



**University of Western Sydney**  
**School of Computing and Information Technology**

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## Introduction

Since the establishment of the new School of Computing & Information Technology under the UWS restructuring process in 2001, the fundamental importance of developing a research management plan within the School has been recognised and encouraged by the College and University. This School Research Management Plan is developed under the general concepts and principles of the STE College Research Management Plan and in accordance with the UWS research strategies (<http://www.uws.edu.au/uwsn/admin/research/Rohome/>).

This document is subject to be reviewed, revised and further developed.

## Research Performance in 2001

We measure the School research performance from three aspects: Research Publications, Higher Degree Completions and External /Internal Research Grants.

- **Research Publications:**
  - 37 refereed conference and journal papers  
(including papers accepted in 2001 but will be published in 2002).
- **Higher Degree Completion:**
  - 1 Master Honours Degree completion (completion time: 23 months full time study)
- **Research Grants:**
  - 1 external research grant
    - Joanne Curry, External Honours Scholarships from Sony Music Australia, \$45,000

Other CASE research incomes??

- 2 internal research grants
  - Yun Bai, Zhuhan Jiang, Khaled Khan and Yan Zhang – IICL, College Research Quantum Grant
  - Vlad Wietrzykm UWS Research Grant

About **16** academic staff are involved in publishing research papers in 2001 (27.5% in terms of the total number of the School academic staff).

About **12** academic staff are involved in higher degree supervision (20.7%).

## Research Goals

The School aims to achieve the following research goals in the next 3-5 years:

- To become a research intensive School of Computing & Information Technology
- To demonstrate significant national/international research impacts in relevant fields

### *Research Intensive School*

- 50% (or more) School academic staff are involved in research, i.e. to be involved in one of the three types of research activities: publishing research papers, obtaining internal/external research grants, and being involved in higher degree supervisions;
- 30% (or more) School academic staff are *actively* involved in research, i.e. to be involved in at least two of the three types of the above research activities;
- 20% (or more) School academic staff are recognised to be Research Active at UWS;
- Successfully obtain nationally competitive research grants (e.g. ARC Grants) and other kinds of external research grants;
- Have a high completion rate of research postgraduate studies.

### *Significant national/international research impacts:*

- Publications in the top international refereed conferences and journals in the fields which usually have very low acceptance rates and are highly referenced by researchers in the fields (for example, conferences: VLDB, IJCAI, journals: IEEE and ACM transactions journals, etc);
- Publications in refereed conferences and journals that have been extensively cited, discussed, and evaluated by other researchers in the fields;
- Concepts or principles that generate direct influences on the national/international organisations' decision makings;
- Research results or (software/hardware) systems that have been recognised to have directly or indirectly generated national/international benefits.

## **Research Strategies and Concentrations**

It has been recognised that to enforce the School research and achieve its research goals, the School should implement significant and practical research strategies and define its research concentrations:

- Define proper Research Streams based on the current School research performance and activities, and provide possible research funding to support research on these streams.

A Research Infrastructure Funding (\$150,000) is going to be allocated to establish up to 6 research groups and labs (refer to the School Research Infrastructure Funding Proposal for details).

- Encourage staff to participate in research, e.g. publishing research papers, attending national/international conferences, applying for national competitive and internal research grants, being involved in higher degree supervisions, and establishing industrial research co-operations.

The School has developed a Conference Travel Funding Policy which details the policies and procedures of obtaining a conference travel funding. The Conference Travel Committee has been formed to assess staff's applications (refer to the School Conference Travel Policy for details).

- Provide better opportunities for **early research career staff**, such as giving higher priorities to access the School conference travel funding (refer to the School Conference Travel Policy for details), reducing teaching workload, and assisting research grant applications.

*Definition of early research career staff*

- A staff obtained his/her highest research degree within 3 years; or
  - A staff joined the School within 1 year.
- Equally support both academic and industrial oriented research .

The School has recognised the importance of both the academic and industrial oriented research to the School. While the academic research mainly enhances the School's research reputation in the academic world, the industrial oriented research demonstrates the School's research impact to the real world. Under some circumstances, research achievement can be obtained from both sides.

Staff are encouraged to pursue high quality research achievement which produces significant influence and impact in the academic world of the field. Matured researchers should make effort to apply for nationally competitive research grants (e.g. ARC grants).

Staff are encouraged to merge and integrate their research from both academic and industrial aspects. This can be demonstrated by:

- publishing research papers with industrial partners as co-authors;
- establishing industrial partnership research grants/scholarships (e.g. industrial research funding, ARC-linkage grants, etc);
- transferring research results into industrial oriented applications;
- initiating industrial oriented research projects which have higher degree research students involvement and may lead significant academic publications.

## **Staff Research Activities**

The School realises that beside conference attendance, staff may also need to participate in other kinds of research activities to enhance their professional knowledge and research capabilities. These activities may include: attending research seminars in other universities, enrolling in short-term professional workshops, and working as organisers in local conferences, etc.

In general, staff are recommended to use their own research grants or the research group grants to cover the expenses of participating in such research activities. While such funding is not available for individual staff, the School should provide necessary financial support subject to the approval from the School Head.

## Research Training Program

As one of the major components of the research management plan, it is essential to have a comprehensive School research training program. For this purpose, the School will establish a hierarchical framework for research student management and provide the School research student scholarships.

- Management Framework

### *Project Management*

Project Management provides the first management layer in the School research training program.

It is recommended to form a Project Management Team (PMT) consisting of 2-3 three academic staff whose tasks are to conduct project management for 3<sup>rd</sup> year undergraduate project students, Honours students, and Master (coursework) students.

PMT will organise various projects through industrial partners, external research institutes and internal academic staff, and distribute these projects to students.

It has been recognised that one of the major sources of our higher degree research students comes from those outstanding project students. Research groups and individual staff should actively initiate innovative projects for students which may become continuing research topics for their future higher degree studies.

### *Higher Degree Research Student Management*

The second management layer in the School research training program is the higher degree research student management. While supervisors usually take the main responsibility to guide the students' research work, it is also expected that research students are also associated with research groups where their supervisors belong and take part in their groups' research activities.

It has been decided that every research student should regularly present his/her research progress to the School: a full-time student gives presentations twice a year while a part-time once a year.

Research students are encouraged to publish research papers and attend conferences. They have priorities to access the School conference travel fund to attend conferences subject to the acceptance of their papers by refereed conferences (refer to the School Conference Travel Policy).

- The School Research Student Scholarships

The School has decided to allocate special funding to establish research student scholarships from 2002. In 2002, the School will allocate \$180,000 to create 6 full-time research student scholarships (\$30,000x6) (refer to the School Research Student Scholarships Proposal for detail).

