Rob J Hyndman

FAA, FASSA, BSc (Hons), PhD, AStat

Curriculum Vitae

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Department of Econometrics & Business Statistics, Monash University, VIC 3800, Australia.

robjhyndman.com

+61 3 9905 5141

Rob.Hyndman@monash.edu

@robjhyndman

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Education and qualifications

B.Sc.(Hons) University of Melbourne 1988
Ph.D. University of Melbourne 1992
A.Stat. Statistical Society of Australia 2000

Current position

2003- Professor, Department of Econometrics & Business Statistics, Monash University

Fellowships

- ➤ Fellow of the Australian Academy of Science (elected 2021).
- Fellow of the Academy of the Social Sciences in Australia (elected 2020).
- > Fellow of the International Institute of Forecasters (elected 2021).

Selected awards and honours

- 2022 Australian Awards for University Teaching citation for outstanding contributions to student learning
- 2021 Pitman Medal, Statistical Society of Australia
- 2021 Elected Fellow of the Australian Academy of Science
- 2021 Elected Fellow of the International Institute of Forecasters
- 2020 Elected Fellow of the Academy of the Social Sciences in Australia
- 2020 Dean's Award for Innovation in Learning and Teaching, Monash Business School
- 2010 Dean's Award for Excellence in Innovation and External Collaboration, Monash Business School
- 2010 HP Innovation Research Award
- 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
- 2005 Elected member of the International Statistical Institute

Teaching and mentoring

- ➤ In each year since 2018, student evaluations for "Applied forecasting for business and economics" gave an average rating for my teaching above 4.8 out of 5.
- ➤ I currently supervise six PhD students and one post-doctoral research fellow. I have previously supervised another 29 PhD students and 3 Masters students.
- ➤ I am author of an innovative textbook with George Athanasopoulos entitled Forecasting: principles and practice (OTexts.org/fpp3/) which is available online and free of charge. The website has an average of over 25000 pageviews per day.
- ➤ I publish the *Hyndsight* blog on research issues which receives an average of about 1500 pageviews per day.

Editorial boards

2023- Executive Editor, The R Journal
 2011- Editor, Journal of Statistical Software

2001–2004 Associate Editor, International Journal of Forecasting
 2019– Associate Editor, International Journal of Forecasting
 2005–2018 Editor-in-Chief, International Journal of Forecasting

2001–2004 Theory and Methods Editor, Australian & New Zealand Journal of Statistics

1996–2001 Book Review Editor, Australian Journal of Statistics

Society leadership

- ➤ 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 Grants

I have acquired (in most cases jointly) about \$32.1 million in external research grants since 2000. Highlights include being CI on an ARC Centre of Excellence, CI on an ARC Industrial Transformation Training Centre, CI on 3 ARC Discovery Grants, CI on 3 ARC Linkage Grants, and CI on 1 NHMRC grant.

Selected public and keynote addresses

- ➤ Belz lecture, Forecasting and the importance of being uncertain, Statistical Society of Australia, Melbourne, Oct 2006.
- Knibbs lecture, Population forecasting and the importance of being uncertain, Statistical Society of Australia, Canberra, Nov 2007.
- ➤ Invited speaker, Forecasting functional time series, Australian Frontiers of Science, Canberra, Feb 2008.
- ➤ Keynote speaker, Extreme Forecasting, International Symposium on Forecasting, Hong Kong, Jun 2009.
- ➤ Keynote speaker, Man vs Wild Data, Young Statisticians Conference, Melbourne, Feb 2013.
- ➤ Keynote speaker, Forecasting without forecasters, International Symposium on Forecasting, Seoul, Jun 2013.
- ➤ Keynote speaker, Automatic time series forecasting, "New Trends on Intelligent Systems and Soft Computing 2014", Granada, Spain, Feb 2014.
- ➤ Keynote speaker, Challenges in forecasting peak electricity demand, Energy Forum, Valais, Switzerland, Jun 2014.
- ➤ Yahoo Big Thinkers lecture, Exploring the boundaries of predictability: what can we forecast, and when should we give up?, California, Jun 2015.
- ➤ Keynote speaker, Forecasting big time series data using R, Chinese R conference, Nanchang, Oct 2015.
- ➤ Keynote speaker, Forecasting large collections of related time series, German Statistical Week, Augsburg, Sep 2016.
- ➤ Keynote speaker, Visualizing and forecasting big time series data, ICML Time Series Workshop, Sydney, Aug 2017.
- ➤ Keynote speaker, Beijing Workshop on Forecasting, Nov 2017.
- ➤ Keynote speaker, 10 years of forecast reconciliation, International Symposium on Forecasting, Oct 2020.
- ➤ ACEMS public address, Uncertain futures: what can we forecast and when should we give up?, Aug 2021.

