

Editorial

K L Sebastian, Chief Editor

This issue of *Resonance* features the Russian born, German mathematician George Cantor who made very important contributions to mathematics. He introduced set theory, the cornerstone of modern mathematics. He also brought out the importance of the idea of infinity and was instrumental in laying foundations of the theory of fractals, through introduction of the famous ‘Cantor set’. In spite of all these, he was subjected to



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very severe criticism from prominent mathematicians of his day, like Kronecker and Poincaré. In an interesting article and an Article-in-a-Box, Srivastava discusses how Cantor discovered set theory and point set topology as a result of his investigations into trigonometric series. Ideas of the Cantor set, and its extension to two dimension, namely, the Sierpinski triangle and their fractal dimensions are discussed by Shirali, in another article.

This issue has three more interesting mathematics articles – the first is by Kak, who discusses the ideas of the Goldbach partition function. An interesting aspect of the theory of numbers, viz., the finite cycles that result from iterates of functions on the collection of integers is discussed in the article by Herzberg and Ram Murthy. The effects of nonlinearities on ocean waves is the topic of the article by Varma.

Frustrated Lewis Pairs which have been a subject of great deal of attention in the recent past is discussed in a very interesting article by Mukherjee and Thilagar, while biofilms that result from the community behavior of bacteria are covered in a nice article by Shivakumar and Chakravorty.

Each issue of *Resonance* has a cartoon and a nice cover page. The cartoons, which I have always admired, are drawn by Ayan Guha, who is based in the US – and he does it for free for *Resonance* – because of his passion for cartoons, and science. The cover page, which always has a pencil sketch and a design based on the articles in the issue, is made by Subhankar Biswas. Both are uniformly of high quality, as can be seen from the cover of this issue. The back cover portrait incidentally was done by the artist using his left hand this time, as an experiment, as he is a right-handed person! It is very appropriate that I thank Ayan and Subhankar for their tremendous efforts.

