

Christoph Bergmeir

Curriculum Vitae
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Education and qualifications

2013 Ph.D. in Computer Science and Information Technology University of Granada, Spain
2009 Master in Soft Computing and Intelligent Systems University of Granada, Spain
2008 Dipl.-Inf. (equivalent to M.Sc.) in Computer Science University of Ulm, Germany

Employment history

2020– **Senior Lecturer in Data Science and AI**, Faculty of Information Technology, Monash University
2019– **ARC DECRA Fellow**, Faculty of Information Technology, Monash University, Melbourne
2018–2020 **Lecturer in Data Science and AI**, Faculty of Information Technology, Monash University
2014–2018 **Research Fellow (Applied Machine Learning)**, Faculty of Information Technology, Monash University
2013–2014 **Postdoctoral researcher** within the project OPTIRAIL (FP7), University of Granada, Spain

Other positions

2020– **Director of Engagement**, Dept. of Data Science and AI, Faculty of IT, Monash University
2019–2020 **External Engagement Coordinator**, Dept. of Data Science and AI, Faculty of IT, Monash University
2018–2019 **External Engagement Coordinator**, Machine Learning Subgroup, Faculty of IT, Monash University
2015–2017 **Postdoctoral Fellow in Computer Science (Honorary)**, Information Services Dept, Alfred Health, Melbourne

Honours and awards

2018 Dean's Award for excellence in research of an early career researcher, Monash University

Research

- I have published in total 27 papers in international journals (listed on pages 6–8).
- My current research is about Machine Learning methods in time series forecasting, and involves Recurrent Neural Networks, feature extraction, and ensembling. I also do some research in local interpretability.
- I currently (co-)supervise one post-doctoral research fellow, 8 PhD students, 4 Minor Master's students, and 2 Honours students. I have previously (co-)supervised another 3 PhD students, 24 Minor Master's students, and 4 Honours students to completion.
- I have produced 12 R packages as a result of my research

Grants

I have acquired, in most cases jointly with other researchers, about \$2.5 million in external funding since 2017. External grants over \$20,000 are as follows.

2020–2021	\$35,986	Bergmeir, C.. "Forecasting Framework for PyTorch". <i>Funding from Facebook Inc</i>
2020–2021	\$285,559	Bergmeir, C., Liebman, A., Stuckey, P., de Nijs, F.. "Virtual Power Plant Optimisation Project". <i>Funding from CSR Building Products Limited</i>
2019–2022	\$377,829	Bergmeir, C.. "Efficient and effective analytics for real-world time series forecasting". <i>Funding from ARC Discovery Early Career Researcher Award (DECRA)</i>
2019–2020	\$499,753	Nitchov, T., Marshment, D., Bergmeir, C., Brown, S., Danka, G., Vahid-Araghi, F., Miller, B., Hyndman, R., Ben Taieb, S., Salehi, M. and Khalilpour, K.. "Advisian Digital, Proof of Concept for Application of Advanced Short Term Power Generation Forecasting Technology for Wind and Solar Farms". <i>Funding from Australian Renewable Energy Agency (ARENA)</i>
2019	\$69,789	Hyndman, R.J., Bergmeir, C.. "DeepForecast: Leveraging forecasts on large scales of related time series". <i>Funding from Facebook Research Award</i>
2018–2020	\$370,000	Burbano, G., Hoban, T., Molnar, A., Fullelove, T., Ortega, E. G., Vivanco, J. P., de Mues, M. O., Razzaghi, R., Barnes, D., Abdallah, Z., Liebman, A., Rudolph, C., Polizzi, G., Bahrani, B., Varvarigos, M., Bergmeir, C., Khalilpour, K., Liu, J., Gawler, R., Pandey, S. and Dkhissi, Y.. "Monash's Smart Energy City". <i>Funding from Australian Renewable Energy Agency (ARENA)</i>

