Number 15
February 2002

A Publication of the
Civil Engineering Department
University of Canterbury

# This issue

Campus Travel Plan
page 5

New Joint Master's Degree in Transport
page 8-9

New Academic Staff
page 10

Students Research Earth, Water, and Fire
page 14-15

UNIVERSITY OF CANTERBURY
CHRISTCHURCH • NEW ZEALAND

# D- - S

## A -

| | |
|---|---|
| Chris Allington | Structural concrete design |
| John Berrill | Geomechanics, engineering seismology |
| Andy Buchanan | Timber and fire engineering, Head of Department |
| Des Bull | Structural concrete design, earthquake engineering |
| Athol Carr | Structural dynamics, finite element analysis |
| Bente Clausen | Hydrology, impacts on ecology |
| Nigel Cooke | Structural design (bridges), structural masonry |
| Rob Davis | Geomechanics, continuum mechanics |
| Mark Davidson | Fluid mechanics |
| Bruce Deam | Earthquake engineering, timber engineering |
| Charley Fleischmann | Fire engineering |
| Bruce Hunt | Groundwater flow, analytical analysis |
| Jason LeMasurier | Systems, engineering management, risk |
| Kevin McManus | Geotechnical engineering, foundation engineering |
| James Mackechnie | Concrete specialist |
| John Mander | Structural and earthquake engineering |
| Mark Milke | Solid waste management, uncertainty analysis |
| George Mullenger | History of civil engineering, continuum mechanics |
| Alan Nicholson | Transportation planning, traffic safety |
| Roger Nokes | Fluid mechanics |
| David Painter | Water resources engineering |
| Mofreh Saleh | Transportation engineering |
| Michael Spearpoint | Fire engineering |
| Alex Sutherland | Sediment transport, coastal engineering |
| Warren Walpole | Structural steel design, earthquake engineering |
| David Wareham | Biological nutrient removal, waste treatment |

## T -

| |
|---|
| Ray Allen |
| Colin Bliss |
| Melody Callahan |
| Peter Coursey |
| Nigel Dixon |
| Grant Dunlop |
| Siale Faitotonu |
| Frank Greenslade |
| Gary Harvey |
| Brandon Hutchison |
| David Macpherson |
| Russell McConchie |
| John Maley |
| Richard Newton |
| Alan Poynter |
| Ian Sheppard |
| Stuart Toase |
| Mike Weavers |
| Kevin Wines |

## R -

| | |
|---|---|
| David Elms | Risk analysis |
| Peter Moss | Structural dynamics, timber engineering |
| Bob Park | Structural engineering |
| Tom Paulay | Structural design |
| Ian Wood | Fluid mechanics |

## S

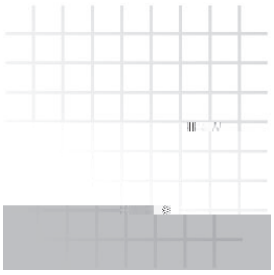
| | |
|---|---|
| Louise Fitzgibbon | Postgraduate administration and enquiries |
| Denise Forbes | Accounts |
| Catherine Price | General and fire engineering enquiries |
| Pat Roberts | Undergraduate administration and enquiries |

:

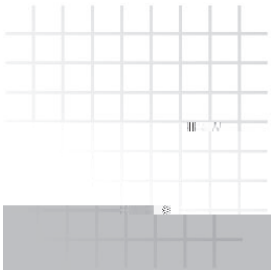
C - e dh :

Be e - i i eb i e a :
www.civil.canterbury.ac.nz

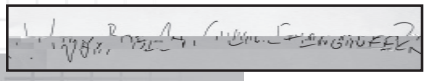
He e ca b e a d,
ca ch d ihfe a i, ee
h ' d i g ha e ea ch d ec ,
- ie c e i e c ac aff



*Water storage tan*
*D*



## A P S



Was discussed at the Department's annual planning workshop in April. Around 70 people including academics, technicians, support staff, post-graduates and members of the Professional Liaison Committee gathered in the Student Association Building to discuss the Department's goals and plans, with Steve Dakin facilitating. An important item on the agenda was a review of the undergraduate curriculum including the teaching and learning techniques.

