



**LA TROBE**  
UNIVERSITY

School of Allied Health,  
Human Services and Sport

# RESEARCH CAPABILITY



**SPORT AND  
EXERCISE  
SCIENCE**



## Acknowledgement of Country

La Trobe University proudly acknowledges the Traditional Custodians of the lands our campuses are located on.

We recognise that Indigenous Australians have an ongoing connection to the land and the University values their unique contribution both to the University and the wider Australian society.

We are committed to providing opportunities for Indigenous Australians, both as individuals and communities through teaching and learning, research and community partnerships across all our campuses and online.

We pay our respects to Indigenous Elders, past, present and emerging.

*Indigenous art by Dixon Patten of Bayila Creative*





## OUR VISION

**To conduct world-class research that seeks to optimise human performance and health, and to help individuals and communities reach their potential.**

## OUR FOCUS

Our research uses physical activity, exercise and sport to promote and enhance health, wellbeing and performance.

Our research focuses on:

- Enhancing athletic performance through innovative training methods
- Investigating the physiological and psychological effects of sport participation
- Exploring the benefits and contraindications of exercise and sport
- Contributing to public health, rehabilitation, and the science of human movement through multidisciplinary research
- Implementing cutting-edge technologies for athlete monitoring and data analysis.

We aspire to be an outstanding team and partner, a destination of choice for students, and known for innovation and leadership in our research.

# RESEARCH CAPABILITY

## OUR OBJECTIVES

As a research team of staff, students and collaborators we aim to:

- Drive world-leading research that creates knowledge, influences practice, and improves the health, wellbeing and performance of individuals and communities.
- Work with industry to develop and foster a culture of partnership, innovation and research impact.
- Build research capacity and a global reputation through national and international collaboration.
- Guide and mentor students to be outstanding researchers, practitioners, and future leaders.

## OUR STAFF

Our multi-disciplinary Sport and Exercise Science team, coupled with world-leading facilities and technology, provide a distinct advantage in our research and consultancy capability. A strength of the team is our inter- and trans-disciplinary approach to problem solving and research translation, with staff expertise and engagement across broad research areas. We collaborate widely and work with local, national and international sport teams, institutes and academies, leagues and governing bodies, and technology companies. Along with colleagues from Food, Nutrition and Dietetics, we come together as a research team as the Sport, Performance, and Nutrition Research Group.

## OUR HDR STUDENTS

We offer PhD, research and coursework Masters degrees in Sport and Exercise Science and Sport Analytics. Many of our students are embedded and conducting research with industry partners including national and international sporting organisations. Our academic staff are globally recognised for their expertise and applied research, providing excellent training to our post graduate students in the key sub-disciplines of:

- Applied sport science
- Biomechanics
- Exercise physiology
- Motor learning and skilled performance
- Performance analysis and sport analytics
- Sport Coaching
- Scholarship of teaching and learning

# STAFF PROFILES



**Clare MacMahon**

**Associate Professor Clare MacMahon** is an expert in Motor Learning and Skilled Performance and currently serves as the Discipline Lead for Sport and Exercise Science. Originally from Canada, she has a BA in Psychology from McGill University, a Masters in Human Kinetics from the University of Ottawa, and a PhD in Human Biodynamics from McMaster University. In Australia, Clare established the Australasian Skill Acquisition Network (ASAN) to connect and promote skill acquisition research and practice. Clare has worked across broad applications of talent identification and development, decision making, and mental and workload demands in sport and other complex domains (e.g., aviation, astronomy visual discovery).

Key research interests:

- The influence of mental fatigue on physical performance
- Judgment and decision making in sport and complex performance domains
- Talent identification and development.

Clare's work has involved funding from the Australian Research Council, and the Defence Science and Technology Group, and industry partners including the Australian Football League, National Rugby League, Cricket Australia, Australian Institute of Sport, Tennis Australia, and the New South Wales Institute of Sport.



**Kate Webster**

**Professor Kate Webster** serves as the Head of Department of Sport, Exercise and Nutrition Sciences. She is an established tertiary educator with over 20 years' undergraduate and post graduate teaching and research supervision experience. She also has a long-standing industry collaboration with OrthoSport Victoria where she supervises clinical fellowships.

Key research interests:

- Knee orthopaedics, especially anterior cruciate ligament injury
- Injury prevention
- Psychological impact of sport injury.

Kate is internationally recognised for her research and had been named as Australia's Top Researcher in Orthopaedic Medicine and Surgery. She was the lead developer of the Anterior Cruciate Ligament Return to Sport after Injury (ACL-RSI) scale which is translated into 15 languages. She is a current member of the ACL Study Group, a member of the Electronic Media Board for the American Journal of Sports Medicine and has appointments for many other advisory boards and international research working groups.



