

READING FREE ANALYSIS OF ELECTRIC MACHINERY DRIVE SYSTEMS 2ND EDITION (PDF)

ANALYSIS OF ELECTRIC MACHINERY AND DRIVE SYSTEMS CONTROL OF ELECTRIC MACHINE DRIVE SYSTEMS ELECTRICAL MACHINE DRIVES CONTROL ELECTRIC MACHINERY AND DRIVES ELECTRICAL MACHINES AND DRIVES ELECTRICAL MACHINES & DRIVES
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2ND ED ELECTRICAL MACHINES, DRIVES, AND POWER SYSTEMS WORKED EXAMPLES IN ELECTRICAL MACHINES AND DRIVES INTRODUCTION TO ELECTRIC POWER AND DRIVE SYSTEMS ELECTRICAL MACHINES & THEIR APPLICATIONS INTRODUCTION TO
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ELECTRIC MACHINES AND DRIVES

ANALYSIS OF ELECTRIC MACHINERY AND DRIVE SYSTEMS *2013-05-22*

INTRODUCING A NEW EDITION OF THE POPULAR REFERENCE ON MACHINE ANALYSIS NOW IN A FULLY REVISED AND EXPANDED EDITION THIS WIDELY USED REFERENCE ON MACHINE ANALYSIS BOASTS MANY CHANGES DESIGNED TO ADDRESS THE VARIED NEEDS OF ENGINEERS IN THE ELECTRIC MACHINERY ELECTRIC DRIVES AND ELECTRIC POWER INDUSTRIES THE AUTHORS DRAW ON THEIR OWN EXTENSIVE RESEARCH EFFORTS BRINGING ALL TOPICS UP TO DATE AND OUTLINING A VARIETY OF NEW APPROACHES THEY HAVE DEVELOPED OVER THE PAST DECADE FOCUSING ON REFERENCE FRAME THEORY THAT HAS BEEN AT THE CORE OF THIS WORK SINCE THE FIRST EDITION THIS VOLUME GOES A STEP FURTHER INTRODUCING NEW MATERIAL RELEVANT TO MACHINE DESIGN ALONG WITH NUMEROUS TECHNIQUES FOR MAKING THE DERIVATION OF EQUATIONS MORE DIRECT AND EASY TO USE COVERAGE INCLUDES COMPLETELY NEW CHAPTERS ON WINDING FUNCTIONS AND MACHINE DESIGN THAT ADD A SIGNIFICANT DIMENSION NOT FOUND IN ANY OTHER TEXT A NEW FORMULATION OF MACHINE EQUATIONS FOR IMPROVING ANALYSIS AND MODELING OF MACHINES COUPLED TO POWER ELECTRONIC CIRCUITS SIMPLIFIED TECHNIQUES THROUGHOUT FROM THE DERIVATION OF TORQUE EQUATIONS AND SYNCHRONOUS MACHINE ANALYSIS TO THE ANALYSIS OF UNBALANCED OPERATION A UNIQUE GENERALIZED APPROACH TO MACHINE PARAMETERS IDENTIFICATION A FIRST RATE RESOURCE FOR ENGINEERS WISHING TO MASTER CUTTING EDGE TECHNIQUES FOR MACHINE ANALYSIS ANALYSIS OF ELECTRIC MACHINERY AND DRIVE SYSTEMS IS ALSO A HIGHLY USEFUL GUIDE FOR STUDENTS IN THE FIELD

