<table>
<thead>
<tr>
<th><strong>Project title:</strong></th>
<th>Best practice design in Australian Aboriginal and Torres Strait Islander Institutional Architecture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project duration:</strong></td>
<td>8 weeks</td>
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<tr>
<td><strong>Description:</strong></td>
<td>The Summer Scholar will contribute to Indigenous Design Place research aimed at finding and analysing best practice in terms of integrated Indigenous inspired service delivery and architectural design in institutional settings including health clinics, aged care, schools and judicial settings. The Summer Scholar’s project will examine the design of one selected type of institutional setting through a comparison of recent buildings from different locations in Australia. The student will attempt to evaluate the architectural and service responses to general and specific social and cultural needs identified in the broader research project. <strong>Approach:</strong> 1. Literature and web search to identify case studies across Australia; 2. Select and analyse the precedents; 3. Prepare a report on the case studies.</td>
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<td><strong>Expected outcomes and deliverables:</strong></td>
<td>Scholars will gain experience in literature-based data research. Research tasks will include: 1. Identification of Indigenous institutional setting by scoping websites and available literature to find examples of best practice in remote, region and urban areas of Australia 2. Develop skills in architectural evaluation. 3. Produce report and bibliography on the project.</td>
</tr>
<tr>
<td><strong>Suitable for:</strong></td>
<td>This project is open to applications from advanced students (eg M. Arch or BA Hons student), with a background and interest in architecture and/or Indigenous studies and/or human well-being.</td>
</tr>
<tr>
<td><strong>Primary Supervisor:</strong></td>
<td>Dr Cathy Keys <a href="mailto:c.keys@uq.edu.au">c.keys@uq.edu.au</a>, Manager Indigenous Design Place initiative</td>
</tr>
<tr>
<td><strong>Further info:</strong></td>
<td>Supervisor wishes to be contacted by students prior to submitting an application <a href="mailto:c.keys@uq.edu.au">c.keys@uq.edu.au</a>.</td>
</tr>
</tbody>
</table>
Project title: Queensland Frontier Towns and the ‘Wild Australia Show’

Project duration: 8 weeks

Description: This summer scholar will join a team of researchers in the Aboriginal Environments Research Centre working on a project investigating the relationships between Aboriginal people and settlers on the Queensland frontier in nineteenth century. The scholar will examine the genesis, establishment and character of Australian frontier towns in the late nineteenth century. Compare and contrast Aboriginal and early colonial settlement patterns and modes of living and the colonial exchange. This project will contribute to the Australian Research Council-funded research project on the Wild Australia Show. A broader aim of this research is to exhibit the history of the Wild Australia Show in the Queensland Museum, NSW Public Library and Museum Victorian as well as smaller regional centres.

Expected outcomes and deliverables: Scholars will gain experience in literature-based data research. Research tasks will include:

1. Archival research
2. Mapping and graphic presentation

Suitable for: This project is open to applications from advanced students (e.g. M. Arch or B.Arch), with a background and interest in architecture and/or Indigenous studies.

Primary Supervisor: Dr Tim O’Rourke t.orourke@uq.edu.au (with input from Professor Paul Memmott p.memmott@uq.edu.au)

Further info: Supervisors wish to be contacted by students prior to submitting an application t.orourke@uq.edu.au

THE WILD AUSTRALIA SHOW

The Wild Australia Show was conceived by Archibald Meston and was a travelling troupe of twenty-seven Aboriginal people conscripted from the Queensland frontier who performed in Brisbane, Sydney and Melbourne during 1892 and 1893 in preparation for departure on an international tour in the era of World Exhibitions. However the plans were curtailed by contractual disputes, scandals of financial incompetence and accusations of the capture of certain troupe members against their will in chains.

The Wild Australia Show was planned by Meston to be simultaneously a demonstration of the superior classical physique and skill of the ‘wild’ Aborigines, one which the world could be seeing for the last time due to the ‘doomed race’ theory and hence part of the spectacle. It was also a lecture tour whereby Meston could project his ideology for change in Aboriginal Australia upon the general public and promote his ‘racial engineering’ scheme of protection reserves and separation of ‘half castes’, quadroons’, and children of mixed racial origin.
Meston appointed a junior partner for his Wild Australia Show project, Brabazon Harry Purcell, who was promised a third share of the profits. His roles were to find and conscript the members of the troupe in the outback of Queensland, to make a collection of three thousand Aboriginal artefacts, and to manage the troupe whilst on tour.

