

Editorial

Rajaram Nityananda, Chief Editor

Resonance bears the subtitle ‘*journal of science education*’ and has mainly carried resources for both teachers and students of science, typically at the undergraduate level. Our Classroom section sometime deals with practical suggestions for teaching, but it is rare that we receive – and accept – an article researching the effectiveness of educational practices. Given that the Academy encourages its members to reach out to schools and colleges, it is of considerable interest to learn of similar efforts in South Africa, where university teachers visited schools to address issues in maths education. The intervention has been carried out and evaluated systematically – we hope it will encourage similar efforts in our own context.



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No one doubts the fundamental role of chemistry in biology – in fact it is a long standing complaint of chemists that the Nobel Prizes, in their discipline, including the most recent ones, go to chemistry inspired by biology.

The role of simple physics in biology is not so apparent. Our back cover personality, Steven Vogel, carved a unique niche by examining a variety of biological systems as a physicist and engineer. One article by him has been selected for our Classics section. It is just the beginning of a series which appeared in the *Journal of Biosciences* published by the Academy – we urge our readers to go to the entire series at the journal website. Each one brings out a fascinating aspect of physical principles playing a key role in the functioning of biological systems, ranging from leaves to blood vessels and much more. One important lesson is that evolution has found rather different solutions to the same problems that engineers face – resemblances are superficial and sometimes deceptive.

V Rajaraman’s books on computers and computation have been a major resource for generations of students in India, starting as early as the 1970s. A quick look at the *Resonance* archives turned up more than twenty articles by him explaining new developments in this field. The article on grid computing in this issue is just one more!

In ‘heavy water’ the hydrogen nucleus is replaced by deuterium nucleus which is twice as heavy. Most of us associate this material with nuclear physics – slowing down neutrons in reactors. In the Classroom section, Maitra and Zare come up with a fascinating demonstration of basic physical and chemical principles, based on heavy ice.