2018	\$95,381	Taniar, D., Lee, C. and Bergmeir, C.. "Data Analytics for Digital Metering". <i>Funding from Yarra Valley Water</i>
2017–2018	\$86,586	Hyndman, R.J., Ben Taieb, S. and Bergmeir C.. "Demand forecasting for large-scale dynamic hierarchies in a big data environment". <i>Funding from Huawei Innovation Research Program</i>
2017–2018	\$75,000	Kaye, D., Nanayakkara, S., Pilcher, D., Stub, D., Nasis, A., Cameron, J. and Bergmeir, C.. "Prediction of mortality following admission to intensive care after cardiac arrest". <i>Funding from Alfred Health, Equity Trustees</i>
2017–2018	\$20,000	Bergmeir, C.. "Data Science in Energy Management of Heating and Cooling Loads". <i>Funding from Zen Within Pty Ltd: AMSI Intern Project INT316</i>

Invited talks

Invited talks at academic conferences

1. Bergmeir, C (2020). Forecasting for Data Scientists. In: *Tutorial, 12th Asian Conference on Machine Learning (ACML), November 18-20 2020, Bangkok, Thailand (virtual)*.
2. Padt, F and C Bergmeir (2017). Optical retail clustering assisted hierarchical forecasting. In: *Invited practitioner talk, International Symposium on Forecasting (ISF) 2017, 25-28/6/2017 Cairns, Australia*.

Invited talks at industry conferences

1. Bergmeir, C (2019). Panel Discussion: How Can Artificial Intelligence Be Defined, Sold And Delivered Successfully Across Business Units And Stakeholders From Differing Industries. In: *4th Annual Artificial Intelligence for Enterprise Summit 2019, 13-14/8/2019, Sydney, Australia*.
2. Bergmeir, C (2019). How Machine Learning and Advanced Predictive Analytics Improves Demand Forecasting and Production Planning. In: *3rd Digital Supply Chain Innovation and Humanless Warehouse Forum, 29-30/10/2019, Melbourne, Australia*.
3. Bergmeir, C (2018). "Applied AI and Machine Learning", Post-conference workshop. In: *Robotic Process Automation Asia 2018, 19-22/4/2018, Manila, Philippines*.
4. Bergmeir, C (2018). Procurement digitization: Impact on supply chain advancement. In: *Australasian Supply Chain Institute (ASCI) 2018, 23-24/5/2018, Sydney, Australia*.
5. Bergmeir, C (2018). Leveraging AI and Data Analytics to Improve Forecasting and Demand Planning. In: *Supply Chain Innovation Summit 2018, 18-20/9/2018, Melbourne, Australia*.
6. Bergmeir, C (2018). Reducing Supply Chain Forecasting Error and Improving Demand Planning with AI and Machine Learning. In: *Disruptive Innovation and Digital Transformation in Supply Chain, 18-20/9/2018, Melbourne, Australia*.
7. Bergmeir, C (2017). Masterclass "Artificial Intelligence for Enterprises". In: *Robotic Process Automation, Asia 2017, 7-9/6/2017, Singapore*.
8. Bergmeir, C (2017). State of the art hierarchical sales and demand forecasting. In: *Supply Chain Planning & Innovation 2017, 29-30/8/2017, Melbourne, Australia*.
9. Bergmeir, C (2016). Panelist, session "Delving into Machine Learning". In: *Artificial Intelligence for Enterprise Summit 2016, 13-14/9/2016, Sydney, Australia*.

Research Stays

09/2019	Research stay (3 weeks) at Uber Technologies, San Francisco, CA. Host: Slawek Smyl.
06/2018–07/2018	Invited researcher (2 weeks) at School of Economics and Management Beihang University, Beijing, China. Host: Yanfei Kang.

