

## PREFACE TO THIS SPECIAL ISSUE

The articles in this Special Issue are refereed versions of some of the papers presented at **Kruskal 2000**, an international conference on integrable systems held in Adelaide from 3–7 January 2000 in celebration of the 75th birthday of Martin David Kruskal. The conference provided the opportunity to bring together mathematicians, physicists and others with interests overlapping those of Martin Kruskal.

It was supported by the Australia Research Council, the Institute for Geometry and its Applications and the Department of Pure Mathematics, University of Adelaide. It was organised by Nalini Joshi (who was guest editor of this Special Issue), Chris Cosgrove and Andrew Hone. There were 36 speakers listed in the programme and over 40 delegates from Australia, Europe, North America and Europe. Martin himself gave the first and last talks.

Martin Kruskal has been professor of mathematics at Rutgers University since 1989. He spent most of his career at Princeton, where he is Professor Emeritus of Astrophysics and Mathematics. His discovery with Norman Zabusky in 1965 of solitons was an outstanding early success of scientific computation. In 1993 he received the National Medal of Science from President Clinton for his contributions to nonlinear science. Over the past 50 years, he has worked in a diversity of fields, including plasma physics, thermonuclear fusion, astrophysics and number systems: His dogged questioning of accepted beliefs has become a hallmark of the Kruskal approach.

“I find that, at a fundamental level, a great number of things are — in some sense — wrong with the beliefs or mindsets of people in any field. I mean, you can find better ways.

In almost every field there’s the potential for revolutionary change at the foundations. I find that in most fields — even well developed ones — there are some elementary questions that have not been answered. There are holes there, missing results.”

An example he cites (“my consuming passion”) is that of Conway’s surreal numbers. This was the subject of one of his two talks.

Outside the fields of mathematics and physics, Martin Kruskal is noted as an origamist and limerick writer. His mother, Lillian Oppenheimer Kruskal, founded the Origami Center of America. His wife, Laura Kruskal, is an internationally known and

published origami creator and teacher and taught some of her models to the conference delegates. Martin himself has invented some strikingly original folds.

Many of his limericks have been written for scientific gatherings to introduce speakers and summarise their presentations. I conclude this preface with one of them.

*To physicist Jacob Shaham  
The earth crackles and snaps like a bomb  
With nonillions fantastic  
Of stored ergs elastic  
He thinks it won't pop, so stay calm.*

CHARLES PEARCE  
Editor-in-Chief