

# Preface

This book has been written for university students, professionals in the area of protective relaying, and other interested individuals with minimum engineering skills to study the material on their own. To achieve this goal, the book has been written in an unconventional way: It uses a simulation tool called MERIT 2000, based on widely known MATLAB software, to offer hands-on experience in understanding and implementing protective relaying designs.

Many books on protective relaying have been published over the years, which provide an excellent background on power system faults and protective relaying principles. However, most of these books assume that the reader is interested in learning about relaying principles and on how protective relay products can be used to implement protective approaches for various power system apparatus.

This book takes a different approach: It assumes that the reader is interested in learning how the relays work, what the basic design principles are, and how an implemented design of a relay may be evaluated. With this goal in mind, the book tries to make the learning process a design experience wherein the reader starts using the software engineering tools (MATLAB) from the very beginning as the basic relay design principles are introduced. The book is not a substitute for a reference on the fundamentals of relaying but is rather a complementary source on the topic.

To provide a hands-on experience, the authors have provided MERIT 2000 software developed in MATLAB as a supplement to this book. The software has been in use since 2000 in laboratory assignments in courses at Texas A&M University.

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