During PhD and undergraduate studies (Internships, Stays at Other Centers):

04/2013–06/2013	Research stay at Dept. of Econometrics and Business Statistics, Monash University. Supervisor: Rob J. Hyndman. Funding: Ph.D. scholarship "FPU"
10/2011–02/2012	Research stay at Dept. of Economics, University of Vienna, Austria. Supervisor: R. Kunst. Funding: Ph.D. scholarship "FPU"
05/2008–09/2008	Internship at GE Global Research, Bangalore, India.
02/2008–04/2008	Assistant at German Cancer Research Center, Heidelberg, Germany.
04/2007–01/2008	Master's Thesis at German Cancer Research Center, Heidelberg, Germany. Development and Evaluation of Calibration Methods for 3D Ultrasound.
09/2005–02/2006	University of Alcalá de Henares, Spain. Free-Mover Scholarship.

Accreditations

09/2014 Enabled as Assistant Professor, Contract Professor, and Private University Professor (Profesor Ayudante Doctor, Profesor Contratado Doctor, Profesor Universidad Privada) by the Spanish National Agency for evaluating the quality and accreditation of Professors (ANECA).

Teaching

At Monash University, Lecturer in the following subjects:

03/2018–11/2018	FIT3163/FIT3164: Data Science project 1 and 2. First time delivery. Chief examiner. Student Evaluation of Teaching Units (SETU) score for FIT3163: Median between 4.5 and 4.75 out of 5 in all of the 5 evaluated categories, with 6 responses in total.
07/2017–11/2017	FIT5120AA: Industry Experience Studio Project (Advanced Analytics Stream), Master of Data Science. First time delivery. Nominated by one of the students for a FIT Teaching Award. SETU score: Median between 4.13 and 4.63 out of 5 in all of the 5 evaluated categories, with 7 responses in total.
07/2017–11/2017	FIT5145: Introduction to Data Science, Master of Data Science. SETU score: Median between 4.10 and 4.30 out of 5 in all of the 5 evaluated categories, with 18 responses in total
01/2016 – 02/2016 (TP1), 07/2016 – 08/2016 (TP4)	FIT5145: Introduction to Data Science, online teaching, Graduate Diploma in Data Science (GDDS). SETU score TP1: Median 4.5 out of 5, with 10 responses in total. TP4: Median between 4.19 and 4.56 out of 5 in all of the 5 evaluated categories, with 17 responses in total.

During Ph.D. studies at University of Granada:

09/2012 – 02/2013 Teaching assistant in two problem classes of the lecture “Models of Computation”, 6 ECTS (4 hours per week during one semester)

During undergraduate studies at University of Ulm:

10/2006–02/2007, 04/2006–07/2006, and 04/2005–07/2005	Helper to correct exercises and to create laboratory courseware and model solutions within the three lectures “Computer aided modeling and verification”, “Semantics of programming languages” and “Introduction to artificial intelligence”.
10/2004–02/2005 08/2005, 03/2005, and 09/2004	Tutor within the basic software internship. Holding three times the revision course for theoretical Computer Science.

Honours, Masters and Ph.D. theses directed

- Level 1 Graduate Research Supervisor Accreditation, Monash University, (08/2017)
- I’m currently (co-)supervising 8 PhD students, and have (co-)supervised 3 PhD students to completion.

Ph.D. thesis supervision

2020–	Abishek Sriramulu	Graph Neural Networks for Time series forecasting Co-direction with Nicolas Fourier, Pablo Montero-Manso
2020–	Priscila Grecov	RNNs for Causal Analysis Co-direction with Klaus Ackermann
2019–	Alexey Chernikow	Feature Generation methods for time series forecasting Co-direction with Pablo Montero-Manso
2019–	Jahan Penny-Dimri	Machine Learning Algorithms for Predicting and Risk Profiling in Cardiac Surgery Co-direction with Julian Smith