**Matthew Driller**

**Professor Matt Driller** has extensive academic and industry experience in Sport and Exercise Science. Matt worked at the Tasmanian Institute of Sport while completing his PhD (2006-2009), the Australian Institute of Sport (2009 - 2014) and was the Head of Performance Physiology at High Performance Sport New Zealand (2017-2018). He has had extensive involvement as a sport physiologist over a range of sports spanning from age group/development athletes through to Olympic and Paralympic medalists.

Key research interests:

- Fatigue, recovery and sleep in elite athletes
- Athlete monitoring
- Sport physiology and human performance.

Matt has been involved in establishing multiple industry-funding PhD scholarships, with most of these embedded in professional sporting teams or organisations. He regularly consults to athletes and teams on sleep and recovery practices. More recently, his work has focussed on sleep in various other populations, including military and student contexts.



**Lachlan James**

**Associate Professor Lachlan James** is a Researcher in Strength and Conditioning and Applied Sport Science. Dr James acquired over 10 years of international strength and conditioning industry experience before he returned to Australia in 2014 to transition into applied sport science research. He is an accredited Level 2 Sports Scientist (ESSA), and Accredited Level 2 Strength and Conditioning Coach (ASCA).

Key research interests:

- Strength-power development
- Periodisation and training theory
- Collision and combat sports.

Lachlan has undertaken applied research across several professional sport organisations including teams in the National Rugby League (NRL), Australian Football League (AFL), and the Ultimate Fighting Championship (UFC). Lachlan has attracted industry funding from sport science and sportswear companies such as Vald Performance and Pressio Ltd.



**Kane Middleton**

**Associate Professor Kane Middleton** is a Senior Lecturer in Sport and Exercise Science, specialising in Sport and Occupational Biomechanics. Kane finished his PhD in 2012 at The University of Western Australia in which he investigated the mechanical determinants of ball release speed in cricket fast bowlers. He completed his post-doctoral training at the University of Wollongong where he was embedded with the Defence Science and Technology Group as a Human Performance Scientist and Lead Scientist in the development of physical employment standards for the Royal Australian Navy.

Key research interests:

- Movement variability
- Human performance in accuracy-based sports and physically-demanding occupations
- The assessment and use of portable kinematic and kinetic measurement systems.

Kane is the Chief Investigator on two Australian Department of Defence funded projects investigating 1) movement variability during loaded marching, and 2) perception-action coupling during combat shooting using weapon-mounted sensors. He has also worked with national and international organisations including the Boston Red Sox, New York Yankees, International Cricket Council, CSIRO data61, and Vicon Motion Systems Ltd. Kane is currently a Consultant Biomechanist with the Boston Red Sox.



**Scott Talpey**

**Dr Scott Talpey** is a Senior Lecturer in Sport Coaching and Strength and Conditioning, with two decades of experience in the field across the United States and Australia. He has worked as a coach in the high school and collegiate system in the USA and at the semi-professional level in Australia. Dr Talpey holds specialist coach certifications in Strength and Conditioning (Australian Strength and Conditioning Association; National Strength Conditioning Association, USA) and Baseball (USA Baseball).

Key research interests:

- Coach education and development
- Mentorships in strength and conditioning
- Agility training for team sports.

Scott is an applied researcher who collaborates with national sporting bodies to conduct research that informs coach education and development. He is currently working with Yale University's athletic department to inform practices that enhance athlete safety and performance. Scott is also leading a project with the Victorian Institute of Sport and Victorian Regional Academies of Sport to understand the coach education needs of regional coaches working with high performing junior athletes.



**David Carey**

**Dr David Carey** is a Senior Lecturer in Sport Analytics and Data Science with a background in applied mathematics.

Key research interests:

- Applications of computer vision in sport
- Statistical modelling and data mining in sport science and medicine
- Simulation and optimisation.

David is currently working on problems related to automated player tracking and event detection in team and individual sports using computer vision and deep learning. Previously he has worked with professional Australian Football and soccer teams, and the Australian Institute of Sport on problems relating to training, injury and performance in elite athletes.



**Matthew Varley**

**Dr Matthew Varley** is a Senior Lecturer in Sport Science. He has worked as a sport scientist in both an applied and academic setting. Previously, Dr Varley worked as Research Coordinator and Senior Sport Scientist at the Football Performance and Science Department at the Aspire Academy in Qatar. Prior to that he was a lecturer in the College of Sports and Exercise Science at Victoria University, where he taught in the areas of sport and exercise physiology. He completed his undergraduate studies at RMIT and his PhD at Victoria University titled "Acceleration and Fatigue in Soccer".

