Position Description

Position title:	Senior Lecturer / Associate Professor, Applied Mathematics and Statistics
School/Directorate/VCO:	Institute of Innovation, Science and Sustainability
Campus:	Mt Helen or Berwick Campus. Travel between campuses may be required.
Classification:	Academic Level C or D
Time fraction:	Full-time
Employment mode:	Continuing employment
Further information from:	Professor Iven Mareels, Executive Dean, Institute of Innovation, Science and Sustainability Email: execdean.iiss@federation.edu.au
Recruitment number:	852078

Position summary

The Senior Lecturer / Associate Professor, Applied Mathematics and Statistics will be expected overall to:

Level C:

- contribute to the development and delivery of courses at undergraduate and graduate levels;
- contribute to the Institute's research program by participating in research activities and developing or maintaining an active research profile; and
- contribute to the Institute's administrative functions.

Level D:

- provide leadership in the development and delivery of programs and courses at undergraduate and graduate levels;
- contribute to the Institute's research program through the pursuit of research; and
- contribute to the Institute's administrative functions in a manner appropriate to the level of appointment.

Portfolio

The Institute of Innovation, Science and Sustainability offers Bachelor programmes in the Institute's four main disciplines, which are Business, Engineering and Mathematics, Information Technology, and Science. The Institute also offers a number graduate by coursework programmes. These programmes are offered on campus and at a number of locations throughout Australia and overseas. Many of these programmes are also co-designed with and supported by our strong network of established industry partners.

Research and consultancy forms a major aspect of the Institute's activities with numerous partnerships established with local, state, national and international organisations. Research within the University is driven through its Research

Centres. The Centre for Smart Analytics (CSA) has a stream focus on Computational and Intelligent Mathematics which applies optimization methods and approaches to solve real-world problems in machine learning, artificial intelligence, bioinformatics and finance.

In the recent Excellence in Research for Australia the Institute received a rating of 5* for civil engineering, applied mathematics, environmental science and management, and environmental sciences, and also 4* for artificial intelligence and image processing and 3* for pure mathematics.

Background

At Federation University, we are driven to make a real difference to the lives of every student, and to the communities we serve.

We are one of Australia's oldest universities, known today for our modern approach to teaching and learning. For 150 years, we have been reaching out to new communities, steadily building a generation of independent thinkers united in the knowledge that they are greater together.

Across our university and TAFE campuses in Ballarat, Berwick, Brisbane, Gippsland, and the Wimmera, we deliver world-class education and facilities. With the largest network of campuses across Victoria, as well as a growing Brisbane base, we are uniquely positioned to provide pathways from vocational education and skills training at Federation TAFE through to higher education.

To be successful at Federation University you must be willing to enthusiastically embrace the university's ambition as expressed in the 2021 - 2025 University Strategic Plan and share the University's values of:

INCLUSION, we celebrate our diversity, particularly valuing Aboriginal and Torres Strait Islander cultural heritage, knowledge and perspectives.

INNOVATION, we are agile and responsive to emerging opportunities.

EXCELLENCE, we act with integrity and take responsibility for achieving high standards.

EMPOWERMENT, we create a supportive environment to take informed risks in pursuit of success.

COLLABORATION, we establish genuine partnerships built on shared goals.

Key responsibilities

Level C

1. Provide leadership in developing, teaching, coordinating, and moderating courses in Applied Mathematics and Statistics at undergraduate, honours and graduate levels.

2. Undertake teaching and assessment of undergraduate and postgraduate students within the area of Applied Mathematics and Statistics.

3. Supervise students undertaking project courses, honours programs and research higher degrees.

4. Making a significant contribution to research activity within the Institute.

5. Participate in team projects and various committee meetings as required.

6. Contribute significantly to the administrative functions of the Institute, undertaking and overseeing broad administrative functions within the Institute.

7. Other responsibilities applicable to a Level C academic under current minimum standards for Academic Levels, as assigned by the Institute of Innovation, Science and Sustainability Executive Dean, Director, Academic Operations and Discipline Leader.

Level D

1. Making a significant contribution to developing, teaching, coordinating, and moderating courses in Applied Mathematics and Statistics at undergraduate and graduate levels.

2. Provide leadership for the development, implementation and monitoring of student retention and success strategies in Applied Mathematics and Statistics.

3. Undertake teaching and assessment of undergraduate and postgraduate students within the area of Applied Mathematics and Statistics.

4. Participate in team projects and various committee meetings as required.

5. Supervise students undertaking project courses, honours programs and research higher degrees.

6. Making a significant contribution to the administrative functions of the Institute.

7. Making an outstanding contribution to research activity within the Institute.

8. Promote, where appropriate, research and consultancy with outside bodies.

9. Playing a key leadership role in the teaching, research and administrative functions within the Institute and the University.

10. Other responsibilities applicable to a Level D academic under current Minimum Standards for Academic Levels as assigned by the Institute of Innovation, Science and Sustainability Executive Dean, Director, Academic Operations and Discipline Leader.

Applicable for appointment at both levels:

1. Reflect and embed the University's strategic purpose, priorities and goals when exercising the responsibilities of this position. For a more complete understanding and further information please access the Strategic Plan at: https://federation.edu.au/about-us/our-university/strategic-plan.

2. Undertake the responsibilities of the position adhering to:

- The Staff and Child Safe Codes of Conduct and Conflict of Interest Policy and Procedure;

- Equal Opportunity and anti-discrimination legislation and requirements;

- the requirements for the inclusion of people with disabilities in work and study;

- Occupational Health and Safety (OH&S) legislation and requirements; and

- Public Records Office of Victoria (PROV) legislation.

