THE UNIVERSITY OF
MELBOURNE

School of Mathematics and Statistics
Faculty of Science

Research Fellow in Optimisation

POSITION NO	0058660
CLASSIFICATION	Level A
SALARY	$97,558 - $104,717 p.a. (PhD entry level $97,558)
SUPERANNUATION	Employer contribution of 17%
WORKING HOURS	Full-Time (1.0 FTE)
BASIS OF EMPLOYMENT	Fixed-Term for 2 years
OTHER BENEFITS	https://about.unimelb.edu.au/careers/staff-benefits
HOW TO APPLY	Online applications are essential. Go to https://www.mathjobs.org/jobs, Login or Create a New Account, then find the position by title.
CONTACT FOR ENQUIRIES ONLY	Dr Matthew K. Tam Tel +61 3 8344 6876 Email: matthew.tam@unimelb.edu.au *Please do not send your application to this contact*

For information about working for the University of Melbourne, visit our website:
about.unimelb.edu.au/careers

Acknowledgement of Country

The University of Melbourne acknowledges the Traditional Owners of the unceded land on which we work, learn and live: the Wurundjeri Woi Wurrung and Bunurong peoples (Burnley, Fishermans Bend, Parkville, Southbank and Werribee campuses), the Yorta Yorta Nation (Dookie and Shepparton campuses), and the Dja Dja Wurrung people (Creswick campus).

The University also acknowledges and is grateful to the Traditional Owners, Elders and Knowledge Holders of all Indigenous nations and clans who have been instrumental in our reconciliation journey.

We recognise the unique place held by Aboriginal and Torres Strait Islander peoples as the original owners and custodians of the lands and waterways across the Australian continent, with histories of continuous connection dating back more than 60,000 years. We also acknowledge their enduring cultural practices of caring for Country.

We pay respect to Elders past, present and future, and acknowledge the importance of Indigenous knowledge in the Academy. As a community of researchers, teachers, professional staff and students we are privileged to work and learn every day with Indigenous colleagues and partners.

Position Summary

This Research Fellow will be expected to work closely with Dr Matthew K. Tam and Dr Minh N. Dao on the Australian Research Council (ARC) funded research program Distributed Optimisation without Central Coordination (funded under the Discovery Program). While the research program is guided by a set of research questions, there will be considerable scope for this Research Fellow to develop their own ideas within a broader research agenda.

The successful candidate will preferably have experience within at least one of the following: continuous optimisation, distributed optimisation, monotone operator splitting, nonsmooth and variational analysis, or federated learning. The Research Fellow will be part of the School's Operations Research Group https://ms.unimelb.edu.au/research/groups/details?gid=9%22

1. Key Responsibilities

The position description should be read alongside Academic Career Benchmarks and Indicators and the Academic Performance Framework.

A level A academic has well developed academic skills and strong academic performance (approaching or progressing towards the benchmarks).

1.1   RESEARCH AND RESEARCH TRAINING

The incumbent is expected to significantly contribute towards the research effort of the team and to develop their research expertise with an increasing degree of autonomy.

- Under the guidance and support of Senior Academic staff conduct internationally competitive research, resulting in publications in high impact journals.

- Contribute to and publish academic papers and other scholarly outputs to a high academic standard in accordance with the research expectations of the University of Melbourne.

- Actively participate in research seminars and conferences to disseminate research findings as opportunities arise.

- Contribute to the preparation, or where appropriate individual preparation of research proposal submissions to internal or external funding bodies as relevant.

- Undertake administrative functions and obligations primarily connected with the staff member's area of research.

- Contribute to and assist in the co-supervision and training of research students primarily at undergraduate level.

- Engage with relevant professional and industry bodies and stakeholders to foster collaborative partnerships.

1.2   TEACHING AND LEARNING

- Contribute to scientific mentoring and supervision of students.

- Contribute to the effective supervision of junior research staff in the appointee's area of expertise.

1.3   LEADERSHIP AND SERVICE

- Actively participate at School meetings and with guidance, contribute to planning activities or committee work to support capacity building in the School/discipline.

- Contribute to, or present research to the public to elevate public awareness of educational and scientific developments and promote critical enquiry and public debate within the community where appropriate.

- Effective demonstration and promotion of University values including diversity and inclusion and high standards of ethics and integrity.

- Actively contribute to School activities such as Open day to promote student engagement.

1.4   OTHER DUTIES

- Perform other tasks as requested by the supervisor or the Head of School.

- Actively participate in the University Professional Development Framework.

- Ensure an up-to-date record of University compliance courses, such as, but not limited to, Appropriate Workplace Behaviour, PDF for Staff and Supervisors.

- Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 4.

2. Selection Criteria

2.1   ESSENTIAL

- Completion (or near completion) of a PhD in continuous optimisation, distributed optimisation, monotone operator splitting, nonsmooth and variational analysis, federated learning or a related area.

- A demonstrated aptitude for research, with a sound publication record in relevant areas, commensurate with experience and opportunities.

- Demonstrated ability to prepare research reports and manuscripts for publication.

- Strong evidence of ability and desire to build an academic research career trajectory.

- Demonstrated ability to engage with relevant professional bodies, industry bodies or stakeholders to foster collaborative partnerships.

- Excellent interpersonal and both written and oral communication skills in English.

- Demonstrated excellent organisational skills to meet deadlines and bring projects to a timely completion.

- Demonstrated ability to develop, administer and see through to completion appropriately designed research projects with limited supervision.