CONTROL OF ELECTRIC MACHINE DRIVE SYSTEMS 2011-04-20

A UNIQUE APPROACH TO SENSORLESS CONTROL AND REGULATOR DESIGN OF ELECTRIC DRIVES BASED ON THE AUTHOR S VAST INDUSTRY EXPERIENCE AND COLLABORATIVE WORKS WITH OTHER INDUSTRIES CONTROL OF ELECTRIC MACHINE DRIVE SYSTEMS IS PACKED WITH TESTED IMPLEMENTED AND VERIFIED IDEAS THAT ENGINEERS CAN APPLY TO EVERYDAY PROBLEMS IN THE FIELD ORIGINALLY PUBLISHED IN KOREAN AS A TEXTBOOK THIS HIGHLY PRACTICAL UPDATED VERSION FEATURES THE LATEST INFORMATION ON THE CONTROL OF ELECTRIC MACHINES AND APPARATUS AS WELL AS A NEW CHAPTER ON SENSORLESS CONTROL OF AC MACHINES A TOPIC NOT COVERED IN ANY OTHER PUBLICATION THE BOOK BEGINS BY EXPLAINING THE FEATURES OF THE ELECTRIC DRIVE SYSTEM AND TRENDS OF DEVELOPMENT IN RELATED TECHNOLOGIES AS WELL AS THE BASIC STRUCTURE AND OPERATION PRINCIPLES OF THE ELECTRIC MACHINE IT ALSO ADDRESSES STEADY STATE CHARACTERISTICS AND CONTROL OF THE MACHINES AND THE TRANSFORMATION OF PHYSICAL VARIABLES OF AC MACHINES USING REFERENCE FRAME THEORY IN ORDER TO PROVIDE A PROPER FOUNDATION FOR THE MATERIAL THE HEART OF THE BOOK REVIEWS SEVERAL CONTROL ALGORITHMS OF ELECTRIC MACHINES AND POWER CONVERTERS EXPLAINING ACTIVE DAMPING AND HOW TO REGULATE CURRENT SPEED AND POSITION IN A FEEDBACK MANNER SEUNG KI SUL INTRODUCES TRICKS TO ENHANCE THE CONTROL PERFORMANCE OF THE ELECTRIC MACHINES AND THE ALGORITHM TO DETECT THE PHASE ANGLE OF AN AC SOURCE AND TO CONTROL DC LINK VOLTAGES OF POWER CONVERTERS TOPICS ALSO COVERED ARE VECTOR CONTROL CONTROL ALGORITHMS FOR POSITION SPEED SENSORLESS DRIVE OF AC MACHINES METHODS FOR IDENTIFYING THE PARAMETERS OF ELECTRIC MACHINES AND POWER CONVERTERS THE MATRIX ALGEBRA TO MODEL A THREE PHASE AC MACHINE IN D Q N AXES EVERY CHAPTER FEATURES EXERCISE PROBLEMS DRAWN FROM ACTUAL INDUSTRY EXPERIENCE THE BOOK ALSO INCLUDES MORE THAN 300 FIGURES AND OFFERS ACCESS TO AN FTP SITE WHICH PROVIDES MATLAB PROGRAMS FOR SELECTED PROBLEMS THE BOOK S PRACTICALITY AND REALWORLD RELATABILITY MAKE IT AN INVALUABLE RESOURCE FOR PROFESSIONALS AND ENGINEERS INVOLVED IN THE RESEARCH AND DEVELOPMENT OF ELECTRIC MACHINE DRIVE BUSINESS INDUSTRIAL DRIVE DESIGNERS AND SENIOR UNDERGRADUATE AND GRADUATE STUDENTS TO OBTAIN INSTRUCTOR MATERIALS PLEASE SEND AN EMAIL TO PRESSBOOKS IEEE ORG TO VISIT THIS BOOK S FTP SITE TO DOWNLOAD MATLAB CODES PLEASE CLICK ON THIS LINK FTP FTP WILEY COM PUBLIC SCI TECH MED ELECTRIC MACHINE MATLAB CODES ARE ALSO DOWNLOADABLE FROM WILEY BOOKSUPPORT SITE AT BOOKSUPPORT WILEY COM

ELECTRICAL MACHINE DRIVES CONTROL *2016-11-14*

THIS COMPREHENSIVE TEXT EXAMINES EXISTING AND EMERGING ELECTRICAL DRIVE TECHNOLOGIES THE AUTHORS CLEARLY DEFINE THE MOST BASIC ELECTRICAL DRIVE CONCEPTS AND GO ON TO EXPLAIN THE MOST IMPORTANT DETAILS WHILE MAINTAINING A SOLID CONNECTION TO THE THEORY AND DESIGN OF THE ASSOCIATED ELECTRICAL MACHINES ALSO INCLUDING LINKS TO A NUMBER OF INDUSTRIAL APPLICATIONS THE AUTHORS TAKE THEIR INVESTIGATION OF ELECTRICAL DRIVES BEYOND THEORY TO EXAMINE A NUMBER OF PRACTICAL ASPECTS OF ELECTRICAL DRIVE CONTROL AND APPLICATION KEY FEATURES PROVIDES A COMPREHENSIVE SUMMARY OF ALL ASPECTS OF CONTROLLED SPEED ELECTRICAL DRIVE TECHNOLOGY INCLUDING CONTROL AND OPERATION HANDLING OF ELECTRICAL DRIVES IS SOLIDLY LINKED TO THE THEORY AND DESIGN OF THE ASSOCIATED ELECTRICAL MACHINES ADDED INSIGHT INTO PROBLEMS AND FUNCTIONS ARE ILLUSTRATED WITH CLEARLY UNDERSTANDABLE FIGURES OFFERS AN UNDERSTANDING OF THE MAIN PHENOMENA ASSOCIATED WITH ELECTRICAL MACHINE DRIVES CONSIDERS THE PROBLEM OF BEARING CURRENTS AND VOLTAGE STRESSES OF AN ELECTRICAL DRIVE INCLUDES UP TO DATE THEORY AND DESIGN GUIDELINES TAKING INTO ACCOUNT THE MOST RECENT ADVANCES THIS BOOK S RIGOROUS COVERAGE OF THEORETICAL PRINCIPLES AND TECHNIQUES MAKES FOR AN EXCELLENT INTRODUCTION TO CONTROLLED SPEED ELECTRICAL DRIVE TECHNOLOGIES FOR ELECTRICAL ENGINEERING MSC OR PHD STUDENTS STUDYING ELECTRICAL DRIVES IT ALSO SERVES AS AN EXCELLENT REFERENCE FOR PRACTICING ELECTRICAL ENGINEERS LOOKING TO CARRY OUT DESIGN ANALYSES AND DEVELOPMENT OF CONTROLLED SPEED ELECTRICAL DRIVES

