Centre for Functioning and Health Research

2 scholarships will be offered

Name:  Professor Liz Ward

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Phone:  34062265 (please contact by email initially)
The supervisor wishes to be contacted by students prior to submitting an application (email contact via liz.ward@uq.edu.au is preferred in the first stance).

Applications for this project: e-mail to liz.ward@uq.edu.au
copy to rhdadmin.shrs@uq.edu.au

Students will have the opportunity to be part of allied health research being conducted by members of the multidisciplinary team from the Queensland Health, Centre for Functioning and Health Research (CFAHR, www.health.qld.gov.au/cfahr). The Centre is located at Centro Buranda – the office block within the shopping centre located opposite the Princess Alexandra Hospital. The projects will be directly related to clinically based speech pathology research within Queensland Health and many involve multidisciplinary team work. As there are a wide range of projects currently underway in CFAHR, there is scope for the student to be involved in projects of greatest interest to them. The exact project will be determined in consultation with the student. Some examples of the types of projects that may be on offer relate to clinical areas including: speech and swallowing outcomes following head and neck cancer, patterns of clinical practice in voice prosthesis management, management of dysphagia in individuals in residential aged care services, telehealth, new workforce training models - as just some examples. Involvement in these or other ongoing research projects can be discussed with interested applicants – however applicants need to be willing to work across a number of projects.
**Project title:** Exploring profiles of perceived environmental restrictions for participation in children with disabilities attending special schools  

**Project duration:** 10 weeks  

**Description:** Participation has been recently recognised as an important outcome and ultimate goal for rehabilitation research and clinical practice in children with disabilities. Based on *International Classification of Functioning, Disability and Health-Child and Youth version* (ICF-CY), environment may play a significant role in whether or to what extent a child is able to participate. Therefore, this summer research program aims to explore and establish the profiles of perceived environmental restrictions (including areas of home, education, and community) of children with disabilities attending special schools. The researchers hypothesise that children in this group may experience moderate environmental restrictions in community but mild or no restrictions at home or educational setting, because they have attended special schools regularly and home environment may have been optimised for their participation. A population-based survey has been conducted in the special schools located around Brisbane Metropolitan region. Data collection will be completed before the summer research program is started.

**Expected outcomes and deliverables:** The student is expected to conduct a content analysis of the survey questionnaire used in this study by linking it with the ICF-CY. To do so, the student will be trained by the primary researcher and familiarise him/herself about the ICF-CY contents and linking rules. Furthermore, the student will have an opportunity in assisting in analysis of the survey data and reporting of the preliminary results. In addition, the student may be able to be involved in generating some parts of the draft manuscript for journal publication of this research.

**Suitable for:** This project is open to applications from students with a background in allied health or education, 2–4 year undergraduate students or master’s students, and who are interested in paediatric research.

**Primary Supervisor:** Dr. Chi-Wen Chien (Will)

**Further info:** The supervisor wishes to be contacted by students prior to submitting an application (email contact via e.chien@uq.edu.au is preferred in the first stance).

Applications for this project: e-mail to e.chien@uq.edu.au  
copy to rhdadmin.shrs@uq.edu.au
<table>
<thead>
<tr>
<th><strong>Project title:</strong></th>
<th>Pain adaptations in postural control</th>
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<tr>
<td><strong>Project duration:</strong></td>
<td>6-8 weeks</td>
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<tr>
<td><strong>Description:</strong></td>
<td>Background: The human motor system reacts to painful stimuli with a redistribution of activity within and between muscles, which may alter the mechanical behaviour of muscle contractions. Although these short-term adaptations supposedly aim at the relief to the pain sensation, they could also result in long-term consequences, including changes in muscle coordination and overload of otherwise non-painful structures, which could be associated with the development of chronic pain. In fact, significant changes in muscle coordination have been reported in patients with chronic pain conditions such as knee osteoarthritis and low back pain. Taken together, these changes affect the ability of patients to control their postural balance, resulting in increased body sway during quiet standing and increased risk of fall. However, it is hard to determine a causal relationship between pain and motor adaptations in a patient population due to the presence of multiple physiological and psychological confounding factors, e.g. structural damage, inflammation, and/or fear-avoidance behaviour. One alternative is to use experimental pain models to temporarily induce pain in healthy individuals, thus assessing the effects of pain per se.</td>
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<tr>
<td><strong>Expected outcomes and deliverables:</strong></td>
<td>Enrolled scholars will gain skills in data collection and analysis, with the possibility to generate a publication from their research. Students will be required to perform an oral presentation for the research unit at the end of their research project.</td>
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<td><strong>Suitable for:</strong></td>
<td>This project is open to application from students with a background in physiotherapy enrolled at UQ, ideally 3-4 year students.</td>
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<tr>
<td><strong>Primary Supervisor:</strong></td>
<td>Sauro Emerick Salomoni (CCRE Spine – School of Health and Rehabilitation Sciences)</td>
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<td><strong>Further info:</strong></td>
<td>The supervisor wishes to be contacted by students prior to submitting an application for this project: <a href="mailto:s.salomoni@uq.edu.au">s.salomoni@uq.edu.au</a></td>
</tr>
</tbody>
</table>

Applications for this project: e-mail to s.salomoni@uq.edu.au
copy to rhdadmin.shrs@uq.edu.au
### Project title:
Does how you breathe influence capacity to support and control load applied to the spine and shoulder girdle?

### Project duration:
9 weeks

### Description:

**Background:** It has been shown that respiration influences trunk stiffness against a sagittal (front to back) force.

**Aim:** The aim of this study is to determine how respiration influences trunk stiffness against axial load (top to bottom).

**Approach:** Pilot data collected in a Graduate Entry Masters research course (HRSS7801) in semester 1, 2013 has demonstrated that the respiratory cycle varies resistance to shoulder load in sitting, but the variation confounded ability to test trunk stiffness against sudden load application. The proposed study progresses from what was learnt in the HRSS7801 project, with modifications to equipment and refinements in research methods. This will mean that trunk stiffness against axial load through respiration can be tested with a new level of sensitivity.

**Relevance:** The impact of this study will be both for basic science understanding of the postural control, as well as immediately informing methods for a series of studies examining control with axial load.

### Expected outcomes and deliverables:
The project will involve
- Data collection with 14 participants over 4 weeks
- Data analysis for 3 weeks
- Project write-up for 2 weeks.

The applicant(s) can expect to gain skills and experience with
- 3-D motion tracking, force measures and a range of recording, data management and reporting tools,
- Engaging with members of a world-leading research team for study of spinal biomechanics and neuromuscular control.

It is intended that the project will lead to publication in a high quality peer-reviewed journal, and presentation at national / international conferences.

### Suitable for:
It is ideal if the applicant has preliminary experience in Semester 1, 2013, using the novel axial loading apparatus with pilot study that was undertaken as part of HRSS7801.

### Primary Supervisor:
Dr Andrew Claus

### Further info:
Email contact is preferred, to discuss the project with applicants prior to their submission of application.

Email address: a.claus1@uq.edu.au

The supervisor wishes to be contacted by students prior to submitting an application for this project:

Applications for this project: e-mail to a.claus1@uq.edu.au

copy to rhdadmin@uq.edu.au