**2019-2020 SHRS UQ Summer Research Project Description**

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| **Project title:** | **Healthy Ageing and Neurorehabilitation** |
| **Project duration:** | * 10 weeks * 36 hours/week (negotiable) |
| **Position/s available** | 2 positions |
| **Description:** | The scholars will join the UQ Centre for Neurorehabilitation, Ageing and Balance (NAB) Research, based within the School of Health and Rehabilitation Sciences, and have opportunities to contribute to several projects. The scholars will be involved with two key projects led by Prof Sandy Brauer and Dr Anna Hatton, including clinical trials investigating novel footwear devices to improve walking in clinical groups (e.g. sensory-stimulating shoe insoles for adults with diabetic peripheral neuropathy) and physical activity monitoring in people with neurological disease (e.g. Parkinson’s disease). The scholars will be responsible for assisting with participant recruitment; leading clinical and laboratory-based assessments; collecting, processing, and managing data. The scholars will also have opportunities to contribute to ongoing projects led by other academics within the Centre, including vibrotactile neurofeedback training to improve postural stability in older adults with hearing impairment, and the use of accelerometers to measure activity intensity post-stroke. These projects represent exciting partnerships with local health services (e.g. Queensland Health), NGOs (Diabetes Australia, Parkinson’s Queensland), and European industry (e.g. Walk with Path, Denmark), and seek to explore cutting-edge solutions to safe living, active ageing and well-being. |
| **Expected outcomes and deliverables:** | The scholars will gain deeper understanding of current research trends within the ‘healthy ageing’ and ‘neurorehabilitation’ arenas, by leading key activities within ongoing exploratory studies and clinical trials that harness fundamental knowledge and skills from across a broad range of disciplines (e.g. design innovation, engineering, human movement, physiotherapy). The scholars’ contribution to a range of laboratory- and hospital-based research projects will extend their ability to perform rigorous clinical and functional assessments of older people, adults with neurological and metabolic diseases. The scholars will develop skills in data collection, management, processing and analysis, and receive training in the use of biomechanical equipment (e.g. activity monitors, electromyography, force plates, electronic walkways). The scholars will also have the opportunity to contribute to journal publications and conference presentations. |
| **Suitable for:** | The project is open to applications from Year 2 and Year 3 Physiotherapy students, who have a keen interest in healthy ageing, neurological rehabilitation, biomechanics, human movement, and physical activity. |
| **Primary Supervisor:** | Dr Anna Hatton  Professor Sandy Brauer |
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