The troupe members were brought to Brisbane in September 1892 and a rehearsal campsite was established at the St Lucia reach of the river. Their public performances in Brisbane were held at the Exhibition Ground through December that year. The troupe left Brisbane by steamer boat for Sydney just before Christmas and opened at the Bondi Aquarium venue on 26 December 1892 with some nocturnal performances at the School of Arts. The troupe was shipped to Melbourne on 25 January 1893 and they opened on the following day at the internationally renowned Melbourne Exhibition Hall but after three days, the performances stopped due to contractual disputes and withdrawal of investment funds. Meston fled back to Queensland but Purcell remained loyally with the troupe, finding some bridging loans and then organising modest performances to raise funds. Meston and Purcell blamed one another for the project’s failure and their ongoing dispute became quite bitter.

Purcell secured a steamer passage for the troupe back to Sydney in late May where they performed at Her Majesty’s Opera House. The Queensland Under Colonial Secretary demanded the troupe be brought home and eventually arranged payment for their return to Brisbane on 22 July 1893. Many images of the troupe were captured by the three leading studio photographers in Australia at the time: Charles Kerry and Henry King in Sydney and John W. Lindt in Melbourne. (By Paul Memmott.)
**Project title:** Controlled Geometries in Place: The Architecture of Don Watson Project

**Project duration:** 8 weeks

**Description:**
Don Watson is an extremely talented and prolific Brisbane-based architect who has made a remarkable contribution to Australian architecture through his body of exemplary built works. This summer scholarship will afford students the opportunity to conduct hands-on, in-depth research into his work, which has thus far not been studied in great detail, even though Watson’s designs have been recognised as of the highest quality throughout his career.

Don Watson has won three National Awards and a National Commendation in four different award categories over three decades:

- The Campbell Residence, at Graceville on the Brisbane River, won the 1989 Robin Boyd Award for Residential Architecture and the Queensland RAIA House of the Year.
- The Student Centre on the Morningside Campus of the Southbank Institute of TAFE, Brisbane, won the 1999 National BHP Colorbond Award for Steel Architecture, in addition to Queensland’s FDG Stanley Award for Public Architecture and the State BHP Colorbond Award.
- Block B at the Southern Queensland Institute of TAFE, Toowoomba, won the 2007 National Award for Sustainable Architecture, in addition to Queensland’s Harry S. Marks Award for Sustainable Architecture in that year.
- The Noosa Arts & Environmental Tourism Centre for Cooloola Sunshine Institute of TAFE won a National Commendation for Public Architecture in 2005, adding to five state awards and four local awards for the project.

In all, 14 projects by Watson have won State Awards or Commendations in Queensland:

- Southpoint Offices (1983)
- Campbell Residence (1989)
- Ithaca TAFE Computing Amenities (1996)
- Logan TAFE Applied Science Complex (1997)
- Morningside TAFE Student Centre (1999)
- Redcliffe City Library and Art Gallery (2002)
- Logan Institute of TAFE Western Campus (2004)
- Noosa Arts & Environmental Tourism Centre (2005)
- SQIT Block B (2007)
- Windmills on Show, SQIT (2007)
- SQIT Automotive Trades Building (2009)
- Tustin Windmill Reconstruction, SQIT (2010)
- Cobb & Co. Museum, Toowoomba (2011)
**Expected outcomes and deliverables:**

The work carried out will contribute to a planned forthcoming monograph on Don Watson, and (in the lead up to this exhibition) to a small exhibition to be held either at the Queensland chapter premises of the RAIA, Brisbane’s Community Arts Centre or at SLQ (conversations are on-going).

During this summer scholarship, students will gain experience in:

- **Data collecting:** As Watson worked for various firms (including James Birrell and Hayes and Scott), as well as for various institutions (i.e. The National Trust of Queensland, the University of Queensland and the Queensland State Department of Works), and also undertook private commissions, the collection of drawings and materials relating to Don Watson’s work is scattered. Students will be trained in identifying, retrieving and digitising archival material at the start of the scholarship (ca. 2 weeks);

- **Processing digital plans and digitising plans:** Part of Watson’s work was hand-drawn, while later work has been computer-generated. Students will be trained in digitising the available archival material to clean, readily usable (legible and publishable) digital files (ca. 2 weeks);

- **Interpreting postmodern built work:** The largest part of this summer scholarship will be devoted to laying the groundwork for an exhibition on the work of Don Watson. On the basis of the material gathered for Don Watson’s designs, students will be instructed in the development of scale models of 4 of Watson’s key architectural works. These models will be ‘interpretative’ scale models; they will not only ‘show’ the work, but will also display the geometries that informed the design and the multiple references embedded in them (ca. 4 weeks).