ELECTRIC MACHINERY AND DRIVES *2023-09-06*

THIS BOOK PROVIDES ADVANCED CONCEPTS OF ELECTRICAL MACHINERY WITH CONTROL DRIVES AND EMPHASIZES THE NECESSITY OF INTEGRATION OF POWER ELECTRONICS AND CONTROL STRATEGY WHEN STUDYING MODERN ELECTRICAL MACHINERY THE AUTHORS START FROM THE INTRODUCTION OF ELECTRIC CIRCUIT NOTATIONS AND ELEMENTARY CONCEPTS OF ELECTRICAL CIRCUITS POWER ELECTRONICS MAGNETOSTATICS MAGNETIC CIRCUITS AND FUNDAMENTALS OF ELECTROMECHANICAL ENERGY CONVERSION LATER THE BOOK ELABORATES ON THE OPERATING PRINCIPLES OF POLYPHASE INDUCTION MACHINES AND SYNCHRONOUS MACHINES AS WELL AS THE ASSOCIATED SCALE AND VECTOR CONTROLS OF THESE MACHINES FOLLOWED BY BRUSH COMMUTATOR AND BRUSHLESS DC MACHINES FINALLY THE AUTHORS INTRODUCE THE STATE SPACE MODELING OF INDUCTION MACHINES AND SYNCHRONOUS MACHINES THE BOOK CONCLUDES WITH A REVIEW OF SPECIAL MACHINES INCLUDING SINGLE PHASE INDUCTION MACHINES SWITCHED RELUCTANCE MACHINES AXIAL FLUX SYNCHRONOUS MACHINES AND OTHERS

ELECTRICAL MACHINES AND DRIVES 2018-01-20

THIS BOOK AIMS TO OFFER A THOROUGH STUDY AND REFERENCE TEXTBOOK ON ELECTRICAL MACHINES AND DRIVES THE BASIC IDEA IS TO START FROM THE PURE ELECTROMAGNETIC PRINCIPLES TO DERIVE THE EQUIVALENT CIRCUITS AND STEADY STATE EQUATIONS OF THE MOST COMMON ELECTRICAL MACHINES IN THE FIRST PARTS ALTHOUGH THE BOOK MAINLY CONCENTRATES ON ROTATING FIELD MACHINES THE FIRST TWO CHAPTERS ARE DEVOTED TO TRANSFORMERS AND DC COMMUTATOR MACHINES THE CHAPTER ON TRANSFORMERS IS INCLUDED AS AN INTRODUCTION TO INDUCTION AND SYNCHRONOUS MACHINES THEIR ELECTROMAGNETICS AND EQUIVALENT CIRCUITS CHAPTERS THREE AND FOUR OFFER AN IN DEPTH STUDY OF INDUCTION AND SYNCHRONOUS MACHINES RESPECTIVELY STARTING FROM THEIR ELECTROMAGNETICS STEADY STATE EQUATIONS AND EQUIVALENT CIRCUITS ARE DERIVED FROM WHICH THEIR BASIC PROPERTIES CAN BE DEDUCED THE SECOND PART DISCUSSES THE MAIN POWER ELECTRONIC SUPPLIES FOR ELECTRICAL DRIVES FOR EXAMPLE RECTIFIERS CHOPPERS CYCLOCONVERTERS AND INVERTERS MUCH ATTENTION IS PAID TO PWM TECHNIQUES FOR INVERTERS AND THE RESULTING HARMONIC CONTENT IN THE OUTPUT WAVEFORM IN THE THIRD PART ELECTRICAL DRIVES ARE DISCUSSED COMBINING THE TRADITIONAL ROTATING FIELD AND DC COMMUTATOR ELECTRICAL MACHINES TREATED IN THE FIRST PART AND THE POWER ELECTRONICS OF PART TWO FIELD ORIENTATION OF INDUCTION AND SYNCHRONOUS MACHINES ARE DISCUSSED IN DETAIL AS WELL AS DIRECT TORQUE CONTROL IN ADDITION ALSO SWITCHED RELUCTANCE MACHINES AND STEPPING MOTORS ARE DISCUSSED IN THE LAST CHAPTERS FINALLY PART 4 IS DEVOTED TO THE DYNAMICS OF TRADITIONAL ELECTRICAL MACHINES ALSO FOR THE DYNAMICS OF INDUCTION AND SYNCHRONOUS MACHINE DRIVES THE ELECTROMAGNETICS ARE USED AS THE STARTING POINT TO DERIVE THE DYNAMIC MODELS THROUGHOUT PART 4 MUCH ATTENTION IS PAID TO THE DERIVATION OF ANALYTICAL MODELS BUT OF COURSE THE BASIC DYNAMIC PROPERTIES AND PROBABLE CAUSES OF INSTABILITY OF INDUCTION AND SYNCHRONOUS MACHINE DRIVES ARE DISCUSSED IN DETAIL AS WELL WITH THE DERIVED MODELS FOR STABILITY IN THE SMALL AS STARTING POINT IN ADDITION TO THE STUDY OF THE STABILITY IN THE SMALL A CHAPTER IS DEVOTED TO LARGE SCALE DYNAMICS AS WELL E G SUDDEN SHORT CIRCUIT OF SYNCHRONOUS MACHINES THE TEXTBOOK IS USED AS THE COURSE TEXT FOR THE BACHELOR S AND MASTER S PROGRAMME IN ELECTRICAL AND MECHANICAL ENGINEERING AT THE FACULTY OF ENGINEERING AND ARCHITECTURE OF GHENT UNIVERSITY PARTS 1 AND 2 ARE TAUGHT IN THE BASIC COURSE FUNDAMENTALS OF ELECTRIC DRIVES IN THE THIRD BACHELOR PART 3 IS USED FOR THE COURSE CONTROLLED ELECTRICAL DRIVES IN THE FIRST MASTER WHILE PART 4 IS USED IN THE SPECIALISED MASTER ON ELECTRICAL ENERGY

