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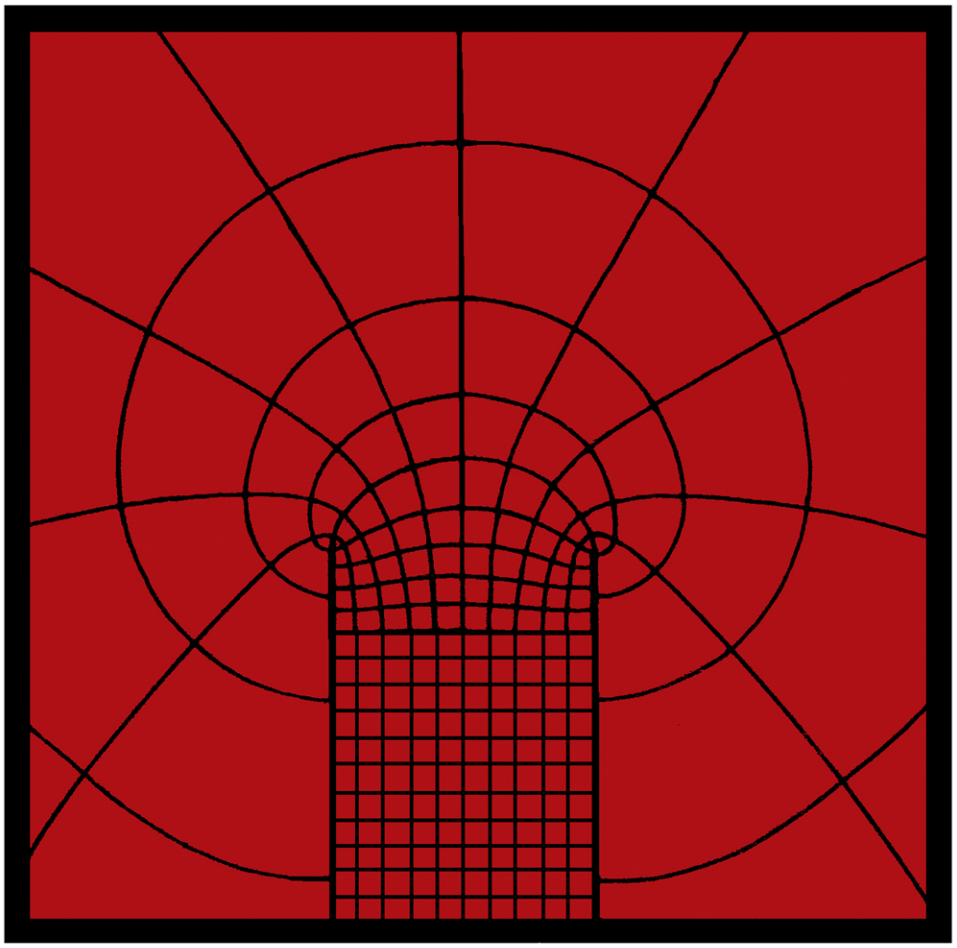

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by

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Preface to the Third Edition

The continuing use of this book by students in many countries has given me the opportunity to prepare a thoroughly revised third edition. There is nothing like teaching to clarify one's thoughts and I have had the privilege and pleasure of teaching successive first-year degree classes both in the department of electrical engineering and in the department of electronics and information engineering at Southampton. The sharpness of intellect of some of these students as shown by their questions has clarified my thinking and helped me to remove obscurities in the book.

Except for the first chapter, which I have rewritten completely, the general argument of the book remains as before. I am more than ever convinced that the principles of electromagnetism are better explained by physical analogies rather than by mathematics. Of course the results can be stated with greater precision and conciseness in mathematical form, but the words of explanation are essential. The students whom I teach do not enjoy abstract thought for its own sake. They are interested in engineering systems and processes and they prefer, like me, to think in terms of physical models.

Even so the difficulties of the subject are formidable and electromagnetism is not the most popular subject, except amongst a small number of students. The propagation and distribution of energy in space is bound to be more