**Suitable for:**

Please highlight any particular qualities that individual supervisors are looking for in applicants to assist with the selection process.

- 2 students
- Completed workshop training is a requirement
- Experience with the use of 3D printers and laser-cutters is a plus

**Primary Supervisor:**

Doug Neale & Janina Gosseye

**Further info:**

Doug Neale: d.neale@uq.edu.au

Janina Gosseye: j.gosseye@uq.edu.au
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<tr>
<th>Project title:</th>
<th>Design and Fabrication of Innovative Timber Structures: Prefabrication and digital fabrication strategies for large-scale timber construction, and alternative uses for under-valued sawmill products in innovative timber structures.</th>
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<tr>
<td>Project duration:</td>
<td>4-6 weeks part-time over the UQ Summer Break</td>
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</table>
| Description: | **Proposal:**  
This project will investigate the design and fabrication of innovative structural timber systems and digital fabrication technologies. It will involve fabrication of large scale timber to timber connections and include processes that adapt non-standard and ‘low value’ timber products. A key research focus will be the development of sophisticated manual and digital fabrication techniques, that investigate alternative timber construction systems to conventional stud framing and roof truss construction. It will involve design and prototyping processes that involve the physical construction of 1:1 prototypes.  

This approach seeks to add value to the 'low value' timber members by combining them together in a novel way in order to achieve overall physical and mechanical properties where the whole is greater than the sum of its parts.  

The research objective will be to investigate the assembly of small member sizes arrayed in 3-dimensional matrix spatial structures that employ novel configurations to achieve large spans and stiffness through inherently stable geometric configurations and interconnections between multiple members. |

![Large spanning roof structures using closely spaced small members - Kitazawa Kenchiku Factory by Misawa and Inayama](image-url)
An interdisciplinary architecture and civil engineering student cohort will be the major contributors to the project, with Kim Baber (directly) and Joe Gattas (remotely) providing supervision.

Background:
The current softwood timber framing market is dominated by the demand for a narrow range of domestic structural framing member sizes in the range of: 90mm x 45mm, 90mm x 35mm, 70mm x 45mm, and 70mm x 35mm. Only a certain volume of timber milled from each log can yield these member sizes at a certifiable structural grade. The yield of framing sized members depends on the diameter of the log, and where the timber is cut from. Timber cut from the heartwood has low strength, and timber cut too close to the sapwood is frequently prone to visual and dimensional defects such as wane and warp. The profile of the log also necessitates that timber sections be cut thinner toward to the sapwood.

In order to yield the most efficient amount of sawn timber from given log, there will always be a significant volume of timber that is low strength heartwood, a quantity of boards that are relatively thin, as well as a certain percentage of the framing sized members that have some defects along their length. These all fall into the ‘low value’ category and cannot be certified for use as structural framing.
Much of what is categorised ‘low value’ is due to it not meeting the minimum dimensional and physical requirements of the construction industry’s domestic framing market. Similarly, much of the ‘low value’ timber that has been rejected to defects, may actually be of a certified structural grade, but has visual defects such as waning, warping or discoloration, so is deemed unsatisfactory by the market. Members with structural defects such as knots or checks are often only affected by less than 20% of the length of the member, allowing the remainder to be perfectly usable, but this is perceived to be too short (eg at lengths 1.8m or less) and deemed unsatisfactory by the market.

The key issues driving the de-valuing of these timber products, is the ubiquity of one standard of domestic framing system, and the industry’s perception of what is visually and dimensional acceptable and convenient to use. A successful demonstration to industry of alternative systems that adapt low value timber products could change this.

Significance:
In the context of a growing demand on both construction materials and natural resources, developing alternative methods of timber framed construction that add genuine value to these ‘low value’ timber products has significant potential to improve economic sustainability in the industry.