2019–	Md Mohaimenuzzaman	Deep Learning for the internet of things Co-direction with Bernd Meyer
2019–	Rakshitha Godahewa	Ensembling for Forecasting using recurrent neural networks Co-direction with Geoff Webb
2018–	Dilini Rajapaksha	Locally interpretable models in a medical context Co-direction with Wray Buntine
2018–	Hansika Hewamalage	Forecasting using recurrent neural networks Co-direction with Wray Buntine, Klaus Ackermann
2016–2020	Kasun Bandara	Forecasting sets of similar time series using recurrent neural networks Co-direction with Wray Buntine, Dan Lubman
2012–2016	Mabel González	Semi-supervised learning for time series classification Co-direction with I. Triguero and J.M. Benítez
2012–2015	Lala Septem Riza	Novel software solutions for Fuzzy Set and Rough Set theory Co-direction with F. Herrera and J.M. Benítez

Minor Master's thesis supervision

2021–2021	Aidan Quinn	Risk assessment and predicting aggression from time series using machine learning methods
2021–2021	Ankitha Nandipura	Causal Inference with Probabilistic Global Forecasting Models
2021–2021	Ziyi Liu	Deep Learning Techniques for Time Series Forecasting
2020–2021	Hayden Hughes	Automated content generation using machine learning and artificial intelligence techniques for synchronised mobile and classroom language learning. Co-direction with Jessica Chakowa
2020	Aijia Yang	Machine Learning for hierarchical time series forecasting. Co-direction with Mahdi Abolghasemi
2020	Alan Gewerc	RNNs for data imputation. Co-direction with Caroline Gao
2020	Arth Patel	Component extraction across time series
2020	Priscila Grecov	RNNs for Causal Analysis. Co-direction with Klaus Ackermann
2019–2020	Naveen Kaushik	Wavenet architectures for time series forecasting
2019–2020	Xinzhe Li	Failure Prediction for HVAC Systems using Machine Learning. Co-direction with Arnaud Prouzeau
2019	Chang Deng	Prediction and simulation for building management using Machine Learning. Co-direction with Arnaud Prouzeau
2019	Satyabrat Borgohain	Self-organising Neural Network Hierarchy. Co-direction with Levin Kuhlmann
2019	Shubham Diwe	Genetic Algorithms for Hierarchical time series forecasting
2019	Xiaocheng Jin	Ensembling methods for forecasting
2018–2019	Abishek Sriramulu	Multi-source transfer learning for time series forecasting
2018–2019	Yuan-Hao Liu	Transfer learning for time series forecasting with artificially generated data
2018	Alexey Chernikov	Autonomous unsupervised feature extraction from Time Series using Convolutional Neural Networks
2018	Chao Kai Hsu	Spatio-temporal analysis of smart meters data for short-term PV output forecasting. Co-direction with Lachlan Andrew
2018	Dong Lei Qian	Time Series Segmentation
2018	Michael Rodda	Improving Forecasting of Recurrent Neural Network Models Through Data Augmentation Via Generative Adversarial Networks

2017–2018	Christopher Keane	Clustering-assisted hierarchical time series forecasting
2017–2018	Erwin Wibowo	Bayesian Exponential Smoothing
2017	Marissa Fernandes	Predictive Modeling for the ANZICS Adult Patient Database
2017	Shang Wang	Clustering time series data using recurrent neural networks
2016–2017	Trevor Yann	Learning non-stationary distributions to classify multi-labelled data. Co-direction with Francois Petitjean
2016–2017	Xiaowei Zhang	PODES: Indonesian survey data analysis with a focus on village electrification. Co-direction with Lachlan Andrew
2013–2014	Jaime P. Benavides Acuña	Household electricity consumption forecasting: An empirical methodology to compare the model precision. Co-direction with J.M. Benítez
2012–2013	Sergio Ramírez Gallego	A forecasting methodology for elastic cloud resource provisioning. Co-direction with J.M. Benítez

Honours thesis supervision

2021–2021	Clinton Zhang	Optimisation with Probabilistic Forecasting
2021–2021	Nashia Fairuz	Towards ML/AI generated content for language learning
2019	Julian Kardis	Beyond dropout for regularization. Co-direction with Klaus Ackermann
2019	Zhenxie Dong	Feature Selection for RNNs
2019	Zhihui Wang	Probabilistic Forecasting with RNNs
2017–2018	Zihao Yang	Porting Snob to Weka. Co-direction with Peter Tischer

Service

- 08/2017 Part of the Local Arrangements Committee as invitation chair/visa coordinator for the International Joint Conference on Artificial Intelligence (IJCAI) 2017, August 19-25, Melbourne.
- 03/2017 One of the organizers of the ANZICS Critical Care Datathon 2017, March 4-5, Melbourne.