The morning was dedicated to a review and discussion of the department's goals. Stimulating talks were given by Vicki Buck, former Mayor of Christchurch, and Peter Leslie, manager

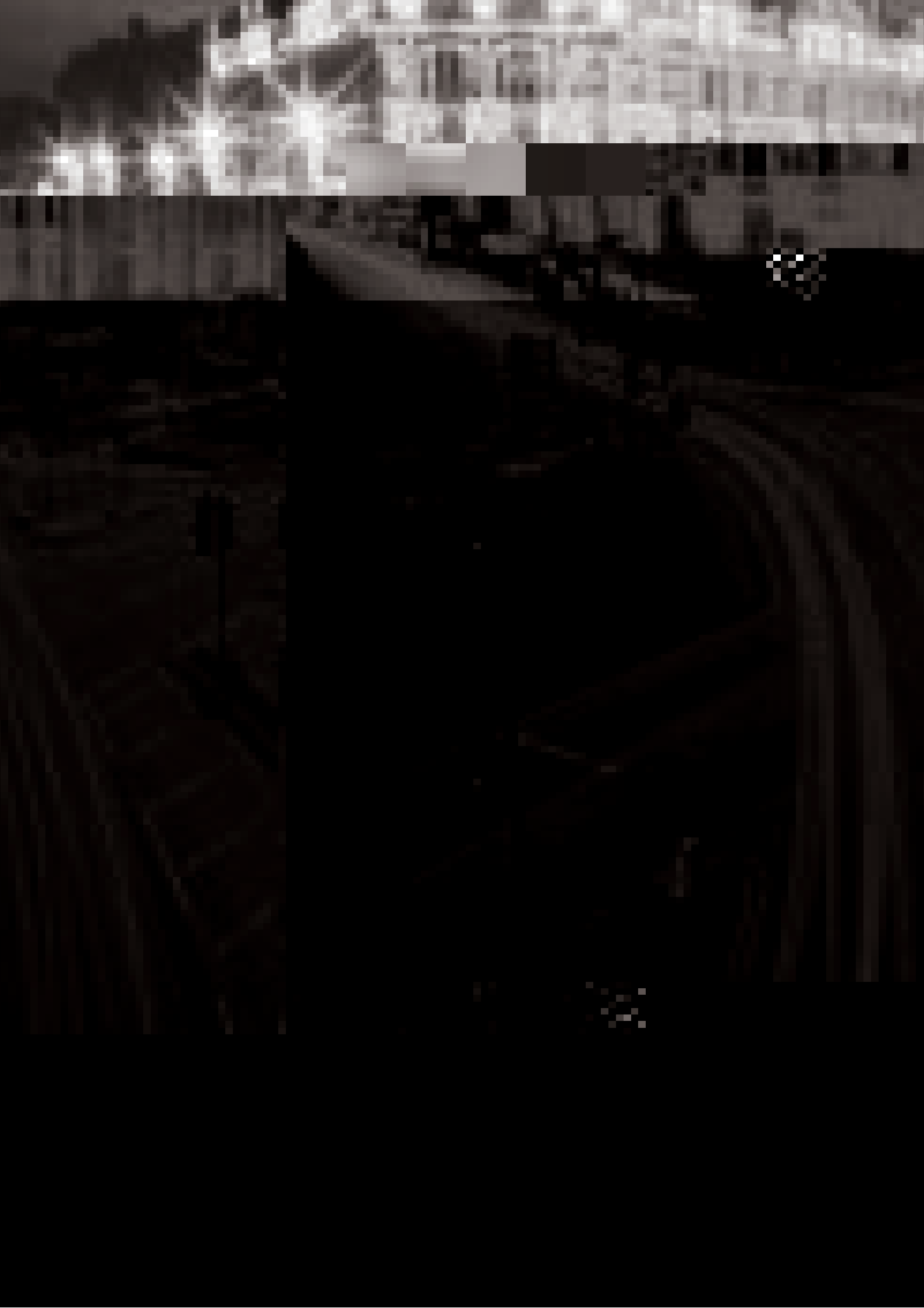
of Pacific Architect Engineering (PAE). Vicki Buck spoke on creativity and the importance of teaching people how to think. Peter Leslie gave an employer's view of the department's graduates and stressed the importance of good communication and leadership skills. Katherine Hill, a PhD student, and Lauren Waring, a second-professional-year direct-entry student, gave critical and courageous reviews of the learning process and teaching style in the department. This was followed up by a presentation on teaching techniques by Victor Chen from the University's Education, Research and Advisory Unit (ERAU).