Maximising the net yield of usable structural timber from harvested logs will increase the proportion of timber products that are available to meet demand from the construction industry, thus increasing the availability of renewal materials and enhancing sustainable practices in the industry.

The construction of a demonstration project to showcase the innovative use of this undervalued product is a direct and tangible method to increase awareness in the industry, and can be an effective format to encourage change of practices.

Expected outcomes and deliverables:
Students will actively participate in the design development, documentation, modelling and fabrication of a series of timber prototypes and the construction of full scale timber structures. These structures will demonstrate the development of novel fabrication techniques and test structural application that increase the use of under-valued timber products.
**Suitable for:** This project will be suitable to students already who have some experience in working in the School of Architecture Co-Lab and/or the School of Civil Engineering Structures Lab. Students should have capacity to model in Digital 3D software such as Rhino, Grasshopper Revit or Autocad 3D. Students are to have completed the requisite safety induction prior to commencement of the project.

**Primary Supervisor:**
- Kim Baber, Fellow in Civil Engineering and Architecture, School of Architecture
- Dr Joe Gattas (remote), Lecturer in Civil Engineering, School of Civil Engineering

**Further info:** There are positions for up to 4 students Part time in this research project. Please Contact Kim Baber for further information k.baber@uq.edu.au
Project title: Digital cultural heritage: scanning, archiving and writing

Project duration: 8 weeks

Description: This summer scholar will join a team of researchers in ATCH the Architecture Theory Criticism History research centre who are broadly examining digital cultural heritage. This incorporates digitising, laser scanning, modelling and recording architectural cultural heritage sites and experiences to better understand and interpret their meanings. The scholar will assist with both technical work to deal with scans, point cloud data, and 3D models and to work on the research for, and writing of digital cultural heritage papers. The scholar will also support researchers organising two international conference sessions in 2018, and assist with website building and archiving of completed projects.

Expected outcomes and deliverables: Scholars will gain experience in literature-based data research. Research tasks will include:
1. 3D modelling of Queensland heritage sites from laser scan data using CAD software
2. Website building (on a simple Wordpress template)
3. General assistance in organising conference panels and papers including through emails and use of spread sheets.
4. Supporting PhD students in preparing for digital cultural heritage research in international locations

Suitable for: This project is open to applications from advanced students (e.g. M. Arch or B.Arch), with a background and interest in architecture and/or Indigenous studies.

Primary Supervisor: Dr Kelly Greenop k.greenop1@uq.edu.au with assistance from Dr Chris Landorf

Further info: Please contact Kelly Greenop prior to making your application to further discuss your skills and the project.

Digital cultural heritage projects: representing and reaching out

This summer research scholarship offers the opportunity to be involved in the School of Architecture’s growing research into and production of digital cultural heritage materials and the discourse on this field.

See some of our previous projects here:
- [http://www.cyark.org/projects/fort-lytton](http://www.cyark.org/projects/fort-lytton)

Dr Chris Landorf and Dr Kelly Greenop will be convening symposia and conference panels in London (see [http://digitalculturalheritageconference.com/](http://digitalculturalheritageconference.com/)), St Paul, USA and Hangzhou, China in late 2017 and 2018 and we are seeking assistance to organise websites, assist with editing and organising conference keynotes and other administrative tasks, as well as work to curate and present digital cultural heritage materials for a wide audience. Experience and interest in 3D modelling, laser scanning and computing for architecture would be helpful. Enthusiasm to learn new techniques is essential.

Please be in touch if you have questions of us before applying for this position.
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<tr>
<th>Project title:</th>
<th><strong>Architecture in Asia:</strong> Producing a handbook of Professor Ronald Lewcock’s lectures.</th>
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<tr>
<td>Project duration:</td>
<td>10 weeks</td>
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| Description:    | **Background:**
Professor Lewcock developed a course of twelve lectures on Architecture in Asia, drawing upon personal research informed by extensive periods of fieldwork and residence in several Asian countries augmented by UNESCO consultancies, a period as MIT/Harvard Aga Khan Professor of Islamic Architecture and archival research. The lectures discuss how the various cultures, religious beliefs, material resources and climates across Asia have contributed to a rich diversity of Architectures. A unifying theme to the lectures is the idea that most built forms, including monumental and representative buildings have evolved from domestic structures. Recordings of the lectures have been transcribed and edited and the images used in them have been digitized. Twelve high quality videos have been produced.