Languages

German	native
English	advanced (IELTS overall band score: 8, minimum of 7 in every category)
Spanish	advanced (level similar to English)
Portuguese	basic
Russian	basic

Software (R packages)

- The package **Rlgt** implements Local and Global Trend models, which is a novel class of exponential smoothing models, and fits them with Bayesian model fitting (published on CRAN).
- The package **RSNNS** is a comprehensive package for neural networks in R (published on CRAN).
- The package **Rmalschains** implements memetic algorithms in R (published on CRAN).
- The package **frbs** is a comprehensive package for fuzzy rule-based systems in R (published on CRAN). It is mainly developed by Lala S. Riza, and I maintain it.
- The package **RoughSets** is a comprehensive package for rough set and fuzzy rough set theory in R (published on CRAN). It is mainly developed by Lala S. Riza, and I maintain it.
- The package **ssc** is a package for semi-supervised classification in R (published on CRAN). It is mainly developed by Mabel González, and I maintain it.
- The package **forecast** is the most popular package for forecasting in R. It is developed by Rob J. Hyndman. I re-implemented part of the ets() function in C++, achieving considerable speedups.
- The package **tsDyn** (which is on CRAN) implements threshold autoregressive models. I implemented some patches and some (currently unpublished) extensions, mainly regarding neuro-coefficient STAR models.
- The package **tsExpKit** is a framework for time series experiments, aimed at the facilitation of performing well-documented, reproducible experimentation (currently published on github).

- The package **Rsiopred** is an R package for forecasting by exponential smoothing with model selection by a fuzzy multicriteria approach (currently unpublished).
- The package **Mcomp** contains data of the M3 forecasting competition. Its author is Rob J. Hyndman. I included the forecasts of the original competition participants into the package.
- The package **opusminer** provides an interface to the OPUS Miner algorithm (implemented in C++) for finding the key associations in transaction data efficiently, in the form of self-sufficient itemsets, using either leverage or lift. It is published on CRAN, I maintain it.
- The package **ChoR** is a wrapper for the java-implemented Chordalysis algorithm, which learns the structure of graphical models from datasets with thousands of variables. It is published on CRAN.

Refereeing

Reviewer for the following journals:

- IEEE Transactions on Neural Networks and Learning Systems
- IEEE Transactions on Fuzzy Systems
- International Journal of Forecasting
- Computational Statistics and Data Analysis
- Computer Methods and Programs in Biomedicine
- Information Sciences
- International Journal of Computer Assisted Radiology and Surgery
- Cytometry Part A
- International Journal of Computational Intelligence Systems,
- International Journal of Approximate Reasoning
- Fuzzy Sets and Systems
- Progress in Artificial Intelligence
- Computers and Electrical Engineering
- Neural Computing and Applications
- Journal of Aerospace Technology and Management

Member of the Program Committee of the following conferences:

- 11/2020 AAAI Conference on Artificial Intelligence (AAAI-21), February 2-9, 2021, virtually.
- 04/2020 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD) September 14-18 2020, Ghent, Belgium.
- 09/2019 26th International Conference on Neural Information Processing (ICONIP), December 12-15 2019, Sydney.

Publications

My Google scholar profile can be found here: http://scholar.google.com/citations?user=_UG_SgUAAAAJ&hl=en
According to this profile, I have over 3200 citations and an H-index of 21.