Key research interests:

- Athlete monitoring
- Sport technology
- Sport science
- Data in sport and team sports

Matthew has experience with the Victorian Institute of Sport and has provided sport science advice for elite sporting clubs and sport technology companies including Football Federation Australia, Football Federation Victoria, Fusion Sports, and Melbourne Victory, Melbourne Heart, Perth Glory and Western Bulldogs football clubs.



**Anthea Clarke**

**Dr Anthea Clarke** is a Senior Lecturer in Sport and Exercise Science, specialising in Exercise Physiology and Applied Sport Science. Anthea completed her PhD in 2016, which was as a joint project between the University of Canberra and the Australian Institute of Sport, looking at elite women's rugby sevens.

Key research interests:

- Training and performance in elite team sports
- Improving the performance and athlete management process for female athletes.

Anthea has recently received a Victorian Government grant for a project working with male coaches of female team sport athletes to guide future education programs for both coaches and athletes around the menstrual cycle, training, and performance. The aims are to improve the monitoring and management strategies when working with female team sport athletes, particularly in the football codes within Australia.



**Andrew Govus**

**Dr Andrew Govus** is a Senior Lecturer in Sport and Exercise Science, specialising in Exercise Physiology. He completed his PhD at Edith Cowan University in 2015 working with the Australian Institute of Sport to investigate iron metabolism during prolonged, moderate altitude exposure.

Key research interests:

- Environmental physiology: Heat, cold and altitude/hypoxia
- Endurance performance
- Exercise metabolomics
- Data science and statistics.

In 2016, Andrew worked as a Lecturer in Sport and Exercise Science at the University of Bedfordshire (UK) and worked as a post-doctoral researcher at the Swedish Winter Sport Research Centre in 2017, where he assisted with research focused on improving the performance of the Swedish cross-country skiing and biathlon team. Andrew is currently leading the Swimmer's Phenomics Project to develop molecular methods to profile athlete health and performance. This project is in collaboration with the Australian Institute of Sport, Victorian Institute of Sport, Australian National Phenomics Centre, and University of Canberra.



**Pam Kappelides**

**Dr Pam Kappelides** is a Senior Lecturer in Sport and Recreation Management and an expert in inclusive environments. She completed her PhD at Griffith University in 2016 in Psychological contract theory and volunteers.

Key research interests:

- Volunteer management
- Sport participation and inclusion of minority groups (such as females, CALD and Disability)
- Community engagement and the impact of sport participation and development in sport, health and recreation.

She specialises in qualitative research methodology and evaluations. In addition, she has been a lead researcher on large and complex projects. Pam has also been a practitioner in the sport, health and recreation industry prior to an academic career and has a wealth of knowledge in the sector. She has worked with organisations such as the Department of Premier and Cabinet Victoria, VicHealth, YMCA, Special Olympics, International Olympic Council, Melbourne City Football Club and Local governments in Victoria.



**Jacqui Pengelly**

**Dr Jacqui Pengelly** is a Senior Lecturer in Sport and Exercise Science, specialising in Clinical Exercise Physiology. She is an ESSA Accredited Exercise Scientist and ESSA Accredited Exercise Physiologist. Jacqui finished her PhD in 2022 at Swinburne University investigating early resistance training following cardiac surgeries via median sternotomy.

Key research interests:

- Exercise testing and exercise prescription for clinical populations
- Resistance training in clinical populations
- Exercise in people with cardiovascular disease
- Rehabilitation.

Jacqui's research focuses on the use of exercise in disease prevention, treatment and management to improve recovery and function for people with clinical conditions and following injury/surgery. Jacqui is also a member of the ESSA Course Accreditation Committee.



**Mary Grant**

**Dr Mary Grant** is a Senior Lecturer in Career Development in Sport, and Academic Practicum Coordinator within Sport and Exercise Science. Mary has worked as a career development educator within sport and exercise science for many years and recently completed her PhD at Victoria University (Graduate Employability). Prior to entering higher education, Mary worked in industry for 15 years in sport management/junior development, combined with human resources, VET in schools placement programs and training in the TAFE sector.

Key research interests:

- Graduate employability – Strengthening graduate signalling to prospective employers
- Career development – Engaging undergraduates to create opportunities and self-manage their career
- Practical experience – Student learning and development from industry experiences.

Since 2015, Mary has received five Excellence in Learning and Teaching Awards in Higher Education (National, Vice Chancellor, and College) for her work within career development and graduate employability. Mary has been successful in engaging industry to contribute to student learning and to assist the development of undergraduates through placement, guest speakers, industry networking events and orientation programs.



**Ben Mentiplay**

**Dr Benjamin Mentiplay** is a Senior Lecturer in Sport and Exercise Science, specialising in Clinical Biomechanics. Ben currently acts as the Honours Coordinator for the discipline, overseeing the optional Honours research year after completion of undergraduate studies for our students. Ben finished his PhD in 2017 at Australian Catholic University in Melbourne and has experience conducting research in various sporting and clinical populations.

