Centrefold

John Fauvel

This year's New Zealand Mathematical Society Visiting Lecturer, John Fauvel, is a historian of mathematics from the Open University in the UK.

He will arrive in Auckland on 26 September, and spend the next three weeks touring through the universities in a southerly direction.

The Open University teaches students who are studying part-time, from home, and has built up a strong reputation for the quality of its teaching materials designed to be studied at a distance. John brings on his visit to New Zealand a great enthusiasm for mathematics education at all levels, and the use of history of mathematics within that teaching and learning process. This is the first time that the New Zealand Mathematical Society Visiting Lecturer has been a specialist in the history of mathematics.

A Scot, born in Glasgow, John was educated in mathematics at the universities of Essex and Warwick before joining the Open University to help in an area which the University (then in its early years) was seeking to develop, the history of mathematics. Since then he has worked on mathematics as well as interdisciplinary courses. It was for an Open University course on the history of mathematics that John produced, with his OU colleague Jeremy Gray, one of the leading source-books in the field, "The history of mathematics: a reader" (Macmillan 1987).

Other books he has worked on include "Let Newton be!" and "Möbius and his band" (both Oxford University Press) and recently a collection of papers on using history in the mathematics classroom and lecture theatre called "Learn from the Masters!" (a quotation from Niels Henrik Abel), published by The Mathematical Association of America in 1995. Currently he is working on a history of mathematics at the University of Oxford over the past 800 years, and this is the subject of one of John's talks in New Zealand about how different Oxford professors (in particular, John Wallis in the 17th century, J J Sylvester in the 19th century, and G H Hardy earlier this century) tackled in rather constrasting ways the issues of promoting research activity and building up the research strengths and reputation of the University while sustaining undergraduate teaching.

John's last visit to New Zealand, in 1995, was to make some films for the Open University's foundation mathematics course, having returned from an earlier visit to insist to his UK colleagues that every possible way in which mathematical modelling is used to understand the world can be found in New Zealand! The

films include the modelling work of Colin Fox (University of Auckland), David Fletcher (University of Otago), and Dion Burns (University of Otago), an interview with statistician Wiremu Solomon (University of Auckland), and include, too, the 1858 Maori arithmetic which John found in the Auckland Public Library on his previous visit, thanks to the help of New Zealand's historian-in-residence Garry Tee and Auckland mathematics educator Bill Barton.

John is a former President of the British Society for the History of Mathematics, a world-wide organisation (with several NZ members) despite its name, and has also served on the Executive

Committee of the International Commission for the History of Mathematics. Another body through which John has been working is the International Study Group on the Relations between History and Pedagogy of Mathematics, and he has recently taken the role of co-chairing an international study on "The role of the history of mathematics in the teaching and learning of mathematics" which is due to be delivered to the International Congress of Mathematics Education in Tokyo in 2000. (A subsequent study in the same series, on "Teaching and learning mathematics at university level", is currently in progress, chaired by Derek Holton of the University of Otago.)

In his forthcoming lecture tour of New Zealand, John will talk about ways in which historical resources and insights can be drawn upon to strengthen mathematics education at all levels, as well as sharing some of the results of his recent historical researches. One of his proposed talks, for example, will explore the roots of a fashionable modern concern such as chaos theory in traditions of problem-solving going back four thousand years, in a line stretching through Newton (and his youngr colleague Joseph Raphson) back to north African engineers and Babylonian scribes.

Another of John's talks reflects on the historical fact that some of the most productive and insightful mathematicians, from John Walls and Isaac Newton to Andrew Weil (who died recently), have been those who paid most attention to the history of the subject. John's broader educational claim is that one purpose of history is to help us understand present situations better, and that history of mathematics provides a means of pulling traditions together and avoiding further cultural fragmentation.

Mike Hendy