



LA TROBE
UNIVERSITY

School of Allied Health,
Human Services and Sport

**RESEARCH
CAPABILITY**

**PROSTHETICS
AND
ORTHOTICS**



Acknowledgement of Country

LaTrobe 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 improve the health outcomes of prosthetic and orthotics users through relevant, targeted and impactful research.

OUR FOCUS

Our research seeks to better understand the issues that impact prosthetic and orthotic users and to investigate solutions that address clinical needs.

We work collaboratively with interdisciplinary teams, as well as industry partners to solve real world problems.

RESEARCH CAPABILITY

OUR OBJECTIVES

- To evaluate the effectiveness of prosthetic and orthotic clinical interventions and systems, and the development of best practice models of clinical practice and education.
- To build research capacity to maximise research outputs, impact and recognition.
- To work with clinical and industry partners to ensure our research is relevant to key stakeholders, health services and users.

OUR STAFF

Our team offer a mix of highly skilled researchers, educators and clinicians with a demonstrated commitment to engaging and exploring topics related to prosthetic and orthotic design, clinical provision and education.

OUR GRADUATE RESEARCH STUDENTS

Our higher degree students are enrolled in Masters by research or PhD degrees. As part of those degrees, students undertake highly quality research aligned to an area of personal interest and professional need. Over time, students have completed a diverse range of projects to:

- understand orthotists' rationale for the prescription of ankle-foot orthoses or supramalleolar orthoses for children living with Cerebral Palsy.
- solve some of the most pressing method design issues limiting health economic evaluations in prosthetics and orthotics.



STAFF PROFILES



Anthony Francis

Associate Professor Anthony Francis is a Certified Clinical Orthotist/Prosthetist (c-OP AOPA) and fellow of the Higher Education Academy (FHEA). He currently serves as the Discipline lead, Prosthetics and Orthotics. His interests include the promotion and development of good teaching practice at national and international level and the identification and development of learning activities which promote high professional competencies in Prosthetics and Orthotics graduates with a focus on client centred practice.

Key research interests:

- development of best-practice education in prosthetics and orthotics
- clinical applications for complex lower limb orthotics
- user centred design and assistive technology.



Tim Burke

Tim Burke is a Certified Clinical Orthotist/Prosthetist (c-OP AOPA), Senior Lecturer and Course Coordinator for the Discipline of Prosthetics and Orthotics. Tim worked clinically as an orthotist for >10 years in the Victorian public health system in both senior clinical and management positions. His interests include orthotic trauma management, diabetic foot disease management and education, and curriculum design in prosthetics and orthotics.

Key research interests:

- work-based learning in prosthetics and orthotics
- diabetic foot disease management
- interprofessional practice in healthcare.



Aileen Wong

Dr Aileen Wong is a Lecturer in the Discipline of Prosthetics and Orthotics and the honours coordinator for both the research and industry streams. Aileen completed her PhD in 2010 investigating the neurophysiologic effect of tone-reducing ankle-foot orthoses in stroke survivors. Following this, Aileen worked for several years as an orthotist gaining essential clinical experience and specialising in the orthotic management of foot and ankle conditions. Aileen's current research interests involve burnout among Australian prosthetists and orthotists and spatial visualisation ability in students.

Key research interests:

- work-related burnout
- spatial visualisation ability
- orthotic management of foot and ankle pathology.



Fiona Mac Manus

Fiona Mac Manus is a Lecturer in the Discipline of Prosthetics and Orthotics and a Certified Clinical Orthotist/Prosthetist (c-OP AOPA). Fiona has worked in acute and subacute public health settings across metropolitan and regional Victoria and Tasmania as a clinical Orthotist and Prosthetist for more than 20 years. Her interest areas include diabetic foot disease and neurological management.

Key research interests:

- lower limb orthotic management
- education design and delivery
- clinical placement experience.



Sam Nichols

Sam Nichols is a Lecturer in the Discipline of Prosthetics and Orthotics at La Trobe University and is a Certified Clinical Orthotist/Prosthetist (c-OP AOPA). Sam has had considerable experience as a clinical prosthetist over the past 15 years, which has equipped him with a deep understanding of patient care and the latest advancements in prosthetic and orthotic technology. His research interests include technological advancements in the field, especially in creating innovative solutions for amputees.

Key research interests:

- prosthetic innovations
- amputee client outcomes
- prosthetic and orthotic service delivery in developing nations.



Patrick Shinnars

Patrick Shinnars is a Lecturer in the Discipline of Prosthetics and Orthotics. Patrick is a certified Prosthetist/Orthotist (c-OP AOPA) with over 15 years of extensive clinical experience in rehabilitation and community settings, both in metropolitan and regional areas. He has dedicated his career to working with individuals after limb amputation, providing compassionate and expert care. Patrick is currently completing his Graduate Certificate of Higher Education.

Key research interests:

- upper and lower-limb prosthetics
- adult learning and higher education
- use of digital tools to improve delivery of prosthetic and orthotic services.