Level of responsibility

Level C

The Senior Lecturer, Applied Mathematics and Statistics will be expected to work independently in the conduct of teaching and research activities and assume a leadership role within the Institute in one or more of the areas of teaching, research and administration.

Level D

The Associate Professor, Applied Mathematics and Statistics will be expected to work independently in the conduct of teaching and research activities, assume a leadership role within the Institute and the University in one or more of the areas of teaching, research and administration and assume a broad leadership role across a range of Institute functions.

Position and Organisational relationships

Level C

The Senior Lecturer, Applied Mathematics and Statistics will work under the broad direction of the Executive Dean, Director, Academic Operations and Discipline Leader, and work as part of the Institute team of academic and administrative staff. The direct supervisor will be the Institute of Innovation, Science and Sustainability Discipline Leader.

Level D

The Associate Professor, Applied Mathematics and Statistics will work under the broad direction of the Institute of Innovation, Science and Sustainability Executive Dean, Director, Academic Operations and Discipline Leader, and work as part of the Institute's team of academic and administrative staff. The direct supervisor will be the Institute of Innovation, Science and Sustainability Discipline Leader.

Key selection criteria

Applicants must demonstrate they are able to undertake the inherent responsibilities of the position as contained in the position description and are able to meet the following key selection criteria:

Level C

Training and qualifications

1. A doctoral qualificaton is required.

2. All academic positions delivering education and/or services to children (a child for this purpose is considered to be someone below the age of 18 years) in first-year undergraduate programs must hold a valid Working with Children Check (WWCC) or hold a current registration with the Victorian Institute of Teaching (VIT).

Experience, knowledge and attributes

3. Demonstrated commitment to and enthusiasm for teaching and learning, and a good teaching record in applied mathematics and statistics

4. Demonstrated record of research at an international level in the areas of mathematical data science focusing particularly on one or more of the key following areas: applied optimization (non-smooth, robust, global) for discrete and continuous underlying data structures, modelling uncertainty, numerical linear algebra for large data.

5. Demonstrated capacity to supervise honours and research postgraduate students.

6. Capacity to work independently, as well as part of a team.

7. Demonstrated capacity in organisational and administrative abilities necessary for the construction, coordination and administration of courses.

8. Substantial University administrative experience.

9. Demonstrated commitment and ability to develop and implement a student-centred approach with a focus on student success, including the ability to monitor student success initiatives.

10. Excellent interpersonal, oral and written communications skills and an ability to relate well to students and other University staff.

11. Knowledge and understanding of the needs, including learning needs, of a diverse range of students, including those with disabilities.

12. Demonstrated working knowledge and application of the Child Safety Standards.

13. Demonstrated knowledge and application of appropriate behaviours when engaging with children, including children with a disability and from culturally and/or linguistically diverse backgrounds.

Level D

Training and qualifications

1. A doctoral qualification in Applied Mathematics or equivalent.

Experience, knowledge and attributes

2. Demonstrated experience, commitment to and enthusiasm for teaching and learning, and evidence of a good teaching record in applied mathematics, statistics and data science

3. A national record of achievement in research and a demonstrated capacity to play a leading role in the Institute's research program, focusing particularly on one or more of the key following areas: applied optimization (non-smooth, robust, global) for discrete and continuous underlying data structures, modelling uncertainty, numerical linear algebra for large data.

4. A significant record of achievement in the supervision of honours, masters and doctoral students.

5. Organisational and administrative abilities necessary for coordination and administration of courses, and other administrative duties.

6. Other relevant professional or managerial experience.

7. Demonstrated commitment and ability to develop and implement student-centred approaches with a focus on student success, including the ability to provide leadership to the School in the development, implementation and monitoring of student-centred approaches and student success initiatives.

8. Substantial University administrative experience.

9. Excellent interpersonal, oral and written communications skills and an ability to relate well to students and other University staff.

10. Knowledge and understanding of the needs, including learning needs, of a diverse range of students, including those with disabilities.

11. Demonstrated alignment with the University's commitment to child safety.

The University reserves the right to invite applications and to make no appointment.

It is not the intention of the position description to limit the scope or accountabilities of the position but to highlight the most important aspects of the position. The aspects mentioned above may be altered in accordance with the changing requirements of the role.

Key Minimum Standards for Academic Levels (MSALs)

Teaching and research academic staff

Level C

A Level C academic will make a significant contribution to the discipline at the national level. In research and/or scholarship and/or teaching he or she will make original contributions, which expand knowledge or practice in his or her discipline.

A Level C academic will normally make a significant contribution to research and/or scholarship and/or teaching and administration activities of an organisational unit or an interdisciplinary area at undergraduate, honours and postgraduate level. He or she will normally play a major role or provide a significant degree of leadership in scholarly, research and/or professional activities relevant to the profession, discipline and/or community and may be required to perform the full academic responsibilities of and related administration for the co-ordination of a large award program or a number of smaller award programs of the institution.

The standards are not exhaustive of all tasks in academic employment, which is by its nature multi-skilled and involves an overlap of duties between levels.

Level D

A Level D academic will normally make an outstanding contribution to the research and/or scholarship and/or teaching and administration activities of an organisation unit, including a large organisational unit, or interdisciplinary area.

A Level D academic will make an outstanding contribution to the governance and collegial life inside and outside of the institution and will have attained recognition at a national or international level in his or her discipline. He or she will make original and innovative contributions to the advancement of scholarship, research and teaching in his or her discipline.

The standards are not exhaustive of all tasks in academic employment, which is by its nature multi-skilled and involves an overlap of duties between levels.