ELECTRICAL MACHINES & DRIVES 2013-10-22

CONTAINING APPROXIMATELY 200 PROBLEMS 100 WORKED THE TEXT COVERS A WIDE RANGE OF TOPICS CONCERNING ELECTRICAL MACHINES PLACING PARTICULAR EMPHASIS UPON ELECTRICAL MACHINE DRIVE APPLICATIONS THE THEORY IS CONCISELY REVIEWED AND FOCUSES ON FEATURES COMMON TO ALL MACHINE TYPES THE PROBLEMS ARE ARRANGED IN ORDER OF INCREASING LEVELS OF COMPLEXITY AND DISCUSSIONS OF THE SOLUTIONS ARE INCLUDED WHERE APPROPRIATE TO ILLUSTRATE THE ENGINEERING IMPLICATIONS THIS SECOND EDITION INCLUDES AN IMPORTANT NEW CHAPTER ON MATHEMATICAL AND COMPUTER SIMULATION OF MACHINE SYSTEMS AND REVISED DISCUSSIONS OF UNBALANCED OPERATION PERMANENT MAGNET MACHINES AND UNIVERSAL MOTORS NEW WORKED EXAMPLES AND TUTORIAL PROBLEMS HAVE ALSO BEEN ADDED

ELECTRIC MACHINES AND ELECTRIC DRIVES 2013-09

AN IEEE PRESS CLASSIC REISSUE THIS ADVANCED TEXT AND INDUSTRY REFERENCE COVERS THE AREAS OF ELECTRIC POWER AND ELECTRIC DRIVES WITH EMPHASIS ON CONTROL APPLICATIONS AND COMPUTER SIMULATION USING A MODERN APPROACH BASED ON REFERENCE FRAME THEORY IT PROVIDES A THOROUGH ANALYSIS OF ELECTRIC MACHINES AND SWITCHING CONVERTERS YOU LL FIND FORMULATIONS FOR EQUATIONS OF ELECTRIC MACHINES AND CONVERTERS AS WELL AS MODELS OF MACHINES AND CONVERTERS THAT FORM THE BASIS FOR PREDICTING AND UNDERSTANDING SYSTEM LEVEL PERFORMANCE THIS TEXT IS APPROPRIATE FOR COURSES AT THE SENIOR GRADUATE LEVEL AND WILL ALSO BE OF PARTICULAR INTEREST TO SYSTEMS ANALYSTS AND CONTROL ENGINEERS IN THE AREAS OF ELECTRIC POWER AND ELECTRIC DRIVES

ANALYSIS OF ELECTRIC MACHINERY 1995

RECENT YEARS HAVE BROUGHT SUBSTANTIAL DEVELOPMENTS IN ELECTRICAL DRIVE TECHNOLOGY WITH THE APPEARANCE OF HIGHLY RATED VERY HIGH SPEED POWER ELECTRONIC SWITCHES COMBINED WITH MICROCOMPUTER CONTROL SYSTEMS THIS POPULAR TEXTBOOK HAS BEEN THOROUGHLY REVISED AND UPDATED IN THE LIGHT OF THESE CHANGES IT RETAINS ITS SUCCESSFUL FORMULA OF TEACHING THROUGH WORKED EXAMPLES WHICH ARE PUT IN CONTEXT WITH CONCISE EXPLANATIONS OF THEORY REVISION OF EQUATIONS AND DISCUSSION OF THE ENGINEERING IMPLICATIONS NUMEROUS PROBLEMS ARE ALSO PROVIDED WITH ANSWERS SUPPLIED THE THIRD EDITION INCLUDES ENHANCED COVERAGE OF POWER ELECTRONIC SYSTEMS AND NEW MATERIAL ON CLOSED LOOP CONTROL IN ADDITION TO THOROUGH TREATMENT OF ELECTRICAL MACHINES

ELECTRICAL MACHINES AND DRIVES 1996-09-19

THIS WORK WAS DEVELOPED BASED ON THE AUTHOR S EXPERIENCE OF MORE THAN 10 YEARS WORKING IN RESEARCH AND INDUSTRY IN THE AREAS OF ELECTRICAL DRIVES AND INDUSTRIAL AUTOMATION SEEKING THE CONNECTION BETWEEN THEORY AND ITS APPLICATIONS THE AUTHOR PRESENTS A DETAILED CONCEPTUAL DESCRIPTION WITH LOTS OF FIGURES AND ILLUSTRATIVE EXAMPLES THAT HARMONIZE THE THEORETICAL APPROACH WITH THE PRACTICE COMPOSED OF ELEVEN CHAPTERS AND THREE APPENDICES THE BOOK DESCRIBES IN A DYNAMIC AND DIDACTIC WAY THE FUNDAMENTAL CONCEPTS RELATED TO THE DRIVES OF ELECTRIC MACHINES AT THE END OF EACH CHAPTER IS A SET OF EXERCISES TO EASE THE FIXATION OF THE PRESENTED CONTENT