In the afternoon the group split in two. One group discussed the undergraduate degree and how a revised Curriculum can be implemented. The other group learnt of how pending changes in the purchasing system would affect them. Lynne O'Donoghue, the Project Manager for the UC Finance system upgrade, answered many and varied questions from technical and support staff.◆

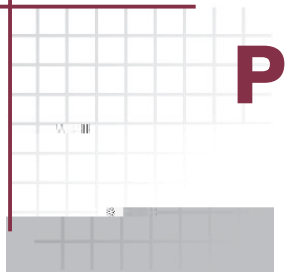
## D S C

A special issue of Journal of Hydraulic Research (JHR) was dedicated by the IAHR fluid mechanics section in memory of David Wilkinson, who was Professor of Hydraulics in the Department from 1995 till his untimely death in December 1998, just prior to the opening of the Second International Symposium on Environmental Hydraulics (ISEH). He was in Hong Kong as an invited symposium speaker, and at the time of his death he just finished lecturing together with other section members in a pre-conference international short course on 'Hydraulics and design of sea outfalls'. During the symposium the fluid mechanics section met and unanimously supported the idea of preparing a special JHR issue on environmental hydraulics in honour of David Wilkinson.

David is known for his contributions to environmental fluid mechanics, and his earlier paper on 'Rapidly varied flow phenomenon in a 2-layer flow' (Wilkinson and Wood, Journal of Fluid Mechanics, 1971) is one of the most widely cited works in the field. David had a warm and strong personality, and is missed in the Department. ◆



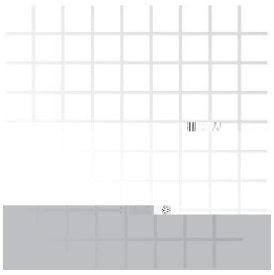
# People People People

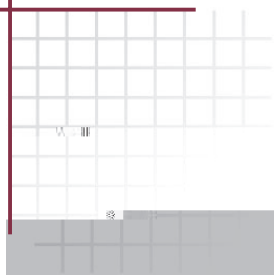


Mark Davidson joined the Department in July 2001 to take up a senior lectureship in fluid mechanics. Since obtaining a PhD from the Department under the supervision of Ian Wood, he has held a post-doctoral position at the Cambridge University in the United Kingdom and a lectureship in Hong Kong at the University of Science Technology.

While at Cambridge he focused on atmospheric pollution problems and in particular the dispersion of pollutants within groups of buildings. Hong Kong presented a wide range of challenges because the initial task involved working with colleagues to create a new Civil Engineering department within a new University. With the establishment of appropriate facilities he was able to continue to pursue research interests in a range of pollutant mixing problems. However the context had changed to that of wastewater discharges, which represented a return to the area that had initially motivated his move into an academic career.

Returning to New Zealand provides a new set of challenges. The Department is in the process of making significant changes to its undergraduate curriculum and the hydraulics laboratory is undergoing an extensive re-development, particularly with





2001-2

The department wishes to congratulate the following students who were awarded prizes for their excellent results in 2001. These prizes are made available by the generous support of the industry

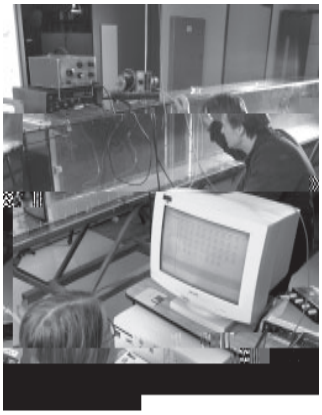
*Rope of mussels in the lab for tests*

*Manu Ward reading measurement of flow-meter*

Karin Lutz, a German student studying for a Master's in Civil Engineering at Karlsruhr University, had a whirlwind visit in the department in May and June when she undertook a two month experimental fluid dynamics

*Fabien sampling material prior to test burn.*

*Ee Yii standing beside his test furnace*



Short Courses

BE (Hons) degrees

Master’s degrees

PhD degrees

Contract Research

Consulting

Commercial Testing

University of Canterbury

www.civil.canterbury.ac.nz