

## Preface

It is our great pleasure to dedicate this special issue of *Journal of Plasma Physics* to our dear friend and colleague Professor Padma Kant Shukla on the occasion of his 60th birthday on 7th July 2010. Padma is one of the most prominent and productive scientists in plasma physics and in neighboring fields, and has published more than 1300 papers in scientific journals. It has for some time been the aim of his friends to honor him on this occasion, and earlier this year we sent out invitations to distinguished scientists who have collaborated with Padma over the years. The response has been overwhelming, and we collected 43 manuscripts, covering a diverse range of topics in plasma physics, which are now published in this issue. We believe that these papers reflect some of the impact of Padma's research in plasma physics.

Padma was born near Varanasi, India, where he received his education and first scientific schooling. He was later invited to Sweden, where he successfully received a doctorate in Physics under the supervision of Prof. Lennart Stenflo. This led to a long and successful career at the Ruhr-University Bochum, Germany, where he established his base. Padma's exceptionally productive career spans four decades and includes a diverse range of subjects in plasma physics and neighboring areas of physics, such as nonlinear interactions between plasmas and electromagnetic fields, relativistic laser-plasma interactions, dusty (complex) plasmas, drift waves and vortices in magnetized plasmas, magnetic confinement fusion, collective neutrino-plasma interactions and quantum effects in plasmas, to mention a few. For his scientific achievements, Padma has been awarded several prizes, including the Gay-Lussac/Humboldt Prize. He has been elected Foreign Member of the Royal Swedish Academy of Sciences and the Royal Swedish Academy of Engineering Sciences and Corresponding Fellow of the Royal Society of Edinburgh, Scotland. He has also received Doctor Honouris Causa degrees from the Russian Academy of Sciences and the Technical University of Lisbon, Portugal.

Padma has always had the mentoring of students from the third world close to his heart. This has been accomplished by inviting and supervising PhD students and junior researchers to his group and to numerous workshops and summer schools at the Abdus Salam International Centre for Theoretical Physics in Trieste, Italy, as well as in Faro, Portugal and in Santorini, Greece. This training of young researchers has led to the possibility for them to start their own independent careers and research groups in India, Pakistan, Egypt, Brazil and other places. Padma's work awarded him the 2005 American Physical Society Nicholson Medal for Human Outreach *"For his prodigious and successful efforts in encouraging young scientists from under-represented countries throughout the world, by his regular visits to their universities and by facilitating their participation in international meetings and workshops."*

It is a great privilege for us to know and work with Padma both as a colleague and as a friend. We wish Padma a very long and healthy life and hope that he will continue with many more years of success in science and to be a source of inspiration for future generations of scientists.

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