ELECTRICAL MACHINE DRIVES *2019-01-14*

SPECIAL FEATURES PRESENTS AN UP TO DATE YET EASY TO UNDERSTAND GUIDE TO ELECTRIC MACHINE AND VARIABLE SPEED DRIVES PROVIDES A SIMPLIFIED SECTION ON THE REQUIRED THEORIES THE BULK OF THE BOOK IS DEDICATED TO DESCRIBING VARIOUS APPLICATION PROBLEMS COVERS BOTH AC AND DC VARIABLE DRIVES ALLOWS USERS TO AVOID PITFALLS SUCH AS POWER FACTOR HARMONIC OR EMI PROBLEMS ABOUT THE BOOK PREVIOUS EDITION SALES WERE APPROXIMATELY 3000 LOT STRONG MARKET FOR THIS TYPE OF BOOK WITH AN UNDER REPRESENTATION OF COMPETING TITLES

ELECTRICAL MACHINES AND DRIVES *1991*

THE HVDC LIGHT TRADEMARK METHOD OF TRANSMITTING ELECTRIC POWER INTRODUCES STUDENTS TO AN IMPORTANT NEW WAY OF CARRYING POWER TO REMOTE LOCATIONS REVISED REFORMATTED INSTRUCTOR S MANUAL PROVIDES INSTRUCTORS WITH A TOOL THAT IS MUCH EASIER TO READ CLEAR PRACTICAL APPROACH

ANALYSIS OF ELECTRIC MACHINERY AND DRIVE SYSTEMS, 2ND ED *2010-01-01*

AN INTRODUCTION TO THE ANALYSIS OF ELECTRIC MACHINES POWER ELECTRONIC CIRCUITS ELECTRIC DRIVE PERFORMANCE AND POWER SYSTEMS THIS BOOK PROVIDES STUDENTS WITH THE BASIC PHYSICAL CONCEPTS AND ANALYSIS TOOLS NEEDED FOR SUBSEQUENT COURSEWORK IN ELECTRIC POWER AND DRIVE SYSTEMS WITH A FOCUS ON TESLA S ROTATING MAGNETIC FIELD ORGANIZED IN A FLEXIBLE FORMAT IT ALLOWS INSTRUCTORS TO SELECT MATERIAL AS NEEDED TO FIT THEIR SCHOOL S POWER PROGRAM THE FIRST CHAPTER COVERS THE FUNDAMENTAL CONCEPTS AND ANALYTICAL METHODS THAT ARE COMMON TO POWER AND ELECTRIC DRIVE SYSTEMS THE SUBSEQUENT CHAPTERS OFFER INTRODUCTORY ANALYSES SPECIFIC TO ELECTRIC MACHINES POWER ELECTRONIC CIRCUITS DRIVE SYSTEM PERFORMANCE AND SIMULATION AND POWER SYSTEMS IN ADDITION THIS BOOK PROVIDES STUDENTS WITH AN ANALYTICAL BASE ON WHICH TO BUILD IN ADVANCED FOLLOW ON COURSES EXAMINES FUNDAMENTAL POWER CONVERSIONS DC DC AC DC AND DC AC HARMONICS AND DISTORTION DESCRIBES THE DYNAMIC COMPUTER SIMULATION OF A BRUSHLESS DC DRIVE TO ILLUSTRATE ITS PERFORMANCE WITH BOTH A SINUSOIDAL INVERTER VOLTAGE APPROXIMATION AND MORE REALISTIC STATOR SIX STEP DRIVE APPLIED VOLTAGES INCLUDES IN CHAPTER SHORT PROBLEMS NUMEROUS WORKED EXAMPLES AND END OF CHAPTER PROBLEMS TO HELP READERS REVIEW AND MORE FULLY UNDERSTAND EACH TOPIC

ELECTRICAL MACHINES, DRIVES, AND POWER SYSTEMS *2006*

A SELF CONTAINED COMPREHENSIVE AND UNIFIED TREATMENT OF ELECTRICAL MACHINES INCLUDING CONSIDERATION OF THEIR CONTROL CHARACTERISTICS IN BOTH CONVENTIONAL AND SEMICONDUCTOR SWITCHED CIRCUITS THIS NEW EDITION HAS BEEN EXPANDED AND UPDATED TO INCLUDE MATERIAL WHICH REFLECTS CURRENT THINKING AND PRACTICE ALL REFERENCES HAVE BEEN UPDATED TO CONFORM TO THE LATEST NATIONAL BS AND INTERNATIONAL IEC RECOMMENDATIONS AND A NEW APPENDIX HAS BEEN ADDED WHICH DEALS MORE FULLY WITH THE THEORY OF PERMANENT MAGNETS RECOGNISING THE GROWING IMPORTANCE OF PERMANENT MAGNET MACHINES THE TEXT IS SO ARRANGED THAT SELECTIONS CAN BE MADE FROM IT TO GIVE A SHORT COURSE FOR NON SPECIALISTS WHILE THE BOOK AS A WHOLE WILL PREPARE STUDENTS FOR MORE ADVANCED STUDIES IN POWER SYSTEMS CONTROL SYSTEMS ELECTRICAL MACHINE DESIGN AND GENERAL INDUSTRIAL APPLICATIONS INCLUDES NUMEROUS WORKED EXAMPLES AND TUTORIAL PROBLEMS WITH ANSWERS