Journal papers

1. Bergmeir, C, M Seitel, C Frank, R de Simone, HP Meinzer, and I Wolf (2009). Comparing calibration approaches for 3D ultrasound probes. *International Journal of Computer Assisted Radiology and Surgery* 4(2), 203–213.
2. Bergmeir, C and JM Benítez (2012). Neural Networks in R Using the Stuttgart Neural Network Simulator: RSNNS. *Journal of Statistical Software* 46(7). (IF 4.910, Q1 in “Computer Science, Interdisciplinary Research”, and Q1 in “Statistics & Probability”, JCR 2012), 1–26.
3. Bergmeir, C and JM Benítez (2012). On the use of cross-validation for time series predictor evaluation. *Information Sciences* 191. (IF 3.643, Q1 in “Computer Science, Information Systems”, JCR 2012), 192–213.
4. Bergmeir, C, M García Silvente, and JM Benítez (2012). Segmentation of Cervical Cell Nuclei in High-resolution Microscopic Images: A new Algorithm and a Web-based Software Framework. *Computer Methods and Programs in Biomedicine* 107(3). (IF 1.555, Q1 in the category “Computer Science, Theory & Methods” and Q2 in “Computer Science, Interdisciplinary Applications”, JCR 2012), 497–512.
5. Bergmeir, C, I Triguero, D Molina, JL Aznarte, and JM Benítez (2012). Time Series Modeling and Forecasting Using Memetic Algorithms for Regime-switching Models. *IEEE Transactions on Neural Networks and Learning Systems* 23(11). (IF 3.766, Q1 ranking in the categories “Computer Science, Artificial Intelligence”, “Computer Science, Hardware & Architecture”, and “Computer Science, Theory & Methods”, JCR 2012), 1841–1847.
6. Santos-Lozano, A, F Santín-Medeiros, G Cardon, G Torres-Luque, R Bailón, C Bergmeir, J Ruiz, A Lucia, and N Garatachea (2013). The Actigraph GT3X Accelerometer: validation and determination of physical intensity cut points across age-groups. *Int J Sports Med.* 34. (IF 2.374, Q1 in “Sports Sciences”, JCR 2013), 975–982.

