

# PREFACE

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Some years ago, before I started to write this book, I already had an idea about how to structure the Preface. It was to be organized essentially as a “Preface-diary,” to assist and encourage me in my work by recording the difficulties encountered along the way, the choices made and the subsequent changes, which often required rearranging the entire order of the subjects and rewriting complete parts of the book.

Now that the book is written, such a Preface would make no sense, not even to me. With the work finished, a strange feeling is aroused in me, a mixture of pride and perplexity, mainly when thinking about the courage and the tenacity I have had.

Drawing from the results of a long personal experience—technical, scientific, and teaching—which has been intensively matured in industrial and academic fields, I have tried to put together whatever I thought was necessary to achieve an up-to-date, organized, and coherent treatise; quite a challenging project which I have been thinking about for a long time.

The typical topics of electric power area (and related areas such as hydro and thermal power plants) are discussed here according to a “system approach” in order to allow, according to the most recent theories and methods, a global and right vision of the different problems involved. Special attention is dedicated to operational scheduling, control, and modelling of phenomena (essential, by the way, for simulations), and to the interpretation of the phenomena themselves, to make them more understandable to the reader and to ensure a sufficient mastery of the problems.

On the whole, the aim of this book is to be critical and constructive, not only for the ability to “do” but, before that, for “knowledge.” It expresses the constant desire to clarify concepts and justify simplifications, so to maintain the *human being* at the core of problems. Therefore, this book is intended as a

basic and up-to-date text, both for students and for anyone concerned, working in universities, industries or consulting. I hope that the presence of commonly separated topics will offer, for the homogeneity of the treatment, interesting comparisons, useful correlations, and a deeper and wider knowledge for specialists in different branches.

I cited at the beginning, pride and perplexity; it seems to me that what has been said could justify such feelings, at least for the variety of contents and ambitious intention. The attempt of assembling (consistently) so many topics may appear successful, but such an effort has required, apart from a sort of cultural “challenge,” a continuous and tiring research of the most effective way of presentation, to avoid lack of uniformity in style and emphasis; it is difficult for me to evaluate the result.

I am also aware of having, perhaps, “invaded” too many fields, with the risk of appearing sometimes superficial to specialists, but I hope they can forgive me by considering this invasion an obliged (and possibly discreet) choice and by still appreciating the outcome of the work and the intention that has driven me.

Just before closing, I wish to thank everybody who contributed to my preparation, and the ones who shared, in different ways, more or less directly, the discomforts originating from my work.

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*Genoa, Italy  
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