

Editorial

Rajaram Nityananda, Chief Editor

The back cover carries the picture of a great physicist of the first half of the twentieth century, Arnold Sommerfeld of Germany. He is a classic example of what the biologists call inclusive fitness – he did not win a Nobel Prize himself but set many others on their road to becoming great physicists themselves – and the *gharana* continues to this day. I heard of one of his principles from a fourth generation member – choose your field of work so that you have an unfair advantage! One only needs to read the articles in this issue to realise how unfair this advantage was for his students. But also for Sommerfeld himself, given early exposure to giants such as David Hilbert and Felix Klein. Others too had this exposure, but it is clear that he made brilliant use of the mathematical perspective he gained, and turned it onto problems in physics. One only needs to look at his interest in fluids, not covered in this issue, to realise how much he was inspired by the macroscopic world, and the continuum mechanics needed to describe it. Another anecdote: his student, Otto Laporte, discovered the law of parity conservation from studying atomic spectra – a fundamental law if ever there was one. Apparently, Sommerfeld spoke some words of encouragement and then said, “lets get on to the main business of your thesis in fluid dynamics!”



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Another *Resonance* tradition is to cover the Nobel Prizes. This issue carries an article on the 2014 Prize in Physiology or Medicine – now loosely interpreted as a Prize for Biology. One of the privileges of being an editor of this journal is a preview of some utterly fascinating science expounded by someone who understands it. Neuroscience is growing by leaps and bounds, and the experiments described reveal a remarkable architecture of neurons and their interconnections and how they underlie one of our most basic abilities – to know where we are, and to put this information to some use!

