Parabola Volume 47, Issue 3 (2011)

Editorial

Dear Readers

Welcome to a packed issue to close the year in 2011.

Congratulations to all of the students, their parents and teachers who had success in the 50th Annual UNSW School Mathematics Competition. The competition problems, solutions and names of prizewinners are included in this issue.

Mathematical problems might seem far removed from everyday life but really this is not the case. In fact, as Mrs Fibonacci says in the wonderful picture book by Jon Scieszka and Lane Smith, *Maths Curse*: "YOU KNOW, you can think of almost everything as a maths problem".

The tenth anniversary unveiling of the memorial to commemorate the victims of the 9/11 attacks in New York revealed among other things an elegant solution to a mathematics problem. The names on the memorial are not simply listed in alphabetical order. Instead a mathematical optimization problem was solved to group names in clusters composed of names of persons with meaningful relationships with one another. Examples of meaningful relationships are persons in the same family, persons in the same emergency services unit, persons on the same hijacked airline. Approximately 1200 meaningful relationship requests were received from victims friends and families. The optimization problem had to consider that some persons had meaningful relationships with more than one cluster. For example, two brothers who died in the attacks included one who was part of a firefighter cluster and another who was part of a detective cluster. There were also geometrical space constraints to consider, with different clusters having different sizes, and there were additional overarching organizational requirements that were imposed. Further details of this problem and its solution were published in on article "Commemorative Calculus: How an Algorithm Helped Arrange the Names on the 9/11 Memorial" by John Matson, published in *Scientific American* 7 September 2011. There is a more technical description given by the software artist and designer who solved the problem, Jer Thorp, that can be accessed from his web page, `blog.blprnt.com`. He has some really nice tutorials there on data visualization too.

Editor

Bruce Henry