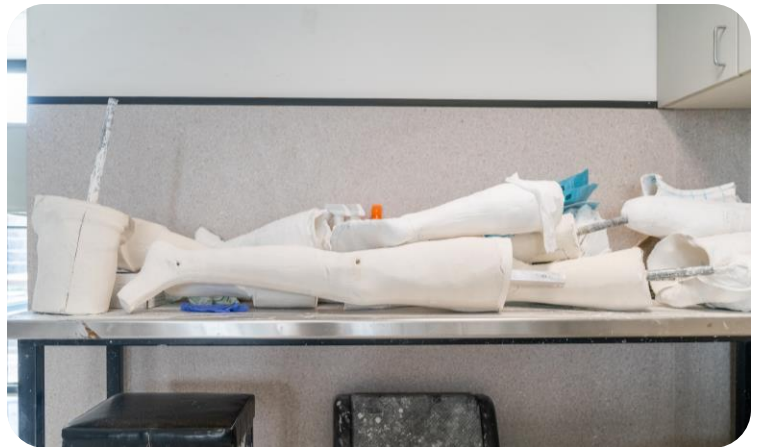


WORLD CLASS RESEARCH AND TRAINING FACILITIES

PROSTHETICS AND ORTHOTICS LABORATORY

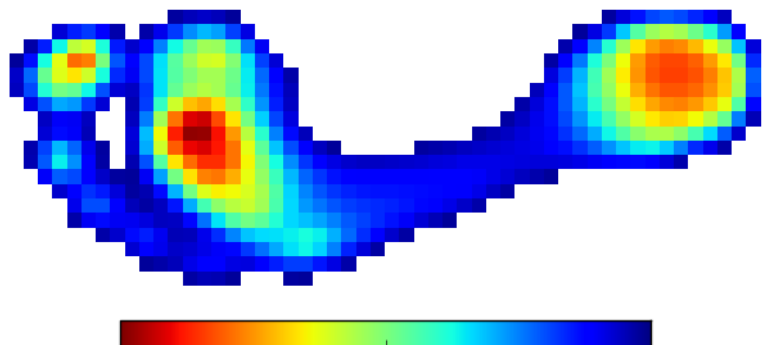
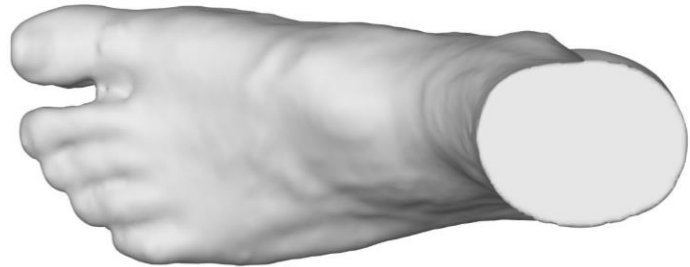
The Prosthetics and Orthotics laboratory provides students with a hands-on learning experience in prescribing, designing, fabricating and fitting prosthetic and orthotic devices.

The laboratory includes clinical spaces for client consultations and assessments, and a machine room with equipment to fabricate industry-standard prosthetics and orthotics.



FOOT AND ANKLE LABORATORY

The Foot and Ankle Laboratory is located in the Health Sciences 2 building of the Bundoora campus, and houses a state-of-the-art 3-dimensional laser scanner (the IN-FOOT Scanner), a high-resolution plantar pressure platform (the Novel EMED-SF system), in-shoe plantar pressure system (the Novel Pedar), optical treadmill gait analysis system (OptoGait) and wearable sensor balance and gait analysis system (Gyko). The laboratory also features instrumentation for measuring muscle strength, and in-shoe temperature and humidity testing for the evaluation of footwear and foot orthoses.



GAIT LABORATORY

The Gait Laboratory, located over two floors in the Health Sciences 3 building, is a state-of-the-art research facility within La Trobe's Sport and Exercise Medicine Research Centre. It is used to understand the structure and function of the musculoskeletal system, and causes, prevention and treatment of musculoskeletal injuries and disease.

The Gait Laboratory, the largest of its type in the southern hemisphere, incorporates a Vicon 3D motion analysis system, GAITRite walkway, Neurocom Balance Master and Humac Dynamometer.



LA TROBE SPORTS PARK

The La Trobe Sports Park is located on 60 hectares in the south-west corner of the University's campus in Bundoora, Melbourne. The \$81 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.



WHY CHOOSE LA TROBE?



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 \[PDF, 812 KB\]](#)



#4 in Australia for good health and wellbeing

We're ranked fourth in Australia and twelfth in the world for our research on key diseases and conditions, our support for healthcare professions, and the health of our students and staff.

Times Higher Education (THE), 2024 [Impact Rankings 2024: good health and well-being](#)



Real work settings

Our students learn in Victoria's leading hospitals through our on-site clinical schools and work placements.

[Find out more](#) about our health placements



Leading research

Our researchers are working to improve health and wellbeing across communities and the lifespan.

Find out more about [our research](#)

INDUSTRY RELATIONSHIPS

CLINICAL PARTNERS

The Prosthetics and Orthotics Discipline partners with a diverse range of industry, clinical, community and health organisations to develop research that deliver real-world impact.

Our Australian and international partnerships are integral to ensure that our research is leads to valuable and impactful change in the health, wellbeing and performance of all communities. Students enrolled in our Industry and Clinical PhD programs are embedded with partners to ensure that their PhD 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 ideas and projects, including:

- Honours projects (12 months' duration)
- Masters/PhD projects (2-3 years duration, may require some funding)
- Collaborative grant applications
- Research consultancy.

CONTACT US

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

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WANT TO KNOW MORE? GET IN TOUCH

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