AUSTRALASIAN JOURNAL OF COMBINATORICS
Volume **55** (2013), Page 3

International Workshop on Hadamard Matrices and their Applications

Held in honour of Professor Kathy Horadam on her 60th birthday

A number of the papers in this volume are in honour of Professor Kathryn J. Horadam on the occasion of her 60th birthday. As Cheryl Praeger points out, Kathy is a woman in mathematics par excellence and a great role model for young mathematicians.

Kathy Horadam was born in 1951 in Armidale, Australia. Her BSc and PhD degrees, both in pure mathematics, are from the Australian National University. The major part of Kathy's career has been at RMIT University, where she has been a professor of mathematics since 1995. Even though Kathy has worked in academia for 30 years, she has also undertaken defence research, working for three years in the Cryptomathematics Research group at the Defence Science and Technology Organisation. A Fellow of the Australian Mathematical Society and of the Institute of Combinatorics and its Applications, Kathy leads the Information Security-Informatics Group in the School of Mathematical and Geospatial Sciences at RMIT. In the past she was Head of the Department of Mathematics and the Head of the Security and Safety Program in the Platform Technologies Research Institute at RMIT.

There are five papers in honour of Kathy Horadam in this issue, all on the topic of Hadamard matrices and related designs, a long-term research interest of Kathy's. While Matolcsi, Ruzsa and Weiner look at systems of mutually unbiased Hadamard matrices, Szöllősi ponders the existence of Butson Hadamard matrices of a particular order. Dillon and Kashyap approach Hadamard matrices from the angle of difference sets and connections to Jacobi-like sums, whereas Seberry discusses the amicability of Hadamard matrices and orthogonal designs. Hadamard matrices occur infrequently in vast search spaces and Brent's paper looks at ways of finding them, or rather, more generalised structures, the D-optimal designs. More papers are expected to appear in the next volume of the *Australasian Journal of Combinatorics*.

Some of the authors of the papers in this volume in honour of Kathy were also speakers at the International Workshop on Hadamard Matrices and their Applications, held in Kathy's honour at RMIT University in late November 2011. As Kathy said, whilst giving her invited talk at the workshop, "... it is necessary for mathematicians to work on the "hard" problems...".

Asha Rao
December 2012