Key research interests:

- Rehabilitation
- 3D gait analysis
- Low-cost and portable technology for the assessment of biomechanics outside the laboratory.

Ben's research has had wide-reaching impact in the assessment and understanding of movement impairments for both patients and clinicians. He has been successful in receiving both internal and external grant funding, including government funding (VESKI, Endeavour) that has allowed him to visit and collaborate with world-leading academics in South-East Asia and North America. Ben is on the Editorial Board for Gait and Posture, has acted as a reviewer for external grant funding bodies (e.g., NHMRC, ESSA, Physiotherapy Research Foundation), is a member of the Exercise and Sports Science Australia (ESSA) Publications Committee, and was previously a member of the La Trobe University Human Ethics Committee.



**Haresh Suppiah**

**Dr Haresh Suppiah** is a Senior Lecturer and Postdoctoral Research Fellow in Sport and Exercise Science and was previously a Senior Sport Physiologist and Head of Research and Development at the National Youth Sports Institute (Singapore), where he worked with multiple Olympic sports in preparation for regional and international competitions. His doctoral and current research focuses on the performance impact of sleep in adolescent athletes. His research also extends to other applied sport science areas, the identification and development of youth talent in sport, and strength and conditioning.

Key research interests:

- Sleep and human performance
- Sport data analytics
- Sport physiology and nutrition.

Haresh continues to collaborate with various international partners on youth athlete development and adolescent sleep.



**Charlie Davids**

**Dr Charlie Davids** is a Lecturer in Sport and Exercise Science, specialising in Exercise Prescription, Strength and Conditioning, and Exercise Physiology. Dr Davids is also an Exercise and Sports Science (ESSA) Accredited Exercise Scientist (AES) and Accredited Level 1 Strength and Conditioning Coach (ASCA). Dr Davids completed his PhD at The University of Queensland.

Key research interests:

- Blood flow restriction exercise
- Acute neuromuscular and physiological responses to exercise
- Hypertrophy and strength adaptations to resistance training.

Charlie is also a research scholar with the Queensland Academy of Sport (QAS) in their Sport Performance Innovation and Knowledge Excellence (SPIKE) unit. During his PhD studies, Charlie developed a collaborative project with the Norwegian School of Sport Science, and spent time in Oslo, Norway investigating the influence of blood flow restriction exercise on trained individuals.



**Chris Neason**

**Dr Chris Neason** is a Lecturer in Exercise Physiology and an ESSA Accredited Exercise Physiologist who completed his PhD at Monash University's Eastern Health Clinical School. His research focuses on optimising exercise for the treatment of low back pain. Chris recently published the ASTEROID 12-week randomised controlled trial, a world-first trial exploring the suitability of run-walk interval training for people with chronic low back pain. He is experienced in qualitative research methods and is involved in several systematic and umbrella reviews.

Key research interests:

- Running for chronic low back pain
- Optimising exercise for chronic pain
- Fears and beliefs towards exercise

Chris is currently expanding the ASTEROID trial to assess its suitability for diverse groups of people with chronic low back pain, alongside a pragmatic real-world rollout.



**Jacquie Tran**

**Dr Jacquie Tran** is a Lecturer in Sports Analytics and Performance Analysis. Prior to joining La Trobe, Jacquie has held various roles in elite sport over the last 10 years, including Head of Intelligence at High Performance Sport New Zealand and Research Fellow at the Geelong Cats FC and Deakin University (joint appointment). She is a multidisciplinary sport scientist, with applied and research experiences spanning topics in biomechanics, training and recovery physiology, and game analysis. Jacquie completed her PhD at Deakin University, in collaboration with the Australian Institute of Sport and Rowing Australia.

Key research interests:

- Preparation and recovery strategies in elite sport and high-performance contexts
- Gameplay patterns in team sports
- Statistical modelling of sport data.

Jacquie continues to pursue research focused on human performance in elite / performance-focused settings, with current collaborations including projects with Australian football clubs (North Melbourne FC, Collingwood FC), the Victorian Institute of Sport, Cricket Australia, and the Defence Science and Technology Group.



**Kate Perry**

**Kate Perry** is a Lecturer in Sport Coaching and Development and Sport and Exercise Science. She specialises in coach development, coaching pedagogy, exercise programming and prescription, and exercise physiology. Kate completed her Masters of High Performance Sport (2015) before commencing work as an endurance cycling coach, working with a number of elite road cycling teams and individual athletes.

Key research interests:

- Coach development
- Training load monitoring and adaptations to endurance exercise
- Coaching pedagogy and impact on athlete development
- Inclusive sport coaching.

