



## RESEARCH FELLOW

<b>DEPARTMENT/UNIT</b>	Econometrics and Business Statistics
<b>FACULTY/DIVISION</b>	Faculty of Business and Economics
<b>CLASSIFICATION</b>	Level B
<b>DESIGNATED CAMPUS OR LOCATION</b>	Clayton campus

### ORGANISATIONAL CONTEXT

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Everyone needs a platform to launch a satisfying career. At Monash, we give you the space and support to take your career in all kinds of exciting new directions. You'll have access to quality research, infrastructure and learning facilities, opportunities to collaborate internationally, as well as the grants you'll need to publish your work. We're a university full of energetic and enthusiastic minds, driven to challenge what's expected, expand what we know, and learn from other inspiring, empowering thinkers. Discover more at [www.monash.edu](http://www.monash.edu).

The **Monash Business School** operates across all three Australian campuses (Caulfield, Clayton and Peninsula) and, together with the business school in Malaysia, makes up Monash University's Faculty of Business and Economics. It is structured into seven discipline-based departments (Accounting, Banking and Finance, Business Law and Taxation, Econometrics and Business Statistics, Economics, Management, and Marketing) as well as a number of research centres, units and groups in specialist areas such as behavioural economics, development economics, employment and work, and retail studies. To learn more about the Monash Business School, please visit our website, [www.monash.edu/business](http://www.monash.edu/business).

The **Department of Econometrics and Business Statistics** is recognised worldwide for the quality of its research and teaching. A defining characteristic of the research conducted by the Department is the development of cutting-edge new methodology and theoretical results in econometrics and statistics. Time series analysis, Bayesian inference, financial econometrics and data analytics feature prominently in much of the research, as do sophisticated, computer-intensive numerical methods. The Department is home to one of the strongest research groups in forecasting in the world, attracting many international visitors, PhD students and Research Fellows. Consistent with their expertise, departmental staff also provide training for a high proportion of all PhD students in econometrics and business statistics in Australia.

As a testament to the quality of the Department's research output, Monash was given the highest possible rating (5) in Econometrics in the 2012, 2015 and 2018 Excellence in Research for Australia assessments conducted by the Australian Research Council (ARC). The Department is ranked in the top 10 institutions in the fields of Econometrics, Time Series and Forecasting by IDEAS (a Research Papers in Economics service maintained by the Federal Reserve Bank of St. Louis, USA).

We provide the quantitative training in the Bachelor of Business, the Bachelor of Commerce, the Bachelor of Economics, the Bachelor of Finance and the Bachelor of Actuarial Science, as well as several Masters by Coursework programs, and we offer a comprehensive curriculum at the undergraduate and postgraduate levels in theoretical and applied econometrics, business analytics and actuarial studies. Many of our senior staff are editors and associate editors of reputable academic journals in econometrics and statistics and we enjoy significant success in gaining competitive ARC grants, industry-based grants, and contract research. For more information about our Department and the work we do, please visit our website: [www.monash.edu/business/ebs](http://www.monash.edu/business/ebs).

## POSITION PURPOSE

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A Level B research-only academic is expected to carry out independent and/or team research within the field in which the incumbent is appointed and to carry out activities to develop their research expertise relevant to the particular field of research.

The Research Fellow will conduct research associated with ARC Discovery Grant DP200101414: "Loss-Based Bayesian Prediction". This project proposes a new paradigm for prediction. Using state-of-the-art computational methods, the project aims to produce accurate, fit for purpose predictions which, by design, reduce the loss incurred when the prediction is inaccurate. Theoretical validation of the new predictive method is an expected outcome, as is extensive application of the method to diverse empirical problems, including those based on high-dimensional and hierarchical data sets. The project will exploit recent advances in Bayesian computation, including approximate Bayesian computation and variational inference, to produce predictive distributions that are expressly designed to yield accurate predictions in a given loss measure.

The Research Fellow would be expected to engage in all aspects of the research and would therefore build expertise in the methodological, theoretical and empirical aspects of this new predictive approach.

**Reporting Line:** The position reports to the lead Chief Investigator of the Discovery Project Grant # DP200101414

**Supervisory Responsibilities:** Not Applicable

**Financial Delegation:** Not Applicable

**Budgetary Responsibilities:** Not Applicable

## KEY RESPONSIBILITIES

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Specific duties required of a Level B research-only academic may include:

1. The conduct of research either as a member of a team or independently, and the production of conference and seminar papers and publications from that research
2. Supervision of research-support staff involved in the staff member's research
3. Contribution to the preparation or, where appropriate, individual preparation of research proposal submissions to external funding bodies
4. Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise
5. Occasional contributions to the teaching program within the field of the staff member's research
6. Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and/or membership of a limited number of committees

## **KEY SELECTION CRITERIA**

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### **Education/Qualifications**

1. The appointee will have:
  - a doctoral qualification in econometrics, statistics, or equivalent relevant research experience with specific expertise in one or more of the following areas: Bayesian statistical methods, including modern computational techniques; forecast methodology and/or theory; high-dimensional statistical analysis; or statistical theory.

### **Knowledge and Skills**

2. Demonstrated statistical analysis and manuscript and research proposal preparation skills; including a track record of refereed research publications, or evidence of research potential for recent PhD graduates
3. The ability to work under pressure and to prioritise tasks to meet deadlines
4. High level of initiative and flexibility
5. The ability to work both independently in a research environment and as part of an inter-disciplinary research team
6. High level organisational skills, with demonstrated capacity to establish and achieve goals
7. Excellent written and oral communication skills
8. A demonstrated capacity to work in a collegiate manner with other staff in the workplace

## **OTHER JOB RELATED INFORMATION**

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- Travel to other campuses of the University may be required
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

## **GOVERNANCE**

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Monash University expects staff to appropriately balance risk and reward in a manner that is sustainable to its long-term future, contribute to a culture of honesty and integrity, and provide an environment that is safe, secure and inclusive. Ensure you are aware of and adhere to University policies relevant to the duties undertaken and the values of the University. This is a standard which the University sees as the benchmark for all of its activities in Australia and internationally.