

Editorial

Dear Readers

In this issue we welcome a new Problems Editor, David Angell. David has been a long time member of the School of Mathematics and Statistics and has been a regular contributor to *Parabola Incorporating Function* over many years. I would like to thank the previous Problems Editor, Thanh Tran, for his extraordinary service in this role over the past six years. When *Parabola* was founded more than forty years ago, mathematical problems were a major focus and that continues to be the case today.

The articles in this issue illustrate applied biomathematics, basic mathematics discovery and history of mathematics.

I was pleasantly surprised by a recent letter from a high school student, Karina de Brum, in the only school on the island of Lanai (the sixth largest Hawaiian Island, extending 29 km in the longest direction). Karina had discovered how to factor a sum of squares over the reals. Her method is included as an article in this issue. One factorization of the sum of two squares over the reals is given by $A^2 + B^2 = (A + B)^2 - 2AB = (A + B + \sqrt{2AB})(A + B - \sqrt{2AB})$ which provides a useful factorization when $2AB$ is a perfect square. Karina's article provides an infinity of factorizations and it is a very nice demonstration of how to play with mathematics and make discoveries.

B.I. Henry
Editor