As a member of the Sport Coaching team, Kate is involved in the delivery and research of online coach education to Australian Institute of Sport (AIS) pathway coaches. A former elite cyclist herself, Kate is passionate about the pursuit of performance excellence and mentoring the current generation of elite female cyclists, continuing her work with elite cycling teams and individual athletes.



**Paul Xanthos**

**Dr Paul Xanthos** is a Lecturer in Sport and Exercise Science, specialising in Exercise Physiology. Paul finished his PhD in 2019 at La Trobe University investigating exercise-based cardiac rehabilitation.

Key research interests:

- Exercise and cardiometabolic health
- Exercise and sport physiology
- Scholarship of learning and teaching.

Paul is currently working on projects devoted to the scholarship of learning and teaching, including enhancing the student learning experience, while maintaining a keen research interest in the physiological benefits of exercise for health and performance.



**Luke Wilkins**

**Dr Luke Wilkins** is a Lecturer in Motor Behaviour and Talent Identification. Originally from the United Kingdom, Luke obtained his PhD from The University of Birmingham, where he explored how visual, perceptual, and cognitive skills impact sporting performance. He has held positions at Newcastle University and Nottingham Trent University, teaching skill acquisition and sport psychology. Luke has also worked for the New York Yankees baseball organisation as a sport scientist and lead skill acquisition specialist.

Key research interests:

- Visual, perceptual, and cognitive skills in sport
- Use of virtual reality training to improve sporting performance
- Mental health within the sports and games domain.

Luke is involved in several global research collaborations which include projects exploring the use of the pink ball in cricket, the gaze behaviour of baseball batters, and how virtual reality (VR) technology can be used to enhance sporting performance. He is currently working closely with UK-based VR company 'Rezzil' and Premier League football club Aston Villa and is a part of a Department of Defence funded project at La Trobe.



**Katie McDonald**

**Dr Katie McDonald** is a Lecturer in Sport and Recreation Management, specialising in community sport infrastructure planning and local government policy development. Katie completed her PhD in 2021 at Victoria University focusing on the planning and decision-making processes for aquatic and recreation centres in metropolitan Melbourne.

Key research interests:

- Planning and development of community sport and recreation infrastructure
- Local government sport and recreation policy analysis
- Decision-making processes in public leisure management
- Community engagement in sport and recreation planning.

Katie's work combines academic research with extensive practical industry experience. She has held diverse positions in local government sport development and policy, leisure planning consultancy, and facility management. Katie is also an active member of the Australia New Zealand Association of Leisure Studies (ANZALS), where she serves on the board and has facilitated workshops and development programs for leisure studies students.



**Sarah Carter**

**Dr Sarah Carter** is a Lecturer in Sport and Exercise Science, specialising in exercise physiology. Sarah completed her PhD at The University of Sydney, where she investigated the thermal dysfunction experienced during menopause. She has held positions at The University of Sydney and Charles Darwin University, teaching across anatomy, physiology, strength and conditioning, exercise prescription, and rehabilitation.

Key research interests:

- Thermal physiology and perception
- Sex and thermoregulation
- Cooling practices and ergonomics.

Sarah's previous work has involved the Defence, Science, and Technology group, NSW Health, and the SDA. Her work with the SDA influenced policy for menopausal women in the warehousing sector of NSW, while her guidance has shaped the heat resilience practices of ADF personnel in the Northern Territory. Her future work aims to improve living and work conditions for those experiencing thermal strain or discomfort, with a focus on health and wellbeing in the face of climate change.



**Danielle Vickery-Howe**

**Dr Danielle Vickery-Howe** is a Lecturer in Sport and Exercise Science, specialising in biomechanics and applied physiology. Danielle completed her PhD in 2025 at La Trobe University, where she investigated the effects of task constraints on biomechanical and physiological responses during military load carriage.

Key research interests:

- Military load carriage and physically demanding occupations
- Movement optimisation and injury prevention of movement in sports, exercise and occupational settings
- Biological sex considerations in responses to constraints during performance.

Danielle has worked as an investigator on projects with stakeholders including Defence Science and Technology Group, the Department of Energy, Environment and Climate Action, InvoCare, Epworth Health and Victoria Police. She also has experience and interest in sport biomechanics, including archery, basketball, baseball, netball and tennis. Her interests in clinical biomechanics include walking gait assessment and return-to-sport outcomes following knee injury.



# SES SERVICES

## SPORT PERFORMANCE HUB

We established the [Sport Performance Hub](#) to offer performance services, education, and training facilities for athletes, teams, schools and the wider sports community. Located within La Trobe University's world-class Sports Park precinct, the Sport Performance Hub provides elite athletes, weekend warriors and community sport groups access to state-of-the-art sport and exercise science facilities.