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.

R packages

I have coauthored 62 R packages as a result of my research. There have been over 115 million downloads of my packages since 2015 (to 13 August 2024).

Selected books

- 1. Makridakis, SG, SC Wheelwright, and RJ Hyndman (1998). Forecasting: methods and applications. 3rd ed. New York: John Wiley & Sons. http://robjhyndman.com/forecasting/. [Citations: 7789].
- 2. Hyndman, RJ, AB Koehler, JK Ord, and RD Snyder (2008). Forecasting with exponential smoothing: the state space approach. Berlin: Springer-Verlag. http://robjhyndman.com/expsmooth. [Citations: 2092].
- 3. Hyndman, RJ and G Athanasopoulos (2021). Forecasting: principles and practice. 3rd ed. Melbourne, Australia: OTexts. http://OTexts.org/fpp3. [Citations: 8639].

Research

- ➤ Since 1991 I have authored 249 papers, chapters or books on statistical topics. A selection of these are listed below.
- ➤ On Google Scholar my h-index is 83 with total citations of 64,135 (as at 13 August 2024).

Selected research papers¹

- 1. Hyndman, RJ (1996). Computing and graphing highest density regions. The American Statistician **50**(2), 120–126. [Citations: 848].
- 2. Hyndman, RJ, DM Bashtannyk, and GK Grunwald (1996). Estimating and visualizing conditional densities. *J Computational & Graphical Statistics* **5**(4), 315–336. [Citations: 475].
- 3. Hyndman, RJ and Y Fan (1996). Sample quantiles in statistical packages. *The American Statistician* **50**(4), 361–365. [Citations: 1437].

¹Citations from Google Scholar on 13 August 2024.

