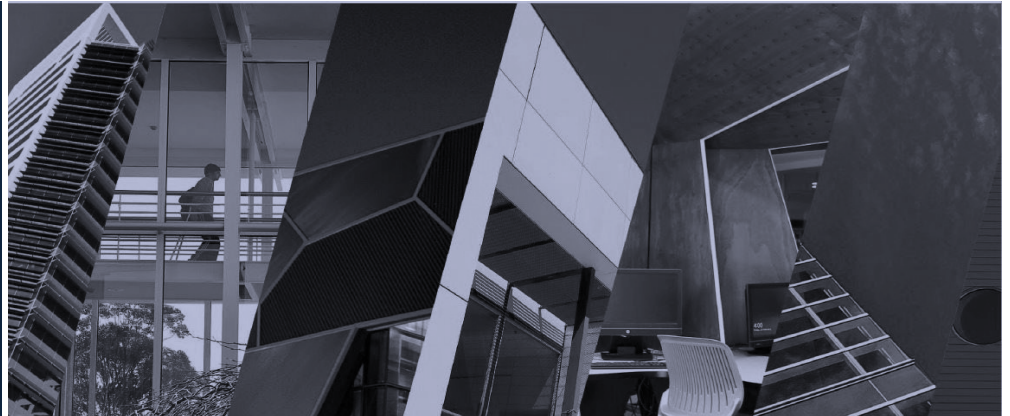# Federation University

Position Description

Position title:	Postdoctoral Research Fellow, Video Coding
School/Section/VCO:	School of Engineering, Information Technology and Physical Sciences (SoEITPS)
Campus:	Gippsland and/or Berwick
Classification:	Academic Level A
Time fraction:	Full-time
Employment mode:	Fixed-term contract for 12 months
Probationary period:	This appointment is offered subject to the successful completion of a probationary period.
Further information from:	Prof Manzur Murshed, School of Engineering, IT and Physical Sciences Telephone: (03) 5122 6467; 0417 142 754 E-mail: manzur.murshed@federation.edu.au
Recruitment number:	849812

Background

Federation University Australia is a modern, progressive university providing high-quality vocational and higher education across a national and international network of campuses. The University has a distinguished history as the University of Ballarat, one of Australia's oldest higher education institutions. It became Federation University Australia in January 2014 upon amalgamation with Monash University's Gippsland Campus. Our campuses span Ballarat, Berwick, Gippsland, and the Wimmera in Victoria. A new campus in Brisbane, Queensland, provides further opportunities for international students and student mobility.

The School of Engineering, Information Technology and Physical Sciences offers bachelor's degrees in Engineering (Civil, Mechanical, Mechatronics and Mining), Mathematics, Information Technology, and Science (primarily Metallurgy and Geology).

The School is in the process of establishing a range of programs in Electrical and Electronic Engineering, Data Science and Industrial Engineering and has an almost unique capability in Australia in that it delivers programs in Geology, Mining, Engineering and Mineral Processing that supports the strong resources sector. The School also offers a number of Graduate Certificate, Graduate Diploma and Master's by coursework programs, with Maintenance and Reliability Engineering being particularly well known internationally. These programs are offered on campus and at a number of locations throughout Australia and overseas.

Position Description

Postdoctoral Research Fellow, Video Coding

Research and consultancy forms a major aspect of the School's activities, with numerous partnerships established with local, state, national and international organisations. In the 2018 ERA assessment the School was rated at 5 (Well above world standard) for civil engineering and applied mathematics, 4 (Above world standard) for artificial intelligence and image processing and 3 (At world standard) for pure mathematics. Currently there are over 100 doctoral, master's and honours students enrolled.

Position summary

As part of the research team in the School of Engineering, Information Technology and Physical Sciences, the Postdoctoral Research Fellow, Video Coding will support the delivery of funded research projects, as outlined in the project agreements. The incumbent will also contribute to other research activities related to image processing and machine learning.

The successful incumbent must be prepared to travel between Federation University Campuses, and to collaborate with research partners in The University of New South Wales and Charles Sturt University.

Key responsibilities

1. Contribute to delivering the ARC Discovery Project DP190102574 (Efficient multi-view video coding with cuboids and base anchored models) – as outlined in the project agreement and plans.

2. Conduct research in video coding & analytics and produce relevant reports and research outputs in areas of image processing and machine learning.

3. Develop literature reviews and maintain data and knowledge repositories to support research activities in the areas of image processing and machine learning.

4. Prepare research findings leading to publication of peer-reviewed journal papers and the presentation of research findings in a variety of forums.

5. Contribute to the preparation, or where appropriate, individual preparation of research proposals to external funding bodies, as required.

6. Where appropriate, involvement in professional activities such as attendance at appropriate conferences and seminars.

7. Administrative functions primarily connected with their area of research.

8. Associate-supervision, of honours and postgraduate research projects.

9. Attend meetings associated with the research project and relevant School meetings as an active contributor.

10. Contribute to the supervision of honours and/or higher degree by research students.

11. 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.

12. 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.

Position Description

Postdoctoral Research Fellow, Video Coding

Level of responsibility

The Postdoctoral Research Fellow, Video Coding will work independently in the conduct of research activities and be an active contributor to administrative functions within the School. The incumbent will be mentored and guided by senior academic staff and will be expected to develop their expertise in research and administration with an increasing degree of autonomy.

Training and qualifications

The Postdoctoral Research Fellow, Video Coding will have completed or significant progression toward a doctorate degree in Computer Science, Software Engineering, Information Technology, or Applied Mathematics with research experience in Video Coding, Image Processing, and Machine Learning. The incumbent will have sound knowledge in computer programming and professional technical writing.

Position/Organisational relationships

The Postdoctoral Research Fellow, Video Coding will work under the broad direction of the Dean of the School of Engineering, Information Technology and Physical Sciences but will be supervised on a day-to-day basis by the Project Chief Investigator Professor Manzur Murshed.

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:

1. The Postdoctoral Research Fellow, Video Coding will have completed or significant progression toward a doctorate degree in Computer Science, Software Engineering, Information Technology, or Applied Mathematics with research experience in Video Coding, Image Processing, and Machine Learning.

2. Demonstrated experience in developing video coding software and using image processing and machine learning toolboxes.

3. Demonstrated experience in preparing and publishing research material including reports, journal and presentations.

4. Demonstrated research experience or a demonstrated capacity and preparedness to achieve an active research profile in the field of image processing and machine learning.

5. Demonstrated ability to work collegially as part of a team.

6. Demonstrated interpersonal, oral and written communications skills and an ability to relate well to higher degree students and other University staff.

7. Demonstrated capacity to contribute to the supervision of honours and/or higher degree by research students.

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

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

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.

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

Position Description

Postdoctoral Research Fellow, Video Coding

Key Minimum Standards for Academic Levels (MSALs)

Research academic staff

Level A

A Level A research academic will typically conduct research/scholarly activities under limited supervision either independently or as a member of a team, and will normally hold a relevant higher degree.

A Level A research academic will normally work under the supervision of academic staff at Level B or above, with an increasing degree of autonomy as the research academic gains skills and experience. A Level A research academic may undertake limited teaching, may supervise at undergraduate levels and may publish the results of the research conducted as sole author or in collaboration. He or she will undertake administration primarily relating to his or her activities at 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.