Complimented by world-renowned research from our leading industry experts and a comprehensive suite of education offerings, the Sport Performance Hub can help you take your performance to the next level.

Services include:

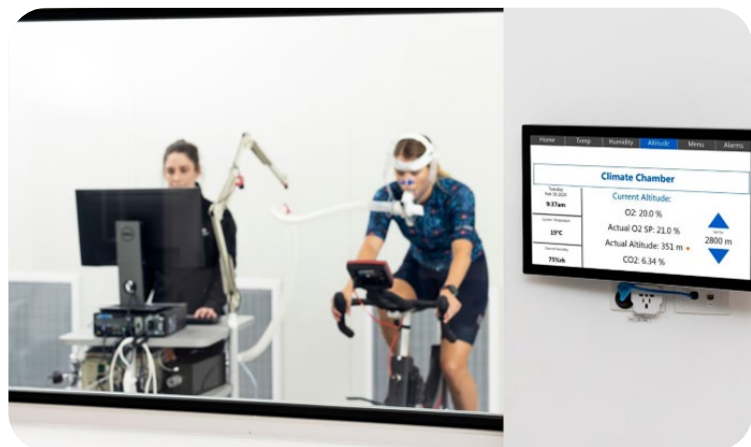
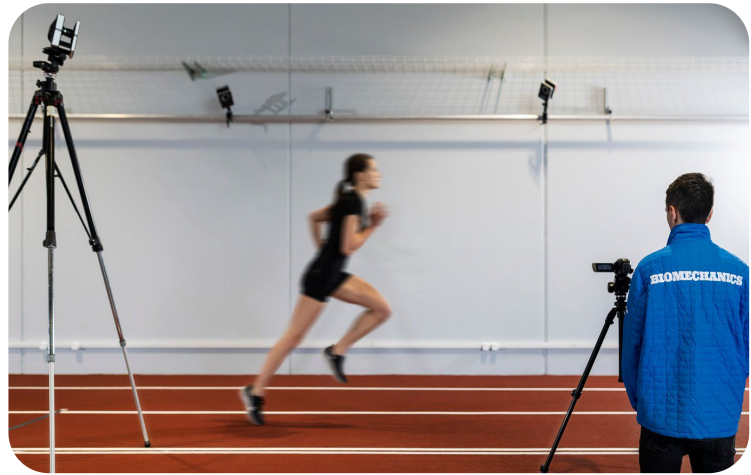
- » sport biomechanics
- » strength and conditioning
- » sport physiology and performance
- » heat and altitude acclimation
- » nutrition and recovery
- » athlete wellbeing
- » team fitness testing
- » sport camps
- » VCE physical education program

All services are delivered by leading academics and qualified members of La Trobe Sport.

Enquiry forms:

[High Performance Sport](#)

[School programs](#)



# SES FACILITIES

## BIOMECHANICS LABORATORY

The La Trobe Sports Biomechanics Laboratory is a 434m<sup>2</sup> multi-zone space. The “Running Zone” incorporates two 50-m Mondotrack running lanes. The “Field Zone” is adjacent to a large door that opens directly onto our FIFA accredited synthetic pitch for kicking, throwing and other field-based activities. The “General Purpose Zone” allows for the conduct of numerous types of activities. The laboratory is serviced by Vicon (marker) and Theia (markerless) motion capture systems. The floor-embedded AMTI force platforms can be moved between zones for complete flexibility. The laboratory also houses a Biodex isokinetic dynamometer, numerous wireless technologies such as Vicon Blue Trident and Movella DOT inertial measurements units, Novel loadsol instrumented insoles, a Krontech Chronos high-speed camera, and a Delsys Trigno electromyography system.



# SES FACILITIES

## EXERCISE PHYSIOLOGY LABORATORY

The La Trobe Exercise Physiology Laboratory has world-class facilities for exercise testing in both research and clinical settings. Our two physiology teaching laboratories each have five Parvomedics TrueOne Metabolic Carts for cardiorespiratory testing, which can be performed using either a treadmill, bicycle or rowing ergometer and accompanied by 12-lead ECG monitoring. Our research laboratory includes a large testing space, four consultation rooms and an environmental chamber. Our environmental chamber can replicate hot and humid conditions of 10-40C and simulate altitudes of up to 6,000m.



