye, A, Hyndman, RJ, & Li, Z. (2006). *Local linear multivariate regression with variable bandwidth in the presence of heteroscedasticity* (Working Paper No. 08/06). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/papers/hetero.pdf
2. Ouwehand, P, Hyndman, RJ, de Kok, TG, & van Donselaar, KH. (2007). *A state space model for exponential smoothing with group seasonality* (Working Paper No. 07/07). Department of Econometrics & Business Statistics, Monash University.

3. Ben Taieb, S, & Hyndman, RJ. (2012). *Recursive and direct multi-step forecasting: The best of both worlds* (Working Paper No. 19/12). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/rectify/
4. Dokumentov, A, & Hyndman, RJ. (2014). *Low-dimensional decomposition, smoothing and forecasting of sparse functional data* (Working Paper No. 16/14). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/ropes/
5. Ben Taieb, S, Huser, R, Hyndman, RJ, & Genton, MG. (2015). *Probabilistic time series forecasting with boosted additive models: An application to smart meter data* (Working Paper No. 12/15). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/kdd2015
6. Jiang, B, Panagiotelis, A, Athanasopoulos, G, Hyndman, RJ, & Vahid, F. (2016). *Bayesian rank selection in multivariate regression* (Working Paper No. 05/16). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/bayesian-rank-selection-in-multivariate-regression/
7. Url, T, Hyndman, RJ, & Dokumentov, A. (2016). *Long-term forecasts of age-specific participation rates with functional data models* (Working Paper No. 03/16). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/participation-rates/
8. Behlul, T, Panagiotelis, A, Athanasopoulos, G, Hyndman, RJ, & Vahid, F. (2017). *The Australian Macro Database: An online resource for macroeconomic research in Australia* (Working Paper No. 17/01). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/ausmacrodata
9. Talagala, TS, Hyndman, RJ, & Athanasopoulos, G. (2018). *Meta-learning how to forecast time series* (Working Paper No. 6/18). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/fforms/
10. Ashouri, M, Hyndman, RJ, & Shmueli, G. (2019). *Fast forecast reconciliation using linear models* (Working Paper No. 29/19). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/lhf
11. Ullah, I, Mengersen, K, Hyndman, RJ, & McGree, J. (2019). *Detection of cybersecurity attacks through analysis of web browsing activities using principal component analysis*. robjhyndman.com/publications/ndis-anomalies/
12. Zamani, A, Haghbin, H, Hashemi, M, & Hyndman, RJ. (2019). *Seasonal functional autoregressive models* (Working Paper No. 16/19). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/sfar/
13. Gupta, S, Hyndman, RJ, Cook, D, & Unwin, A. (2020). *Visualizing probability distributions across bivariate cyclic temporal granularities* (Working Paper No. 35/20). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/gravitas
14. Hyndman, RJ, Zeng, Y, & Shang, HL. (2020). *Forecasting the old-age dependency ratio to determine a sustainable pension age* (Working Paper No. 31/20). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/pensionage
15. Montero-Manso, P, & Hyndman, RJ. (2020). *Principles and algorithms for forecasting groups of time series: Locality and globality* [Working Paper]. Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/global-forecasting/
16. Panagiotelis, A, Gamakumara, P, Athanasopoulos, G, & Hyndman, RJ. (2020). *Probabilistic forecast reconciliation: Properties, evaluation and score optimisation* (Working Paper No. 26/20). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/coherentprob/
17. Rostami-Tabar, B, Ali, MM, Hong, T, Hyndman, RJ, Porter, MD, & Syntetos, A. (2020). *Forecasting for social good* (Working Paper No. 37/20). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/fsg
18. Wang, X, Kang, Y, Hyndman, RJ, & Li, F. (2020). *Distributed ARIMA models for ultra-long time series* (Working Paper No. 29/20). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/darima/
19. Athanasopoulos, G, Hyndman, RJ, & O'Hara-Wild, M. (2021). *The road to recovery from COVID-19 for australian tourism* (Working Paper No. 01/21). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/covidtourism
20. Cheng, F, Hyndman, RJ, & Panagiotelis, A. (2021). *Manifold learning with approximate nearest neighbours* (Working Paper No. 03/21). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/mlann
21. Kandanaarachchi, S, & Hyndman, RJ. (2021). *Leave-one-out kernel density estimates for outlier detection* (Working Paper No. 02/21). Department of Econometrics & Business Statistics, Monash University. robjhyndman.com/publications/lookout

Book reviews

1. Hyndman, RJ. (1996). Book review of "Kernel smoothing" (Wand and Jones, 1995). *Journal of Applied Statistics*, 23, 677–678.
2. Hyndman, RJ. (1998). Book review of "Leading personalities in the statistical sciences: From the seventeenth century to the present" (Kotz and Johnson, 1998). *Australian & New Zealand Journal of Statistics*, 40(3), 382–383.
3. Hyndman, RJ. (1998). Book review of "Smoothing methods in statistics" (Simonoff, 1996). *Australian & New Zealand Journal of Statistics*, 40(2), 251–252.
4. Hyndman, RJ. (1999). Book review of "A primer of mathematical writing" (Krantz, 1997) and "Handbook of writing for the mathematical sciences" (Higham, 1998). *Australian & New Zealand Journal of Statistics*, 41(2), 252–253.
5. Hyndman, RJ. (1999). Book review of "Chance encounters: A first course in data analysis and inference" (Wild and Seber, 2000). *Australian & New Zealand Journal of Statistics*, 41(4), 493–495.
6. Hyndman, RJ. (1999). Book review of "Statistically speaking: A dictionary of quotations" (Gaither and Cavazos-Gaither, 1996). *Australian & New Zealand Journal of Statistics*, 41(3), 380–382.
7. Hyndman, RJ. (2000). Nonparametric econometrics by A. Pagan and A. Ullah (Cambridge University Press, Cambridge, UK, 1999), pp.xviii+424. *The Economic Record*, 76, 309–311.
8. Erbas, B, & Hyndman, RJ. (2005). Book review of "Data analysis and graphics using R: An example-based approach" (Maindonald and Braun, 2003). *Journal of Population Research*, 22(2), 206–208.

Editorials

1. Hyndman, RJ. (2005). Editorial. *International Journal of Forecasting*, 21(1), 1.
2. Hyndman, RJ, & Ord, JK. (2006). Twenty-five years of forecasting. *International Journal of Forecasting*, 22(3), 413–414.
3. Hyndman, RJ. (2010). Changing of the guard. *International Journal of Forecasting*, 26(1), 1.
4. Hyndman, RJ. (2010). Encouraging replication and reproducible research. *International Journal of Forecasting*, 26(1), 2–3.
5. Song, H, & Hyndman, RJ. (2011). Tourism forecasting: An introduction. *International Journal of Forecasting*, 27(3), 817–821.
6. Hyndman, RJ. (2013). Change of editors. *International Journal of Forecasting*, 29(1), A1.
7. Hyndman, RJ. (2015). Change to the IJF editors. *International Journal of Forecasting*, 31(2), 391.
8. Hyndman, RJ. (2015). New IJF editors. *International Journal of Forecasting*, 31(4), 1104.