**Proposal:**
**Production of a POD book on Architecture in Asia – available to UQ students as a handbook and resource.**
1. **Print ready book:** This grant application envisages the production of print ready digital files of the transcripts keyed to images of the lectures
2. **Picture Research:** 15-20% of the images used in the lectures are from published sources – some of these images are under copyright. In the production of the print ready digital files alternative out of copyright images will be sourced and substituted.
3. **Drawings:** It is contemplated that some maps and diagrams will need to be redrawn.
4. **Coordination with recordings:** It is proposed that the handbook contains links to the edited recordings as well as other complementary material such as available files from the UNESCO World Heritage Centre and other sources.

**Rationale and the longer term:**
There are few overviews covering Architecture in Asia. A resource such as the one proposed will help students at UQ understand the diversity of Architecture in Asia developed from a unifying point of view, from which they will be in a good position to develop alternative understanding and access competing theories and explanations. In the longer term, the POD handbook could go through several editing cycles involving revision and balancing as well as resolving copyright issues in consultation with UQ Library’s copyright advice.

| Expected outcomes and deliverables: | 1. A useful resource on Architecture in Asia, based upon a series of lectures delivered at UQ by a recognized expert in the field.  
2. Student(s) working on this project will develop skills in:  
   a) Producing POD Ready files that include edited lecture content and images.  
   b) Develop skills in editing and coordinating images and text  
   c) Develop skills in image research and understanding of copyright issues. |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Suitable for:                     | This project is project is open to applications from advanced students (eg M. Arch or BA Hons student), with a background and interest in architecture.  
1 student is required for the project. |
<p>| Primary Supervisor:              | Dr Pedro D’Alpoim Guedes                                                                                                       |
| Further info:                    | Supervisor wishes to be contacted by students prior to submitting an application. Please email <a href="mailto:p.guedes@uq.edu.au">p.guedes@uq.edu.au</a>.              |</p>
<table>
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<tr>
<th>Project title:</th>
<th>3DPRINTING PLACES</th>
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<tr>
<td>Project duration:</td>
<td>This project will run for eight/ten weeks over the summer. There will be a break over the Christmas, New Year period.</td>
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<td>Description:</td>
<td>This project explores the design of prototypical building components for 3D printing at large scale. The work expands on existing R&amp;D such as the 3D Printed Canal House in Amsterdam by DUS Architects and the work of Emerging Objects. The design research will include formal exploration, assembly processes and material compliance for Australian conditions. The research will be in collaboration with Studio Kite who are based Northern NSW. Studio Kite was originally established as a model making and special effects company mainly servicing the film, advertising and prototyping industries. Their research into rapid prototyping has led them to develop a bespoke large scale high speed robotic printer with a print bed of up to 3m x 3m x 3m. The team from Studio Kite have approached UQ to assist in in expanding their capacity in the design and production of architectural components. The research will explore in a variety of extruded materials types including fiber reinforced plastic and recycled materials.</td>
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<tr>
<td>Expected outcomes and deliverables:</td>
<td>Scholars will develop skills in design-research in digital design and fabrication. Potential exists to engage with other researchers at UQ in the areas of additive manufacturing, materials engineering (composites) and non-technology. The aim of the research is a print full-scale prototype of components for an experimental dwelling at Studio Kite’s workshop. Participants will be required to document the research producing material suitable for academic and other publication – highly developed graphic skills are desirable.</td>
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<tr>
<td>Suitable for:</td>
<td>This project is open to applications from students that are able to demonstrate skills in the use of Rhino and Grasshopper and/or other parametric modelling software such as Zbrush, Modo and the like. Scholars will be required to expand their software skills into the use of Kuka PRC, Autodesk360 or similar digital fabrication tools. This project has funding for one scholar for eight/ten weeks. NOTE: participants will be expected to travel to Northern NSW from Brisbane on occasion during the project. Transport and accommodation will be provided.</td>
</tr>
<tr>
<td>Primary Supervisor:</td>
<td>John de Manincor</td>
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<tr>
<td>Further info:</td>
<td>Please contact the supervisor with specific questions about the project: <a href="mailto:j.demanincor@uq.edu.au">j.demanincor@uq.edu.au</a>.</td>
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</tbody>
</table>