

About the Book

A Laboratory Manual on "Virtual Experimentation on Electrical AC Machines and Circuit Networks using MATLAB/Simulink and MULTISIM" has been written to quickly grip the understanding of Electrical AC machines, particularly induction and synchronous motor, and Circuit Networks from an experimental operation point of view on the virtual platform. This book deals with all the experiments related to important topics of electrical machines and networks which are practically performed by students in a majority of technical institutions. The theoretical background of every experiment is reviewed before the system simulation. Detailed step-by-step experimental procedures are explained with the necessary diagram. Development of experimental setup by using MATLAB/Simulink and MULTISIM has been explained from scratch, which also enhances the simulation and analytical skills for various practical systems. Every step of the simulation is explained during the development of the system using Simulink and MULTISIM which can be further extended to investigate and analyze for Academics, Industrial, and Research & Development purposes. This book can be used as a reference to simulate and analyze the virtually developed system using AC machines and circuit networks by students and working professionals.

A Laboratory Manual

on

Virtual Experimentation on Electrical AC Machines and Circuit Networks using MATLAB/Simulink and MULTISIM

**Arif Iqbal
G. K. Singh**



<https://centralwestpublishing.com>

9 781922 617415

A Laboratory Manual

on

Virtual Experimentation on Electrical AC
Machines and Circuit Networks using
MATLAB/Simulink
and
MULTISIM

Arif Iqbal

Department of Electrical Engineering
Rajkiya Engineering College Ambedkar Nagar
U.P., India

G. K. Singh

Department of Electrical Engineering
Indian Institute of Technology Roorkee
Uttarakhand, India

CWP

Central West Publishing

This edition has been published by Central West Publishing, Australia
© 2023 Central West Publishing

All rights reserved. No part of this volume may be reproduced, copied, stored, or transmitted, in any form or by any means, electronic, photocopying, recording, or otherwise. Permission requests for reuse can be sent to editor@centralwestpublishing.com

For more information about the books published by Central West Publishing, please visit <https://centralwestpublishing.com>

Disclaimer

Every effort has been made by the publisher, editors and authors while preparing this book, however, no warranties are made regarding the accuracy and completeness of the content. The publisher, editors and authors disclaim without any limitation all warranties as well as any implied warranties about sales, along with fitness of the content for a particular purpose. Citation of any website and other information sources does not mean any endorsement from the publisher, editors and authors. For ascertaining the suitability of the contents contained herein for a particular lab or commercial use, consultation with the subject expert is needed. In addition, while using the information and methods contained herein, the practitioners and researchers need to be mindful for their own safety, along with the safety of others, including the professional parties and premises for whom they have professional responsibility. To the fullest extent of law, the publisher, editors and authors are not liable in all circumstances (special, incidental, and consequential) for any injury and/or damage to persons and property, along with any potential loss of profit and other commercial damages due to the use of any methods, products, guidelines, procedures contained in the material herein.



A catalogue record for this book is available from the National Library of Australia

ISBN (print): 978-1-922617-41-5