Rob J Hyndman

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

Curriculum Vitae

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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 positions

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 five PhD students and two post-doctoral research fellows. I have previously supervised another 27 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 20000 pageviews per day.
- ➤ I publish the *Hyndsight* blog on research issues which receives an average of about 2000 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

- ➤ 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 Grants

I have acquired (in most cases jointly) about \$32.0 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 58 R packages as a result of my research. There have been over 89 million downloads of my packages since 2015 (to 25 April 2023).

Selected books

- 1. Makridakis, SG, SC Wheelwright, and RJ Hyndman (1998). *Forecasting: methods and applications*. 3rd ed. New York: John Wiley & Sons. robjhyndman.com/forecasting/. [Citations: 7063].
- 2. Hyndman, RJ, AB Koehler, JK Ord, and RD Snyder (2008). *Forecasting with exponential smoothing: the state space approach*. Berlin: Springer-Verlag. robjhyndman.com/expsmooth. [Citations: 1743].
- 3. Hyndman, RJ and G Athanasopoulos (2021). *Forecasting: principles and practice*. 3rd ed. Melbourne, Australia: OTexts. OTexts.org/fpp3. [Citations: 6189].

Research

- ➤ Since 1991 I have authored 241 papers, chapters or books on statistical topics. A selection of these are listed below.
- ➤ On Google Scholar my h-index is 77 with total citations of 53,817 (as at 25 April 2023).

Selected research papers

- 1. Hyndman, RJ (1996). Computing and graphing highest density regions. *The American Statistician* **50**(2), 120–126. *[Citations: 767]*.
- 2. Hyndman, RJ, DM Bashtannyk, and GK Grunwald (1996). Estimating and visualizing conditional densities. *J Computational & Graphical Statistics* **5**(4), 315–336. [Citations: 438].
- 3. Hyndman, RJ and Y Fan (1996). Sample quantiles in statistical packages. *The American Statistician* **50**(4), 361–365. *[Citations: 1258]*.

- 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: 1220].
- 5. de Gooijer, JG and RJ Hyndman (2006). 25 years of time series forecasting. *International J Forecasting* **22**(3), 443–473. [Citations: 1426].
- 6. Hyndman, RJ and AB Koehler (2006). Another look at measures of forecast accuracy. *International J Forecasting* **22**(4), 679–688. [Citations: 5340].
- 7. 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: 841].
- 8. 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: 336]*.
- 9. Hyndman, RJ and Y Khandakar (2008). Automatic time series forecasting: the forecast package for R. *J Statistical Software* **26**(3), 1–22. *[Citations: 4025]*.
- 10. Hyndman, RJ and S Fan (2010). Density forecasting for long-term peak electricity demand. *IEEE Transactions on Power Systems* **25**(2), 1142–1153. *[Citations: 412]*.
- 11. 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: 1636]*.
- 12. 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: 1004].
- 13. 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: 485].
- 14. 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: 764]*.
- 15. Athanasopoulos, G, RJ Hyndman, N Kourentzes, and F Petropoulos (2017). Forecasting with temporal hierarchies. *European J Operational Research* **262**(1), 60–74. *[Citations: 250]*.
- 16. 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: 527]*.
- 17. 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: 257].
- 18. Hyndman, RJ (2020). A brief history of forecasting competitions. International J Forecasting 36(1), 7–14. [Citations: 110].
- 19. 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: 108].
- 20. Talagala, PD, RJ Hyndman, K Smith-Miles, S Kandanaarachchi, and MA Mu noz (2020). Anomaly detection in streaming nonstationary temporal data. *J Computational & Graphical Statistics* **20**(1), 13–27. [Citations: 54].
- 21. 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: 100].
- 22. Eckert, F, RJ Hyndman, and A Panagiotelis (2021). Forecasting Swiss exports using Bayesian forecast reconciliation. *European J Operational Research* **291**(2), 693–710. *[Citations: 15]*.
- 23. Kandanaarachchi, S and RJ Hyndman (2021). Dimension reduction for outlier detection using DOBIN. *J Computational & Graphical Statistics* **30**(1), 204–219. [Citations: 12].
- 24. 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: 4]*.
- 25. Talagala, PD, RJ Hyndman, and K Smith-Miles (2021). Anomaly detection in high-dimensional data. *J Computational & Graphical Statistics* **30**(2), 360–374. [Citations: 33].
- 26. Ashouri, M, RJ Hyndman, and G Shmueli (2022). Fast forecast reconciliation using linear models. *J Computational & Graphical Statistics* **31**(1), 263–282. [Citations: 2].
- 27. Gupta, S, RJ Hyndman, D Cook, and A Unwin (2022). Visualizing probability distributions across bivariate cyclic temporal granularities. *J Computational & Graphical Statistics* **31**(1), 14–25. [Citations: 3].