- 4. Hyndman, RJ, AB Koehler, RD Snyder, and S Grose (2002). A state space framework for automatic forecasting using exponential smoothing methods. *International J Forecasting* **18**(3), 439–454. [Citations: 1402].
- 5. Booth, H, RJ Hyndman, L Tickle, and P de Jong (2006). Lee-Carter mortality forecasting: a multi-country comparison of variants and extensions. *Demographic Research* **15**(9), 289–310. [Citations: 383].
- 6. de Gooijer, JG and RJ Hyndman (2006). 25 years of time series forecasting. *International J Forecasting* **22**(3), 443–473. [Citations: 1619].
- 7. Hyndman, RJ and AB Koehler (2006). Another look at measures of forecast accuracy. *International J Forecasting* **22**(4), 679–688. [Citations: 6271].
- 8. Wang, X, KA Smith-Miles, and RJ Hyndman (2006). Characteristic-based clustering for time series data. *Data Mining and Knowledge Discovery* **13**(3), 335–364. [Citations: 869].
- 9. Hyndman, RJ and S Ullah (2007). Robust forecasting of mortality and fertility rates: A functional data approach. *Computational Statistics & Data Analysis* **51**(10), 4942–4956. [Citations: 957].
- 10. Hyndman, RJ and H Booth (2008). Stochastic population forecasts using functional data models for mortality, fertility and migration. *International J Forecasting* **24**(3), 323–342. *[Citations: 360].*
- 11. Hyndman, RJ and Y Khandakar (2008). Automatic time series forecasting: the forecast package for R. J Statistical Software **26**(3), 1–22. [Citations: 4920].
- 12. Hyndman, RJ and S Fan (2010). Density forecasting for long-term peak electricity demand. *IEEE Transactions on Power Systems* **25**(2), 1142–1153. [Citations: 456].
- 13. Verbesselt, J, RJ Hyndman, G Newnham, and D Culvenor (2010). Detecting trend and seasonal changes in satellite image time series. *Remote Sensing of Environment* **114**(1), 106–115. [Citations: 1916].
- 14. De Livera, AM, RJ Hyndman, and RD Snyder (2011). Forecasting time series with complex seasonal patterns using exponential smoothing. *J American Statistical Association* **106**(496), 1513–1527. [Citations: 1253].
- 15. Hyndman, RJ, RA Ahmed, G Athanasopoulos, and HL Shang (2011). Optimal combination forecasts for hierarchical time series. *Computational Statistics & Data Analysis* **55**(9), 2579–2589. [*Citations*: 602].
- 16. Hyndman, RJ, H Booth, and F Yasmeen (2013). Coherent mortality forecasting: the product-ratio method with functional time series models. *Demography* **50**(1), 261–283. *[Citations: 370]*.
- 17. Hong, T, P Pinson, S Fan, H Zareipour, A Troccoli, and RJ Hyndman (2016). Probabilistic Energy Forecasting: Global Energy Forecasting Competition 2014 and Beyond. *International J Forecasting* 32(3), 896–913. [Citations: 949].
- 18. Athanasopoulos, G, RJ Hyndman, N Kourentzes, and F Petropoulos (2017). Forecasting with temporal hierarchies. *European J Operational Research* **262**(1), 60–74. [Citations: 323].
- 19. Bergmeir, C, RJ Hyndman, and B Koo (2018). A note on the validity of cross-validation for evaluating autoregressive time series prediction. *Computational Statistics & Data Analysis* **120**, 70–83. [Citations: 688].
- 20. Wickramasuriya, SL, G Athanasopoulos, and RJ Hyndman (2019). Optimal forecast reconciliation for hierarchical and grouped time series through trace minimization. *J American Statistical Association* **114**(526), 804–819. [Citations: 360].
- 21. Hyndman, RJ (2020). A brief history of forecasting competitions. International J Forecasting 36(1), 7-14. [Citations: 159].
- 22. Kang, Y, RJ Hyndman, and F Li (2020). GRATIS: GeneRAting TIme Series with diverse and controllable characteristics. Statistical Analysis and Data Mining **13**(4), 354–376. [Citations: 139].
- 23. Makridakis, S, RJ Hyndman, and F Petropoulos (2020). Forecasting in social settings: the state of the art. *International J Forecasting* **36**(1), 15–28. [Citations: 147].
- 24. Talagala, PD, RJ Hyndman, K Smith-Miles, S Kandanaarachchi, and MA Muñoz (2020). Anomaly detection in streaming nonstationary temporal data. *J Computational & Graphical Statistics* **20**(1), 13–27. [Citations: 66].
- 25. Ben Taieb, S, JW Taylor, and RJ Hyndman (2021). Hierarchical Probabilistic Forecasting of Electricity Demand with Smart Meter Data. *J American Statistical Association* **116**(533), 27–43. [Citations: 143].
- 26. Kandanaarachchi, S and RJ Hyndman (2021). Dimension reduction for outlier detection using DOBIN. J Computational & Graphical Statistics **30**(1), 204–219. [Citations: 12].
- 27. Li, H and RJ Hyndman (2021). Assessing mortality inequality in the US: What can be said about the future? *Insurance, Mathematics and Economics* **99**, 152–162. [Citations: 9].
- 28. Talagala, PD, RJ Hyndman, and K Smith-Miles (2021). Anomaly detection in high-dimensional data. *J Computational & Graphical Statistics* **30**(2), 360–374. [Citations: 60].
- 29. Ashouri, M, RJ Hyndman, and G Shmueli (2022). Fast forecast reconciliation using linear models. *J Computational & Graphical Statistics* **31**(1), 263–282. [Citations: 11].
- 30. Panagiotelis, A, P Gamakumara, G Athanasopoulos, and RJ Hyndman (2023). Probabilistic forecast reconciliation: properties, evaluation and score optimisation. *European J Operational Research* **306**(2), 693–706. *[Citations: 56]*.
- 31. Wang, X, RJ Hyndman, F Li, and Y Kang (2023). Forecast combinations: an over 50-year review. *International J Forecasting* **39**(4), 1518–1547. [Citations: 118].
- 32. Athanasopoulos, G, RJ Hyndman, N Kourentzes, and A Panagiotelis (2024). Forecast reconciliation: a review. *International J Forecasting* **40**(2), 430–456. [Citations: 22].
- 33. Girolimetto, D, G Athanasopoulos, T Di Fonzo, and RJ Hyndman (2024). Cross-temporal probabilistic forecast reconciliation: Methodological and practical issues. *International J Forecasting* **40**(3), 1134–1151. [Citations: 4].