WORKED EXAMPLES IN ELECTRICAL MACHINES AND DRIVES *1982*

AN INTRODUCTION TO THE ANALYSIS OF ELECTRIC MACHINES POWER ELECTRONIC CIRCUITS ELECTRIC DRIVE PERFORMANCE AND POWER SYSTEMS THIS BOOK PROVIDES STUDENTS WITH THE BASIC PHYSICAL CONCEPTS AND ANALYSIS TOOLS NEEDED FOR SUBSEQUENT COURSEWORK IN ELECTRIC POWER AND DRIVE SYSTEMS WITH A FOCUS ON TESLA S ROTATING MAGNETIC FIELD ORGANIZED IN A FLEXIBLE FORMAT IT ALLOWS INSTRUCTORS TO SELECT MATERIAL AS NEEDED TO FIT THEIR SCHOOL S POWER PROGRAM THE FIRST CHAPTER COVERS THE FUNDAMENTAL CONCEPTS AND ANALYTICAL METHODS THAT ARE COMMON TO POWER AND ELECTRIC DRIVE SYSTEMS THE SUBSEQUENT CHAPTERS OFFER INTRODUCTORY ANALYSES SPECIFIC TO ELECTRIC MACHINES POWER ELECTRONIC CIRCUITS DRIVE SYSTEM PERFORMANCE AND SIMULATION AND POWER SYSTEMS IN ADDITION THIS BOOK PROVIDES STUDENTS WITH AN ANALYTICAL BASE ON WHICH TO BUILD IN ADVANCED FOLLOW ON COURSES EXAMINES FUNDAMENTAL POWER CONVERSIONS DC DC AC DC AND DC AC HARMONICS AND DISTORTION DESCRIBES THE DYNAMIC COMPUTER SIMULATION OF A BRUSHLESS DC DRIVE TO ILLUSTRATE ITS PERFORMANCE WITH BOTH A SINUSOIDAL INVERTER VOLTAGE APPROXIMATION AND MORE REALISTIC STATOR SIX STEP DRIVE APPLIED VOLTAGES INCLUDES IN CHAPTER SHORT PROBLEMS NUMEROUS WORKED EXAMPLES AND END OF CHAPTER PROBLEMS TO HELP READERS REVIEW AND MORE FULLY UNDERSTAND EACH TOPIC PAUL C KRAUSE IS BOARD CHAIRMAN OF PC KRAUSE AND ASSOCIATES INC PCKA AND A RETIRED PROFESSOR OF ELECTRICAL AND COMPUTER ENGINEERING AT PURDUE UNIVERSITY HE HAS AUTHORED OR CO AUTHORED MORE THAN 100 TECHNICAL PAPERS AND IS THE CO AUTHOR OF ANALYSIS OF ELECTRIC MACHINERY AND DRIVE SYSTEMS THIRD EDITION WILEY IEEE PRESS AND ELECTROMECHANICAL MOTION DEVICES SECOND EDITION WILEY IEEE PRESS HE IS A LIFE FELLOW OF THE IEEE AND WAS THE 2010 RECIPIENT OF THE IEEE NIKOLA TESLA AWARD OLEG WASYNCZUK IS PROFESSOR OF ELECTRICAL AND COMPUTER ENGINEERING AT PURDUE UNIVERSITY AND CHIEF TECHNICAL OFFICER OF PCKA HE HAS AUTHORED OR CO AUTHORED MORE THAN 100 TECHNICAL PAPERS AND IS THE CO AUTHOR OF ANALYSIS OF ELECTRIC MACHINERY AND DRIVE SYSTEMS THIRD EDITION WILEY IEEE PRESS AND ELECTROMECHANICAL MOTION DEVICES SECOND EDITION WILEY IEEE PRESS HE IS A FELLOW OF THE IEEE AND WAS THE 2008 RECIPIENT OF THE IEEE PES CYRIL VEINOTT ELECTROMECHANICAL ENERGY CONVERSION AWARD TIMOTHY O CONNELL IS A SENIOR LEAD ENGINEER AT PCKA WHERE HE LEADS A MULTI MEMBER INDUSTRY MODELING AND SIMULATION TEAM SUPPORTING THE DESIGN AND ANALYSIS OF MORE ELECTRIC AIRCRAFT HE HAS AUTHORED OR CO AUTHORED OVER 20 TECHNICAL PAPERS ON ELECTRIC MACHINE ANALYSIS AND DESIGN AEROSPACE POWER SYSTEMS AND MODELING AND SIMULATION HE IS A SENIOR MEMBER OF IEEE MAHER HASAN IS A SENIOR LEAD ENGINEER AT PCKA WHERE HE HAS LED SEVERAL SOFTWARE DEVELOPMENT EFFORTS FOR THE SIMULATION OF CIRCUITS AND ELECTROMECHANICAL AND POWER SYSTEMS AND IS INVOLVED IN MODELING AND SIMULATION IN SUPPORT OF MULTIPLE EFFORTS HE HAS

