Research Report

1 August 2002 — 31 December 2003
The University of Canterbury has long seen itself as a research-led teaching institution where high quality research and scholarship permeate teaching and learning at all levels. It has been at the same time both very pleasing and a great tribute to the work of all staff that strong confirmation of this has been received from the first round of the Performance-Based Research Fund. University of Canterbury staff were rated a close second to those of Auckland University on research quality scores.

Though we have long reported our research and creative works in a variety of ways, this report marks some important changes to the ways in which this is done. In common with past reporting, this report presents the principal scholarly achievements of our staff in respect of publications and creative works. It also presents information about masters and PhD theses completed by postgraduate students. It is the first time this information has been published as a separate report. The content is essentially the material formerly published each year in the University Calendar and, like the material in the Calendar, it is by no means an exhaustive list of all the scholarly contributions made by staff and students. Another important change is that, during 2003 the University restructured into four colleges and a School of Law. The information in this report has been assembled for each of these. Additionally, several academic units have taken the opportunity to merge during restructuring (for example, Zoology and Plant and Microbial Sciences have become the School of Biological Sciences) so that within the College lists there is a degree of difference from the reporting units used in the Calendar up to 2002.

The Calendar is published annually but because of the work involved with restructuring, this first research report covers the period from August 2002 to December 2003. Important developments in research over this time period included UC involvement in two Centres of Research Excellence — the MacDiarmid Centre of Advanced Materials and Nanotechnology and the Allan Wilson Centre for Molecular Ecology and Evolution. In addition the University has become the host to the Human Interface Technology Laboratory (HITLab).

Collaborative links with industry have been developing strongly. For example, through the Canterbury Electronics Group and the ICT Cluster. Commercialisation of research is also proceeding apace, the University being a partner in the Canterbury Innovation Incubator and three companies – SyFT Technology Ltd, Canterbury TX and Nanocluster Devices Ltd. These companies have been formed to develop University owned intellectual property.

Traditional strengths in basic research have also been to the fore. External research funding won in 2003 totalled $18.5 million including record totals of $6.1 million from the Foundation for Research, Science and Technology (8 grants) and $6.1 million from the Royal Society of New Zealand’s Marsden Fund (13 grants). Both of these are keenly contested funding sources.

For the period covered by this report the lists that follow set out 2400 publications and creative works, 118 PhD theses and 275 masters theses. The University’s 2003 Annual Report shows it was a bumper year setting record levels for research and scholastic works. Some 83 PhD theses and 184 masters theses were
completed and there was a record total of 1835 refereed research publications.

Many staff have been recognised for their excellence in research. In 2003 Professor Miles Fairburn (History) and Professor Mike Steel (Mathematics and Statistics) were awarded Fellowships of the Royal Society. Professor Andrew Sturman (Geography) was presented with the inaugural Kidson Medal of the Royal Society of New Zealand for his work in climatology. Within the University Professor David Thorns (Sociology and Anthropology) was awarded the Research Medal in the December 2002 Graduation Ceremony. At the end of 2003 the Research Medal was awarded to Professor James Coxon (Chemistry).

There are many other indicators of the extremely strong research culture in the University of Canterbury, but those outlined above, together with the works of staff and students listed in this report, are an ample demonstration of the creative energies and hard work which occurs across the Colleges, their individual Departments and Schools, and the Research Centres of the University.

Professor Bob Kirk  
Deputy Vice-Chancellor
The College of Business and Economics had an impressive inaugural year, scoring highly in the 2003 national Performance-Based Research Fund (PBRF) assessment. Formed in January 2004, the College brings together the Departments of Accountancy, Finance and Information Systems, Economics and Management to form one of the largest centres of expertise in New Zealand. The College is also home to the National Centre for Research on Europe. The College is planning a major new investment in 2005 in research staff and supporting infrastructure to consolidate its position as a leading centre for research in business and economics in the Asia-Pacific region.