7. Bergmeir, C, M Costantini, and JM Benítez (2014). On the usefulness of cross-validation for directional forecast evaluation. *Computational Statistics and Data Analysis* **76**. (IF 1.400, Q2 in “Statistics & Probability” and Q3 in “Computer Science, Interdisciplinary Applications”, JCR 2014), 132–143.
8. Riza, LS, A Janusz, C Bergmeir, C Cornelis, F Herrera, D Ślęzak, and JM Benítez (2014). Implementing algorithms of rough set theory and fuzzy rough set theory in the R package “RoughSets”. *Information Sciences* **287**(10). (IF 4.038, Q1 in “Computer Science, Information Systems”, JCR 2014), 68–89.
9. Riza, LS, C Bergmeir, F Herrera, and JM Benítez (2015). frbs: Fuzzy Rule-Based Systems for Classification and Regression in R. *Journal of Statistical Software* **65**(6). (IF 2.379, Q1 in “Computer Science, Interdisciplinary Research”, and Q1 in “Statistics & Probability”, JCR 2015), 1–30.
10. Bergmeir, C, RJ Hyndman, and JM Benítez (2016). Bagging Exponential Smoothing Methods using STL Decomposition and Box-Cox Transformation. *International Journal of Forecasting* **32**. (IF 2.642, Q1 in “Economics”, JCR 2016), 303–312.
11. Bergmeir, C, D Molina, and JM Benítez (2016). Memetic Algorithms with Local Search Chains in R: The Rmallschains Package. *Journal of Statistical Software* **75**(4). (IF 9.436, Q1 in “Computer Science, Interdisciplinary Research”, and “Statistics & Probability”, JCR 2016), 1–33.
12. González, M, C Bergmeir, I Triguero, Y Rodríguez, and JM Benítez (2016). On the Stopping Criteria for k-Nearest Neighbor in Positive Unlabeled Time Series Classification Problems. *Information Sciences* **328**. (IF 4.832, Q1 in “Computer Science, Information Systems”, JCR 2016), 42–59.
13. Ananda-Rajah, MR, C Bergmeir, F Petitjean, MA Slavin, KA Thursky, and GI Webb (2017). Toward Electronic Surveillance of Invasive Mold Diseases in Hematology-Oncology Patients: An Expert System Combining Natural Language Processing of Chest Computed Tomography Reports, Microbiology, and Antifungal Drug Data. *JCO Clinical Cancer Informatics* (1), 1–10.
14. Bergmeir, C, I Bilgrami, C Bain, GI Webb, J Orosz, and D Pilcher (2017). Designing a more efficient, effective and safe Medical Emergency Team (MET) service using data analysis. *PLoS ONE* **12** (12): e0188688(12). (IF 2.766, Q1 in “Multidisciplinary Sciences”, JCR 2017), 1–13.
15. Straney, LD, AA Udy, A Burrell, C Bergmeir, S Huckson, DJ Cooper, and DV Pilcher (2017). Modelling risk-adjusted variation in length of stay among Australian and New Zealand ICUs. *PLoS ONE* **12** (5): e0176570. (IF 2.766, Q1 in “Multidisciplinary Sciences”, JCR 2017), 1–12.
16. Baldan, F, S Ramírez-Gallego, C Bergmeir, F Herrera, and JM Benítez (2018). A Forecasting Methodology for Workload Forecasting in Cloud Systems. *IEEE Transactions on Cloud Computing* **6**(4). (IF 5.967, top 4% (Q1) in “Computer Science, Information Systems”, and top 7% (Q1) in “Computer Science, Theory & Methods”, JCR 2018), 929–941.
17. Bergmeir, C, RJ Hyndman, and B Koo (2018). A Note on the Validity of Cross-Validation for Evaluating Autoregressive Time Series Prediction. *Computational Statistics and Data Analysis* **120**. (IF 1.323, Q2 ranking in “Statistics & Probability”, JCR 2018), 70–83.
18. González, M, C Bergmeir, I Triguero, Y Rodríguez, and JM Benítez (2018). Self-labeling techniques for semi-supervised time series classification: an empirical study. *Knowledge and Information Systems* **55**(2). (IF 2.397, Q2 in “Computer Science, Information Systems” and Q2 in “Computer Science, Artificial Intelligence”, JCR 2018), 493–528.
19. Nanayakkara, S, S Fogarty, M Tremeer, K Ross, B Richards, C Bergmeir, S Xu, D Stub, K Smith, M Tacey, D Liew, D Pilcher, and DM Kaye (2018). Characterising risk of in-hospital mortality following cardiac arrest using machine learning: A retrospective international registry study. *PLoS Medicine* **15** (11): e1002709. (IF 11.048, top 5% (Q1) in “Medicine, General & Internal”, JCR 2018), 1–16.
20. Peralta, D, C Bergmeir, M Krone, M Galende, M Menendez, GI Sainz-Palmero, CM Beltrand, F Klawonn, and JM Benítez (2018). Multiobjective Optimization for Railway Maintenance Plans. *Journal of Computing in Civil Engineering* **32**(3). (IF 2.554, Q2 in “Engineering, Civil” and Q2 in “Computer Science, Interdisciplinary Applications”, JCR 2018), 04018014, 1–11.
21. Petropoulos, F, RJ Hyndman, and C Bergmeir (2018). Exploring the sources of uncertainty: why does bagging for time series forecasting work? *European Journal of Operational Research* **268**. (IF 3.806, Q1 in “Operations Research & Management Sciences”, JCR 2018), 545–554.
22. Baggio, D, T Peel, A Peleg, S Avery, M Prayaga, M Foo, G Haffari, M Liu, C Bergmeir, and M Ananda-Rajah (2019). Closing the gap in surveillance and audit of invasive mold diseases for antifungal stewardship using machine learning. *Journal of Clinical Medicine* **8**(9). (IF 5.688, Q1 in “Medicine, General & Internal”, JCR 2018), 1390.
23. Abdelkarim, H, M Durie, R Bellomo, C Bergmeir, O Badawi, K El-Khawas, and D Pilcher (2020). A comparison of characteristics and outcomes of patients admitted to the ICU with asthma in Australia and New Zealand and United States. *Journal of Asthma* **57**(4). (IF 2.081, Q3 in “Respiratory System”, JCR 2018), 398–404.
24. Bandara, K, C Bergmeir, and H Hewamalage (2020). LSTM-MSNet: Leveraging Forecasts on Sets of Related Time Series with Multiple Seasonal Patterns. *IEEE Transactions on Neural Networks and Learning Systems* (forthcoming).