AUTHORED OR CO AUTHORED SEVERAL TECHNICAL PAPERS IN THE FIELDS OF DYNAMIC SIMULATION AND NUMERICAL METHODS

INTRODUCTION TO ELECTRIC POWER AND DRIVE SYSTEMS 2017-02-28

THIS BOOK PRESENTS VARIOUS COMPUTATIONALLY EFFICIENT COMPONENT AND SYSTEM LEVEL DESIGN OPTIMIZATION METHODS FOR ADVANCED ELECTRICAL MACHINES AND DRIVE SYSTEMS READERS WILL DISCOVER NOVEL DESIGN OPTIMIZATION CONCEPTS DEVELOPED BY THE AUTHORS AND OTHER RESEARCHERS IN THE LAST DECADE INCLUDING APPLICATION ORIENTED MULTI DISCIPLINARY MULTI OBJECTIVE MULTI LEVEL DETERMINISTIC AND ROBUST DESIGN OPTIMIZATION METHODS A MULTI DISCIPLINARY ANALYSIS INCLUDES VARIOUS ASPECTS OF MATERIALS ELECTROMAGNETICS THERMOTICS MECHANICS POWER ELECTRONICS APPLIED MATHEMATICS MANUFACTURING TECHNOLOGY AND QUALITY CONTROL AND MANAGEMENT THIS BOOK WILL BENEFIT BOTH RESEARCHERS AND ENGINEERS IN THE FIELD OF MOTOR AND DRIVE DESIGN AND MANUFACTURING THUS ENABLING THE EFFECTIVE DEVELOPMENT OF THE HIGH QUALITY PRODUCTION OF INNOVATIVE HIGH PERFORMANCE DRIVE SYSTEMS FOR CHALLENGING APPLICATIONS SUCH AS GREEN ENERGY SYSTEMS AND ELECTRIC VEHICLES

ELECTRICAL MACHINES & THEIR APPLICATIONS 2014-06-28

IN CHAOS IN ELECTRIC DRIVE SYSTEMS ANALYSIS CONTROL AND APPLICATION AUTHORS CHAU AND WANG SYSTEMATICALLY INTRODUCE AN EMERGING TECHNOLOGY OF ELECTRICAL ENGINEERING THAT BRIDGES ABSTRACT CHAOS THEORY AND PRACTICAL ELECTRIC DRIVES THE AUTHORS CONSOLIDATE ALL IMPORTANT INFORMATION IN THIS INTERDISCIPLINARY TECHNOLOGY INCLUDING THE FUNDAMENTAL CONCEPTS MATHEMATICAL MODELING THEORETICAL ANALYSIS COMPUTER SIMULATION AND HARDWARE IMPLEMENTATION THE BOOK PROVIDES COMPREHENSIVE COVERAGE OF CHAOS IN ELECTRIC DRIVE SYSTEMS WITH THREE MAIN PARTS ANALYSIS CONTROL AND APPLICATION CORRESPONDING DRIVE SYSTEMS RANGE FROM THE SIMPLEST TO THE LATEST TYPES DC INDUCTION SYNCHRONOUS RELUCTANCE SWITCHED RELUCTANCE AND PERMANENT MAGNET BRUSHLESS DRIVES THE FIRST BOOK TO COMPREHENSIVELY TREAT CHAOS IN ELECTRIC DRIVE SYSTEMS REVIEWS CHAOS IN VARIOUS ELECTRICAL ENGINEERING TECHNOLOGIES AND DRIVE SYSTEMS PRESENTS INNOVATIVE APPROACHES TO STABILIZE AND STIMULATE CHAOS IN TYPICAL DRIVES DISCUSSES PRACTICAL APPLICATION OF CHAOS STABILIZATION CHAOTIC MODULATION AND CHAOTIC MOTION AUTHORED BY WELL KNOWN SCIENTISTS IN THE FIELD LECTURE MATERIALS AVAILABLE FROM THE BOOK S COMPANION WEBSITE THIS BOOK IS IDEAL FOR RESEARCHERS AND GRADUATE STUDENTS WHO SPECIALIZE IN ELECTRIC DRIVES MECHATRONICS AND ELECTRIC MACHINERY AS WELL AS THOSE ENROLLED IN CLASSES COVERING ADVANCED TOPICS IN ELECTRIC DRIVES AND CONTROL ENGINEERS AND PRODUCT DESIGNERS IN INDUSTRIAL ELECTRONICS CONSUMER ELECTRONICS ELECTRIC APPLIANCES AND ELECTRIC VEHICLES WILL ALSO FIND THIS BOOK HELPFUL IN APPLYING THESE EMERGING TECHNIQUES LECTURE MATERIALS FOR INSTRUCTORS AVAILABLE AT WILEY COM GO CHAU CHAOS

INTRODUCTION TO ELECTRIC POWER AND DRIVE SYSTEMS 2016-12-27

CONTAINING APPROXIMATELY 200 PROBLEMS 100 WORKED THE TEXT COVERS A WIDE RANGE OF TOPICS CONCERNING ELECTRICAL MACHINES PLACING PARTICULAR EMPHASIS UPON ELECTRICAL MACHINE DRIVE APPLICATIONS THE THEORY IS CONCISELY REVIEWED AND FOCUSES ON FEATURES COMMON TO ALL MACHINE TYPES THE PROBLEMS ARE ARRANGED IN ORDER OF INCREASING LEVELS OF COMPLEXITY AND DISCUSSIONS OF THE SOLUTIONS ARE INCLUDED WHERE APPROPRIATE TO ILLUSTRATE THE ENGINEERING IMPLICATIONS THIS SECOND EDITION INCLUDES AN IMPORTANT NEW CHAPTER ON MATHEMATICAL AND COMPUTER SIMULATION OF MACHINE SYSTEMS AND REVISED DISCUSSIONS OF UNBALANCED OPERATION PERMANENT MAGNET MACHINES AND UNIVERSAL MOTORS NEW WORKED EXAMPLES AND TUTORIAL PROBLEMS HAVE ALSO BEEN ADDED