# SES FACILITIES

## STRENGTH AND CONDITIONING LABORATORY

The Strength and Conditioning Laboratory in the La Trobe Sports Stadium houses eight lifting platforms and racks with over 5000kg of competition standard Eleiko equipment. The training floor opens directly on to the FIFA accredited synthetic pitch for speed, agility and endurance training and testing activities. The Strength and Conditioning Laboratory is connected to the Sports Biomechanics Laboratory by two 50m Mondotrack running lanes. The Strength and Conditioning Laboratory also houses two lifting platforms with built-in dual force platforms. These platforms are also instrumented with motion capture technology and interface to provide real time feedback on lifting kinetics and kinematics. In addition, the Strength and Conditioning Laboratory houses a custom made Sorinex isometric testing rack accompanied by synchronised AMTI force platform and a Delsys Trigno electromyography system for combined strength and muscle activation assessment. The Strength and Conditioning Laboratory has extensive capability for off-site testing supported by several sets of portable force platforms, a custom made portable isometric mid-thigh pull rig, several sets of Fusion Sports timing gates, and eight GymAware linear position transducers.



# SES FACILITIES

## PERFORMANCE ANALYSIS AND SPORT ANALYTICS LABORATORY

The La Trobe Performance Analysis and Sport Analytics Laboratory provides in-training and competition analysis and brings the laboratory to the field.

Leveraging the power and convenience of wireless and wearable technologies allows in-game insight for coaches and extensive post-game analysis for sport science staff and researchers. Catapult's Vector system provides premium elite athlete monitoring in the field using advanced GNSS, LPS and inertial measurement unit technology. The La Trobe Sports Stadium's courts are instrumented with Catapult's Clearsky indoor system giving high-quality LPS athlete tracking data.

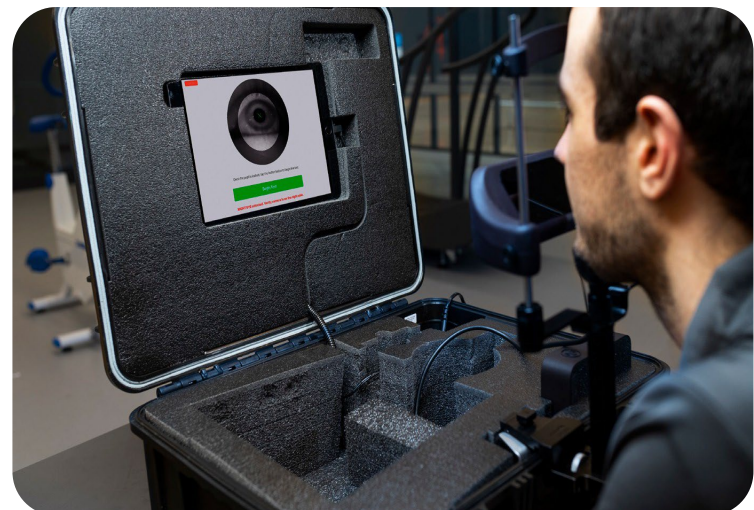
Combined with Synergy Sports' FIBA Connected Stadium camera technology and fully-automated AI driven video production provide unprecedented indoor analysis capability. The Sport Analytics Laboratory overlooks the FIFA-accredited synthetic football-pitch, enabling real-time event coding using Sportscode for performance analysis and packaging of synchronised video highlights. Data science and programming skills enable comprehensive and in-depth analysis of the ever-increasing data collected within sport.



# SES FACILITIES

## SKILLED PERFORMANCE LABORATORY

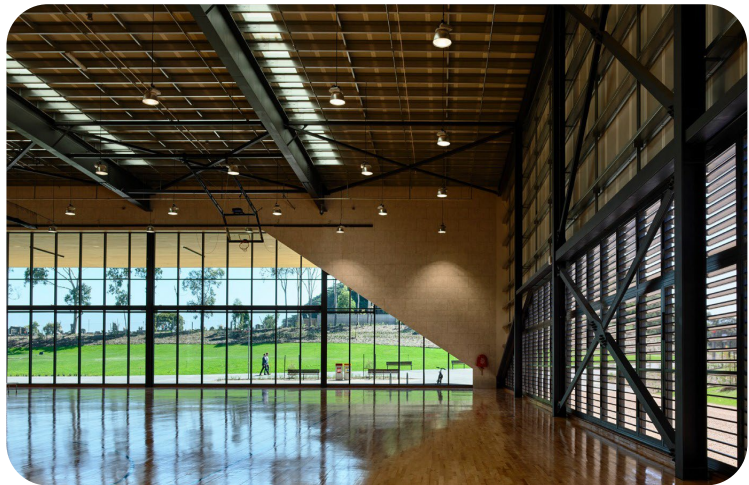
The La Trobe Skilled Performance Laboratory is used to examine aspects of learning and performance for complex skills across multiple domains. This involves exploring and understanding visual processing and decision making, mental load, simulating performance environments, and comparing different training approaches. The lab uses a combination of psychophysiological and behavioural measurement including eye tracking technology, video capture and projection, Virtual Reality, and event coding. Applications span sport performance, coaching and officiating, as well as domains with complex decision and visual processing demands like military, policing and emergency personnel.



