

# Editorial

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*Amitabh Joshi, Associate Editor*

India, being one of the world's oldest civilizations, has contributed greatly to the intellectual development and growth of humankind. Unfortunately, however, India's contributions to philosophy, spirituality, literature and the arts tend to overshadow parallel achievements in the sciences. Science students in India are all too often unfamiliar with the contributions to their respective fields made by our eminent scientists and mathematicians, both ancient and modern. As a medieval Indian bard has said so well



*“duniya badi baavri, patthar poojne jaye; ghar ki chakki koi na pooje, jiska peesa khayee”*  
(people travel far and wide to worship stones, yet no one thinks to worship the grinding stone at home which gives us our sustenance)

In past issues of *Resonance*, we have highlighted the contributions of some of India's great scientists who were very often not just researchers but also played an active and leading role in developing the scientific and technical infrastructure of a newly independent India. Continuing with this tradition, in this issue we remember S S Bhatnagar, an acclaimed chemist who made many contributions to our understanding of colloids and magnetochemistry, was both a pure and applied chemist, and was the founding director of the CSIR. In addition to pursuing research as well as its successful application to industrial problems, Bhatnagar oversaw the setting up of much of Indian scientific and educational infrastructure in the early years after independence. One of his talks, reproduced as a *Classics* item, exemplifies Bhatnagar's clear thinking about and commitment to science education in India. Articles by Kochhar and Sivaram introduce us to his life and work; I was particularly impressed and happy to learn that Bhatnagar, while being a great scientist and institution builder, also published a book of Urdu verse.

Turning from modern to ancient Indian intellectual achievements, Dutta's article introduces us to the varied contributions of our early thinkers to diverse fields of mathematics. The second part of a series on glial cells focusses on astrocytes, highlighting their many functions in the nervous system. Other articles in this issue deal with Bayesian statistics, operating systems, and the possibility of a fractal structure of the universe. And finally, in keeping with Bhatnagar's interest in colloids, we also have two articles on the climatic effects of aerosols and on the discovery of a new attractive force between hydrophobic surfaces.