



Preface

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Editor

Today, we have reached a point where the image of the supermassive black hole at the centre of the milky way galaxy, 27000 light years away, is unveiled proving the predictions from Einstein's General Theory of Relativity. Scientific progress being rapid in all spheres, there is a need for teachers working in the field to keep themselves abreast of the developments, and students to get exposed to the frontier areas of knowledge.

The first issue of the online edition of *APT Tunes* contains informative and relevant articles on new areas of knowledge and new approaches to teaching-learning process. The web-based education being widespread today, the technologies useful for online Education, Computer Interfaced Experiments and the effectiveness of Virtual Laboratories are widely discussed in the current issue under the section, *Special Theme*. The emerging trends of Physics are highlighted by the topics like Q-bits Pieces, Petawatt Lasers under the section *Recent Advances*. Two Invited Articles are included, one on the history of thermodynamics and the other on the perceptions of Classical Mechanics.

As technology evolves, it's key to have the environment of a laboratory evolve as well. Upgradation of laboratories through simple devices is cost-effective and timesaving. It is briefly discussed here, under the section *Upgrade Your Lab*. The essentials of high-quality typesetting system, LaTeX, the de facto standard for the communication and publication of scientific documents is briefly outlined on this issue under the section *Upskill Yourself*.

Professor Thanu Padmanabhan was a prolific researcher who devoted his career mainly to understand the nature of gravity. As a tribute to the eminent theoretical physicist and cosmologist, an overview of his emergent gravity paradigm in cosmology is also included in the current issue under the section *Homage*.

A course syllabus acts as a directional map to proceed in the way of learning which needs to be modified as time demands. The *APT Tunes* have strong conviction that the onus rests with teachers to review and update the syllabus and would like to think loudly on the pedagogical approaches to the subject that suits the undergraduate and graduate programs in our universities. Keeping this in mind, the review of the syllabus of quantum mechanics at UG and PG levels titled, 'Quantum Mechanics Curriculum: A Review' is included in this issue.

We feel proud and privileged to release the first online edition of the *APT Tunes* and entrust it to the scientific community. Let us inspire our students, researchers and teachers to ask further questions. As Voltaire rightly pointed out, questions are more important than answers.

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