25. Bandara, H, C Bergmeir, and S Smyl (2020). Forecasting Across Time Series Databases using Recurrent Neural Networks on Groups of Similar Series: A Clustering Approach. *Expert Systems with Applications* **140**. (IF 4.292, Q1 in "Computer Science, Artificial Intelligence", JCR 2018), 112896.
26. Hewamalage, H, C Bergmeir, and K Bandara (2020). Recurrent Neural Networks for Time Series Forecasting: Current Status and Future Directions. *International Journal of Forecasting* (**forthcoming**).
27. Rajapaksha, D, C Bergmeir, and W Buntine (2020). LoRMiKA: Local rule-based model interpretability with k-optimal associations. *Information Sciences* **540**, 221–241.

Working papers

1. González, M, R Osmani, J Rodríguez, C Bergmeir, I Triguero, and JM Benítez (2016). ssc: An R Package for Semi-Supervised Classification. *Working Paper*.
2. Riza, LS, C Bergmeir, F Herrera, and JM Benítez (2016). A Universal Representation Framework for Fuzzy Rule-Based Systems Based on PMML. *Working Paper*.
3. Abolghasemi, M, R Hyndman, E Spiliotis, and C Bergmeir (2020). Model selection in reconciling hierarchical time series. *arXiv preprint arXiv:2010.10742*.
4. Abolghasemi, M, RJ Hyndman, G Tarr, and C Bergmeir (2020). Machine learning applications in time series hierarchical forecasting. *Working Paper*.
5. Bandara, K, H Hewamalage, YH Liu, Y Kang, and C Bergmeir (2020). Improving the Accuracy of Global Forecasting Models using Time Series Data Augmentation. *arXiv preprint arXiv:2008.02663*.
6. Godahewa, R, K Bandara, GI Webb, S Smyl, and C Bergmeir (2020). Ensembles of Localised Models for Time Series Forecasting. *Working Paper*.
7. Godahewa, R, C Bergmeir, GI Webb, and P Montero-Manso (2020). A Strong Baseline for Weekly Time Series Forecasting. *arXiv preprint arXiv:2010.08158*.
8. Godahewa, R, C Deng, A Prouzeau, and C Bergmeir (2020). Simulation and Optimisation of Air Conditioning Systems using Machine Learning. *Working Paper*.
9. Petropoulos, F, D Apiletti, et al. (2020). Forecasting: theory and practice. *arXiv: 2012.03854 [stat.AP]*.
10. Tan, CW, C Bergmeir, F Petitjean, and GI Webb (2020). Time Series Extrinsic Regression. *Working Paper*.
11. Hewamalage, H, C Bergmeir, and K Bandara (2021). Global Models for Time Series Forecasting: A Simulation Study. *Working Paper*.
12. Meghdadi, S, G Tack, A Liebman, N Langrené, and C Bergmeir (2021). Versatile and Robust Transient Stability Assessment via Instance Transfer Learning. *Working Paper*.
13. Mohaimenuzzaman, M, C Bergmeir, IT West, and B Meyer (2021). Environmental Sound Classification on the Edge: Deep Acoustic Networks for Extremely Resource-Constrained Devices. *Working Paper*.
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