2.2 DESIRABLE

- The ability to attract external funding through grant applications and/or support in funded joint projects with others internal or external to the university.

- Experience in assisting with supervision of students undertaking undergraduate or higher degree research projects.

3. Equal Opportunity, Diversity and Inclusion

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying, vilification and victimisation. The University makes decisions on employment, promotion, and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the Advancing Melbourne strategy that addresses diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people's age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to strive for excellence and reach the targets of Advancing Melbourne.

4. Occupational Health and Safety (OHS)

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

https://safety.unimelb.edu.au/people/community/responsibilities-of-personnel

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.

5. Other Information

5.1 SCHOOL OF MATHEMATICS AND STATISTICS

http://www.ms.unimelb.edu.au

The University of Melbourne's School of Mathematics and Statistics is one of Australia's leading mathematics and statistics schools. It has achieved this status through the high quality of its research and teaching programs. The School offers a wide range of subjects to undergraduate and postgraduate students and is involved in aspects of community life that impact on the interests of the School and the discipline.

The School of Mathematics and Statistics has a total of 70 continuing teaching and/or research staff; 34 research only staff and consultants; 16 academic specialists and 16 support staff. The School has over 240 casual and honorary staff. In 2020, there were 90 Research Higher Degree and 278 Coursework Master of Science students. Five members of the School staff and one Emeritus Professor are members of the Academy of Science.

Infrastructure support for research and basic information technology facilities are provided to all members of the department. Special facilities such as high-end workstations and salaries for research fellows are supported through individual competitive external research grants. Members of the School have had considerable success at attracting support from the Australian Research Council. The school currently hosts two ARC Centres of Excellence, and has hosted four ARC Laureate Fellows, ten ARC Future Fellows and fourteen DECRA Fellows.

It is one of the objectives of the University to develop and maintain a strong international profile. In this context, members of the School have strong collaborative links with colleagues in the United States of States of America, most countries in Europe and the Asia-Pacific region.

5.2 FACULTY OF SCIENCE

https://science.unimelb.edu.au

Science at the University of Melbourne is the most highly ranked Faculty of Science in Australia. Science is defined by its research excellence in the physical and life sciences and is at the forefront of research addressing major societal issues from climate change to disease. Our discoveries help build an understanding of the world around us.

We have over 150 years of experience in pioneering scientific thinking and analysis, leading to outstanding teaching and learning and offer a curriculum based on highly relevant research, which empowers our STEM students and graduates to understand and address complexities that impact real world issues and the challenges of tomorrow.

We aspire to engage the broader community with the impact that Science has on our everyday lives. Through the strength of our internships and research project offerings, our students are provided opportunities to engage with industry partners to solve real-world issues.

The Faculty of Science has over 50,000 alumni and is one of the largest faculties in the University comprising six schools: BioSciences, Chemistry, Ecosystem and Forest Sciences, Mathematics and Statistics, Physics and the School of Geography, Earth and Atmospheric Sciences.

The Faculty is custodian of the Bio21 Molecular Science and Biotechnology Institute, the Indigenous Knowledge Institute, the Melbourne Energy Institute, the Office for Environmental Programs and home to numerous Centres.

Science manages more than $301 million of income per annum, with a staff base in the order of 250 FTE professional staff, and more than 662 FTE academic staff.

We offer a range of undergraduate, honours, graduate and research degrees; enrolling over 10,800 undergraduate and 2,500 graduate students. The Faculty of Science is the custodial Faculty for the BSc (Bachelor of Science). The Faculty of Science is highly research focused, performing strongly in the Australian Research Council competitive grants schemes. The Faculty of Science is currently growing its competitiveness and standing in the National Health and Medical Research Council and health space.

The Faculty of Science provides community services and industry partnerships based on a solid foundation of research in the pure and applied sciences. The Faculty has an endowment of approximately $100 million. The annual income from the endowment supports more than 140 prizes, scholarships and research awards, and numerous academic positions.

5.3   THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville is recognised as the hub of Australia's premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide-range of knowledge-based industries. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded.

Further information about working at The University of Melbourne is available at http://about.unimelb.edu.au/careers.

5.4   ADVANCING MELBOURNE

The University's strategic direction is grounded in its purpose. While its expression may change, our purpose is enduring: to benefit society through the transformative impact of education and research. Together, the vision and purpose inform the focus and scale of our aspirations for the coming decade.

Advancing Melbourne reflects the University's commitment to its people, its place, and its partners. Our aspiration for 2030 is to be known as a world-leading and globally connected Australian university, with our students at the heart of everything we do.

- We will offer students a distinctive and outstanding education and experience, preparing them for success as leaders, change agents and global citizens.

- We will be recognised locally and globally for our leadership on matters of national and global importance, through outstanding research and scholarship and a commitment to collaboration.

- We will be empowered by our sense of place and connections with communities. We will take opportunities to advance both the University and the City of Melbourne in close collaboration and synergy.

- We will deliver this through building a brilliant, diverse and vibrant University community, with strong connections to those we serve.

The means for achieving these goals include the development of the University of Melbourne's academic and professional staff and the capabilities needed to support a modern, world-class university. Those means require a commitment to ongoing financial sustainability and an

ambitious infrastructure program which will reshape the campus and our contribution to the communities we engage with. This strategy, and the priorities proposed, is centred around five intersecting themes; place, community, education, discovery and global.

5.5 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at https://about.unimelb.edu.au/strategy/governance