Editorial

N Mukunda, Chief Editor

We now complete three years of regular – and dare we say successful? – appearance and begin our fourth. As stated more than once in these pages, our constant hope and endeavour is to provide some material of more or less direct use in classroom situations, along with other material which enriches and widens the interests of our readers. We believe we are reaching both students and teachers of science, and we have heard more than once that some of our articles have been used as the basis for classroom seminars and projects. It also seems that some of our series articles have been woven into courses. While all this is encouraging, we also sometimes hear that some of our pieces are rather demanding. That in itself need not be a cause for too much concern. In any event, we will continue to look for and encourage good quality writing at the college and upper school levels; and believe me when I say that is easier said than done! Through our information and announcements pages we tell our student readers about various institutions in the country and the avenues and opportunities they provide.

Norbert Wiener was a remarkable mathematician whose work has had profound influences on many engineering areas. Indeed some of his best work can well be called 'engineering mathematics' in the finest sense. These include his contribution to control theory, stochastic processes, and cybernetics or the science of 'thinking machines'. In two brief article-in-boxes, V S Borkar and A Sitaram describe respectively Wiener's work in harnessing ideas from statistics for engineering applications, and his work on spectral synthesis in Fourier transform theory. Figures like Wiener and Pontrjagin show how contributions to the most pure of mathematics and the most practical applications can come from the same fertile imagination. G Kallianpur recalls very briefly

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Wiener's 1923 work on Brownian motion, and on linear prediction theory of stationary time series. He rounds off his account with charming recollections of times spent with Wiener during 1955 at the Indian Statistical Institute in Calcutta, and goes on to compare Wiener's breadth of interests with other geniuses like Bertrand Russell and John von Neumann in the liberal tradition. Roddam Narasimha reviews Part 1 of Wiener's autobiography, while V Rajaraman introduces an essay of Wiener on 'Some moral and technical consequences of automation'. Thoughtful reflections on the man-machine relationship.

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Wiener's 'forgetful professor' image has led to several memorable stories. He was once walking along the corridor outside his office when a student stopped him to ask a question. After the answer, Wiener asked the student "*Tell me, when you stopped me, was I coming from my room or going towards it?*" To which the student gave the appropriate answer, and then Wiener exclaimed: "*Ah! Then I must have had my lunch!*" On another occasion, after a full day at the office he drove home only to find it all boarded and locked up. He then asked a young man there: "*Tell me, isn't this the home of Norbert Wiener?"*, to which came the reply "*Yes, dad, but we just moved today!*".

Joseph Samuel's 'Crossing bridges' is a delightfully humorous exposition of the birth of topology – the mathematics of quality as opposed to quantity – which will make you chuckle. When you read about Königsberg, remember that both Immanuel Kant and David Hilbert were sons of this city. Hungarians, for good reasons, play a prominent role in this article. The following may then help you: A Hungarian is someone who enters behind you in a revolving door and gets out ahead of you!

Happy reading!