

Foreword

by Richard H. Herman

Textbooks are integral to learning, an essential tool students must have to succeed in their studies. Excellent textbooks, such as this one, endure, undergoing periodic revisions to keep step with advances in knowledge. Since its introduction in 1977, the six editions of *Elements of Engineering Electromagnetics* have served engineering students well, clarifying the principles and applications of electromagnetic theory.

This edition is unique, for it is addressed to the students and faculty of India, the birth nation of its author, N. Narayana Rao. For four decades, Professor Rao has been an accomplished professor of electrical and computer engineering at the University of Illinois at Urbana-Champaign.

This edition also includes a significant new section, “Why Study Electromagnetics?” The numerous contributors to this section offer a wide range of answers to the question, drawing on their experiences as teachers, engineers and entrepreneurs. It is a crucial addition, one that students will find most beneficial in broadening their thinking about electromagnetics.

As a public research university with a long history of service to the international community, Illinois has played an important part in the growth of higher education in India. In the 1950s and 1960s, the university applied its longstanding expertise in agriculture and technology to assisting India develop its own academic pursuits and applications of knowledge. Illinois was instrumental in setting up the first Indian Institute of Technology in Kharagpur, which planted the seeds for the high technology revolution driving India today.

Today, the Indian edition of *Elements of Engineering Electromagnetics* continues that tradition in the high-speed era of the Internet and e-learning, a time marked by unbounded academic exploration and rapid transfer of newly acquired knowledge.

I commend Professor Rao for his steadfast concern that he continue to provide engineering students with the most current and accessible textbook in electromagnetics. It is fitting that Professor Rao has prepared this edition during

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the implementation of the 2005 Indo-US Inter-University Collaborative Initiative in Higher Education and Research, for it is a welcome contribution to the pursuit and sharing of knowledge that Illinois and its counterparts in India have long enjoyed.

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