

Nonlinearity is 20 years old in 2008!

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**EDITORIAL*****Nonlinearity* is 20 years old in 2008!**

During the past 20 years the journal has published many of the subject-defining papers in the field of nonlinear mathematics and its applications. These have ranged from fundamental developments in the theory of dynamical systems and differential equations to applications in atmospheric dynamics, astrophysics, biology, chemistry, fluid dynamics, networks, quantum chaos and statistical physics, to give just a few examples.

The field has changed considerably since the journal was founded. In particular, some applications, once considered little more than wishful thinking, have now matured and spun off to form their own journals, or to find homes in journals that might once have thought them too esoteric or too mathematical. In their place have come exciting new applications for which the fundamental mathematical ideas are still to be developed.

*Nonlinearity* has played a leading role in these developments and we look back with pride. But birthdays are also occasions when one should look forward, and with this in mind, as part of our birthday celebrations, we have commissioned for publication in 2008 a series of short articles, entitled Open Problems, from leading researchers in the field. Each article represents the author's personal selection of some interesting and/or important open problems or conjectures. They are not intended to be systematic lists, or encyclopaedic in coverage, but are, rather, individual perspectives on some of the problems and challenges, large and small, that would be worth solving. Our hope is that these articles will contribute to setting the agenda for the next 20 years, and beyond.

We took great pleasure in inviting these articles and hope that readers of *Nonlinearity* will find them interesting, stimulating, and perhaps, in some cases, even provocative. We certainly look forward to seeing, and maybe even publishing, solutions to the problems they describe!

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