

Editorial

N Mukunda, Chief Editor

Our slightly extended article-in-a-box and back cover portrait this time celebrate the great universalist and intellectual giant Gottfried Wilhelm Leibniz, who was a contemporary of Isaac Newton. The two of them independently invented the differential calculus – called by Newton the "method of fluxions" – and this led to one of the most famous and acrimonious priority disputes in the history of modern science and mathematics. It is astonishing to see the breadth of interests that Leibniz displayed during his life time – one of them pertinent to our times is the method of symbolic computation, making him the father of computer science!



Priti Shankar's series on Error Correcting Codes tackles this time the topic of the Reed–Solomon Codes. Compact Disc music systems, so amazingly faithful in their sound reproduction, are slowly becoming widespread even in our country. It is amazing to realize how much of sophisticated *theory* lies behind these marvels of technology, contributing to both fidelity and ruggedness. How far we have come from Thomas Edison's music machine, and the image of the dog listening to his master's voice over the gramophone! And all this thanks to practical applications of algebra.

Vani Brahmachari's series on Know Your Chromosomes takes up in this instalment the question of sex chromosomes, the differences between male (XY) and female (XX), and the mechanisms of dosage compensation at various levels of evolution – worms, insects and mammals. This reminds one of a take-off on a famous poem of Walter Scott – "Breathes there a man with soul so tough, who thinks two sexes are not enough?"

S M Srivastava's article on transfinite numbers introduces us to the nonintuitive features of the uncountable, so you can understand why there are no more points in a plane than on a line!

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