Preface

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This special issue is devoted to the memory of Professor Padma Kant Shukla, who passed away 26 January 2013 on his travel to New Delhi, India to receive the prestigious Hind Rattan (Jewel of India) award. Padma was born in Tulapur, Uttar Pradesh, India, 7 July 1950, where he grew up and got his education. He received a PhD degree in Physics at the Banaras Hindu University, Varanasi, Uttar Pradesh, India, in 1972, under the supervision of late Prof. R. N. Singh, and a second PhD degree in Theoretical Plasma Physics from Umeå University in Sweden in 1975, under the supervision of Prof. Lennart Stenflo. He worked at the Faculty of Physics & Astronomy, Ruhr-University Bochum, Germany since January 1973, where he was a permanent faculty member and Professor of International Affairs, a position that was created for him to honour his international accomplishments and reputation.

Padma Shukla was one of the most productive theoretical scientists in plasma physics, and he published more than 1500 papers in refereed scientific journals. He was a great source of inspiration for young scientists around the world. In particular he mentored many junior scientists from the third-world countries through a series of plasma physics summer schools and workshops at the Abdus Salam International Centre for Theoretical Physics (ICTP) in Trieste, Italy, as well as in Faro, Portugal and in Santorini, Greece. These activities helped several young scientists to pursue their own scientific careers and to build groups in their home countries.

Prof. Shukla received several honours throughout his career. As examples, he got Doctor Honoris Causa degrees from the Russian Academy of Sciences, Mo-

scow, Russia in 2004 and from the Technical University of Lisbon, Portugal in 2009. For his successful efforts in encouraging young scientists from underrepresented countries throughout the world, he received the Nicholson Medal for Human Outreach in Physics from the American Physical Society in 2005. Other honors include the Gay-Lussac/Humboldt Prize from the French Ministry for Education and Research in 2006 and First Laureate of the 22nd Khwarizmi International Award, Iran, in 2009. He also became Foreign Member of the Physics Class of the Royal Swedish Academy of Sciences in 2006 and Foreign Member of the Royal Swedish Academy of Engineering Sciences in 2008, Fellow of the American Physical Society (APS), USA in 2001, Fellow of the Institute of Physics (IoP), UK in 2002, and Corresponding Fellow of the Royal Society of Edinburgh, Scotland, UK in 2009.

Even though Padma worked most of his career in the Western world, he never lost the connection with his roots, and he was always concious of giving something back. Padma had an infectious enthusiasm for science that touched everyone who collaborated with him. We have lost a great scientist, collaborator and friend.

Padma Shukla was buried in Varanasi at the shores of Ganges, in accordance with his last wish. In this sense, he finally returned home to his motherland India where he now rests in peace.

He is survived by his wife Ranjana and sons Prashant, Predhiman and Pushpesh.

The Editors thank all the invited authors for their well-prepared manuscripts, which appear in this special issue.