

## ***CENTREFOLD***

### **Professor Graeme Wake**



Early in 1986, Graeme Wake left his readership at Victoria University of Wellington to take up the newly created chair of mathematics in the Department of Mathematics and Statistics at Massey University. Thus the Victoria department lost an enthusiastic and lively colleague and Massey gained a bright and shiny new professor.

In many ways Graeme's career reflects the coming-of-age of mathematics in New Zealand over the last decade. He has studied and taught in New Zealand and has built an international reputation in mathematical combustion from this base. He is a particularly fine example of a new endemic species "*apteryx mathematicus*".

His juvenile form was first seen near Eketahuna in early 1943. Somewhat later and further north in Hastings, some of his characteristics were becoming evident. Graeme was dux (equal) of Hastings Boys' High School in 1960. He entered the hallowed halls of Vic, the following year, and completed a brilliant B.Sc. in Mathematics, Physics and Chemistry.

In 1964, Graeme gained a M.Sc. in Mathematics with first class honours. The nefarious honours class included such personalities as Mark Schroder, John Camlen, Lindsay Hall, Ian Wright, Jim Ansell, Martin Manning, F.D. Ward and Shirley Thompson (maintenant Pledger). All took their mathematics further and all except Graeme and Shirley soon turned out to be migratory mathematicians.

Graeme joined the Victoria Mathematics Department as a Teaching Fellow and under Professor George Mackie began his research. He was awarded his Ph.D. in 1967 for his

thesis entitled "Equations of Heat Conduction with Slow Combustion". This was the first mathematical Ph.D. at Victoria and marked the turning point in the department, from a purely teaching department to a teaching and research department. So it has remained, though with a continuing interest in the quality of teaching and a concern for students, that Graeme embodies.

Thus began Graeme's programme of research which has led to 42 publications. He has been deeply involved in the mathematical theory of ignition, which has led him through non-linear eigenvalue and boundary value problems, on search for the disappearance of criticality to the theory of thermal explosions with simultaneous parallel reactions (parts I, II and III appearing in the *Proceedings of the Royal Society of London* in 1984, 1985 and 1986). On the way it was not all bifurcation and phase-plane analysis, there were fires to prevent in wool, wood-chips and milk-powders, and fires to start in lignite and other fuels. He is both a mathematical fire-man and a fire-raiser.

But here we have not just a research mathematician but a committed and caring teacher, as shown by the quality of his lectures, his supervision of a number of research students and his personal concern for students. A wider concern was also shown by his terms as Academic Dean of Science, and as V.U.W. Branch Chairperson of the Association of University Teachers.

On the N.Z.M.S. Council in 1974/75 and 1977/79, Graeme was President in his last year and represented New Zealand at the 1978 Helsinki International Mathematics Union General Assembly. As editor/organiser of the N.Z.M.S. Syllabus Series on Applied Mathematics, he sold over 10,000 volumes from 1981 to 1985. He is currently responsible for finance and publicity on the N.Z. Mathematics Olympiad Committee.

Graeme has undertaken mathematical missionary work abroad with his research leaves at Brasenose College, Oxford, and the University of Leeds, and as an invited speaker to a recent AMS/SIAM research seminar at Cornell. But he is equally adept at attracting distinguished co-workers to New Zealand.

A keen tennis player and football manager/coach, Graeme found the transfer offer as a mathematical player/manager for the Massey Club, too good to refuse. We at Vic miss both Graeme and his wife Elizabeth, who has hosted many a successful mathematical function. We wish them and their family well in the wind less north.

*Jim Ansell*  
*V. U. W.*