The Department of Accountancy, Finance and Information Systems has research strengths in all four of its major sub-disciplines: accounting, finance, information systems and commercial law and tax. Overall, the Department ranked third nationally in accounting and finance in the 2003 PBRF, with the second highest proportion of A-rated researchers in the country. Areas of international research excellence include: public sector accounting and management; not-for-profit accounting; cash-flow analysis; financial reporting; international accounting; management accounting; financial reporting; small firm computing; information systems; competition and fair trading law; contract law; international tax administration; compliance and policy; goods and services tax; and tax planning. Several members of the Department are editors and are on the boards of international peer-reviewed journals.

The Department of Economics has an established national and international reputation in a number of key areas including: public sector economics; labour economics; health economics; monetary policy; the economics of education; the economics of networks; human capital, technological change and economic growth; finance; law and economics; and the economics of asymmetric information. In addition, there is a developing research capability in experimental economics. The Department ranked fourth nationally in the 2003 PBRF. Its research programmes have attracted external funding from a range of agencies, including government ministries. The Department currently holds two Marsden Fund Grants — “Accounting for Economic Growth in New Zealand” and “Measuring the Stock of Human Capital” — and it is part of the Foundation for Research, Science and Technology-funded project “Impacts of ICTs on Work and Communities”. Several members of the Department are on the boards of international peer-reviewed journals and the Blackwell journal, the Journal of Economic Surveys, is jointly-edited by the Department.

The Department of Management comprises four major subject areas: marketing, human resource management (HRM); strategic management, and management science (which embraces operations research and operations management). In the 2003 PBRF exercise, the Department ranked third nationally in management, with 26% of the staff being awarded ‘A’ or ‘B’ ratings. The marketing group is engaged in research on aspects of buyer behaviour and internet and electronic marketing. Within the HRM group, there have been important publications in leadership, workplace communication and the impact on performance of employee perceptions of their work environment. The Department will host a major international conference on workplace communication.
Research in strategic management includes applied studies of: small firms; the way strategic frameworks are applied; and international business and business ethics. For many years, the management science group has held a leading position for its work on the electricity markets. The group is also involved in leading-edge work on simulation studies in telecommunications networks and, more generally, in stochastic programming, complex problem decomposition and aspects of healthcare delivery. A number of staff are on editorial boards of international journals and one such journal, The Journal of International Entrepreneurship, is currently based in the Department.

The National Centre for Research on Europe brings together academics from a wide range of disciplines to research and study the European Union and Europe-related issues and topics. The focus is policy-driven, melding academic work with practical requirements. Current research projects include: EU identity in New Zealand; EU-Pacific policy; EU enlargement and New Zealand; EU financial reporting and New Zealand; EU identity in the Asia-Pacific region; EU knowledge wave migration to NZ. The NCRE is funded by a European Commission grant, the University of Canterbury and a variety of other external, project-based grants. In 2004, the NCRE was awarded the prestigious designation of Jean Monnet Centre of Excellence by the European Commission. This recognition complements the Jean Monnet Chair of European Integration held by the NCRE’s Director, Professor Martin Holland, and its two Jean Monnet teaching modules. The NCRE has strong links with other universities and academics and has a truly national focus. Governance is by way of an internal and external advisory board and a recently-formed Business Advisory Board.

Professor Nigel Healey
Pro-Vice-Chancellor, College of Business and Economics
Accountancy Finance and Information Systems

Chapter in Book


Walsh, J.P. (2002) Gault on Commercial Law. Vol 1, Ch 2. 12/9/03. Paras FT2.01.08B(1)(c), 2.09.04, 2.16.04, 14.01, 14.02 14.12, 24.01, 37.01, 38.01, 38.04, 40.01, 40.02, 40A.01, 40A.02, 41.01, 41.10, 42.01, 42.02, 44.01, 44.14, 45.04(5)(d), 46.01. Gault on Commercial Law. (11p). Wellington: Brookers.


Conference Contribution


Other


Theses

PhD


MCom


Wong, J. (2003) Performance investigation of secure 802.11 wireless LANs: raising the security bar to which level?

National Centre for Research on Europe

Authored Book


Chapter in Book


Edited Book


Journal Article


Conference Contribution


Economics

Chapter in Book


Edited Book


Journal Article


Conference Contribution


Other

Theses

Management
Chapter in Book


Journal Article


**Conference Contribution**


Theses

PhD

MCom