# SES FACILITIES

## LA TROBE SPORTS STADIUM

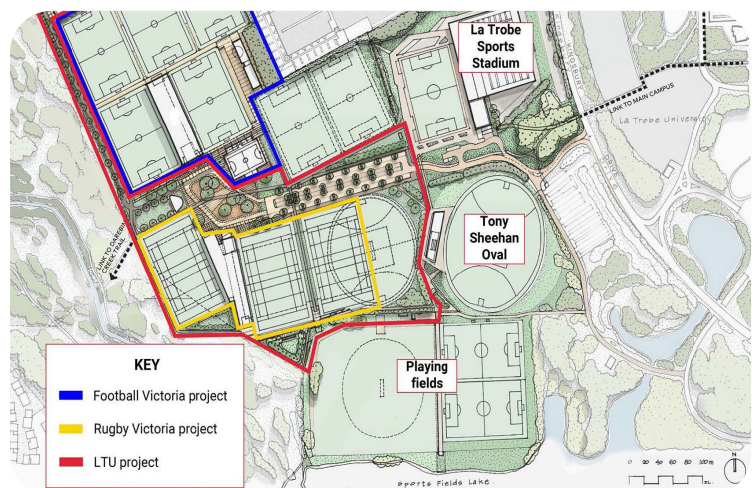
The [La Trobe Sports Stadium](#) includes six indoor multi-purpose courts; world-class sport science laboratories (exercise physiology, strength and conditioning, biomechanics, human performance and environmental), as well as teaching and office facilities for staff and students. The Stadium also accommodates the headquarters of external sport industry tenants including Softball Australia, Northern Football Netball League and the Australian Council for Health, Physical Education and Recreation (ACHPER).



# SES FACILITIES

## LA TROBE SPORTS PARK

[The La Trobe Sports Park](#), managed by [La Trobe Sport](#) (LTS), is located on 60 hectares in the south-west corner of the University's campus in Bundoora, Melbourne. The \$150 million precinct supports major participation sport events, grassroots sport competitions and recreation opportunities. It also trains the next generation of sport industry professionals through a world-class student placement program. The Sports Park includes a FIFA-accredited synthetic football-pitch, multiple soccer and cricket ovals, a competition-grade AFL oval, and a baseball diamond with central pavilion and function facilities. Stage 2 of the Sports park precinct was completed in January 2020 and includes the state-of-the-art Sports Stadium. Stage 3 establishes centres of excellence and administration headquarters for Football Victoria and Rugby Victoria, including five football pitches, a futsal court, and three rugby pitches.



# WHY CHOOSE SPORT AND EXERCISE SCIENCE AT LA TROBE?



## World-leading research

La Trobe's research in human movement and sports science and in physiology is rated 'well above world standard'.

Australian Research Council, 2019, [Excellence in Research for Australia \(ERA\) Outcomes 2018](#)



## Top 40 globally

We're ranked in the world's top 40 for sport.

Quacquarelli Symonds (QS), 2023, [QS World University Rankings by Subject 2023: Sports-Related Subjects](#)



## Ranked 14th globally

Ranked 14 in the Global Ranking of Sport Science Schools and Departments

2022 Global Ranking of Sport Science Schools and Departments  
<https://www.shanghairanking.com/rankings/grsssd/2022>



## 1st in Victoria

We're the best in Victoria and third in Australia for employer satisfaction, with a rating of 88.1 per cent.

Quality Indicators for Learning and Teaching (QILT), 2023, [2022 Employer Satisfaction Survey \[PDF, 812 KB\]](#)

# INDUSTRY PARTNERS AND COLLABORATORS

The Sport and Exercise Science Discipline partners with a diverse range of industry, clinical, sports, and health organisations to develop research that delivers real-world impact. Our Australian and international partnerships are integral to ensure that our research leads to valuable and impactful change in the performance, wellbeing, and health of all communities. Students enrolled in our Industry PhDs are embedded with partners to ensure that their research addresses industry-based challenges that will have immediate impact.

## OPPORTUNITIES TO ENGAGE WITH OUR RESEARCH TEAM

There are numerous opportunities to partner with us on research projects and problem-solving initiatives, including:

- » **Masters/PhD projects** (2-3 years duration; may require some funding)
- » **Honours projects** (12 month duration)
- » **Internships** (80-140 hours of work-based placement)
- » **Collaborative grant applications**
- » **Research consultancy**
- » **Professional education and short courses**

### CONTACT US

If you are interested in working together but don't know where to start, please just email or give us a call:

Associate Professor Clare MacMahon  
Discipline Lead, Sport and Exercise  
Science

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