MULTIDISCIPLINARY DESIGN OPTIMIZATION METHODS FOR ELECTRICAL MACHINES AND DRIVE SYSTEMS 2016-02-05

PRESENTS APPLIED THEORY AND ADVANCED SIMULATION TECHNIQUES FOR ELECTRIC MACHINES AND DRIVES THIS BOOK COMBINES THE KNOWLEDGE OF EXPERTS FROM BOTH ACADEMIA AND THE SOFTWARE INDUSTRY TO PRESENT THEORIES OF MULTIPHYSICS SIMULATION BY DESIGN FOR ELECTRICAL MACHINES POWER ELECTRONICS AND DRIVES THE COMPREHENSIVE DESIGN APPROACH DESCRIBED WITHIN SUPPORTS NEW APPLICATIONS REQUIRED BY TECHNOLOGIES SUSTAINING HIGH DRIVE EFFICIENCY THE HIGHLIGHTED FRAMEWORK CONSIDERS THE ELECTRIC MACHINE AT THE HEART OF THE ENTIRE ELECTRIC DRIVE THE BOOK ALSO EMPHASIZES THE SIMULATION BY DESIGN CONCEPT A CONCEPT THAT FRAMES THE ENTIRE HIGHLIGHTED DESIGN METHODOLOGY WHICH IS DESCRIBED AND ILLUSTRATED BY VARIOUS ADVANCED SIMULATION TECHNOLOGIES MULTIPHYSICS SIMULATION BY DESIGN FOR ELECTRICAL MACHINES POWER ELECTRONICS AND DRIVES BEGINS WITH THE BASICS OF ELECTRICAL MACHINE DESIGN AND MANUFACTURING TOLERANCES IT ALSO DISCUSSES FUNDAMENTAL ASPECTS OF THE STATE OF THE ART DESIGN PROCESS AND INCLUDES EXAMPLES FROM INDUSTRIAL PRACTICE IT EXPLAINS FEM BASED ANALYSIS TECHNIQUES FOR ELECTRICAL MACHINE DESIGN PROVIDING DETAILS ON HOW IT CAN BE EMPLOYED IN ANSYS MAXWELL SOFTWARE IN ADDITION THE BOOK COVERS ADVANCED MAGNETIC MATERIAL MODELING CAPABILITIES EMPLOYED IN NUMERICAL COMPUTATION THERMAL ANALYSIS AUTOMATED OPTIMIZATION FOR ELECTRIC MACHINES AND POWER ELECTRONICS AND DRIVE SYSTEMS THIS VALUABLE RESOURCE DELIVERS THE MULTI PHYSICS KNOW HOW BASED ON PRACTICAL ELECTRIC MACHINE DESIGN METHODOLOGIES PROVIDES AN EXTENSIVE OVERVIEW OF ELECTRIC MACHINE DESIGN OPTIMIZATION AND ITS INTEGRATION WITH POWER ELECTRONICS AND DRIVES INCORPORATES CASE STUDIES FROM INDUSTRIAL PRACTICE AND RESEARCH AND DEVELOPMENT PROJECTS MULTIPHYSICS SIMULATION BY DESIGN FOR ELECTRICAL MACHINES POWER ELECTRONICS AND DRIVES IS AN INCREDIBLY HELPFUL BOOK FOR DESIGN ENGINEERS APPLICATION AND SYSTEM ENGINEERS AND TECHNICAL PROFESSIONALS IT WILL ALSO BENEFIT GRADUATE ENGINEERING STUDENTS WITH A STRONG INTEREST IN ELECTRIC MACHINES AND DRIVES

ELECTRIC MACHINES AND DRIVES 1992

THIS BOOK AND ITS ACCOMPANYING CD ROM OFFER A COMPLETE TREATMENT FROM BACKGROUND THEORY AND MODELS TO IMPLEMENTATION AND VERIFICATION TECHNIQUES FOR SIMULATIONS AND LINEAR ANALYSIS OF FREQUENTLY STUDIED MACHINE SYSTEMS EVERY CHAPTER OF DYNAMIC SIMULATION OF ELECTRIC MACHINERY INCLUDES EXERCISES AND PROJECTS THAT CAN BE EXPLORED USING THE ACCOMPANYING SOFTWARE A FULL CHAPTER IS DEVOTED TO THE USE OF MATLAB AND SIMULINK AND AN APPENDIX PROVIDES A CONVENIENT OVERVIEW OF KEY NUMERICAL METHODS USED DYNAMIC SIMULATION OF ELECTRIC MACHINERY PROVIDES PROFESSIONAL ENGINEERS AND STUDENTS WITH A COMPLETE TOOLKIT FOR MODELING AND ANALYZING POWER SYSTEMS ON THEIR DESKTOP COMPUTERS

CHAOS IN ELECTRIC DRIVE SYSTEMS 2011-03-31

ELECTRICAL DRIVES CONVERT IN A CONTROLLED MANNER ELECTRICAL ENERGY INTO MECHANICAL ENERGY ELECTRICAL DRIVES COMPRISE AN ELECTRICAL MACHINE I E AN ELECTRO MECHANICAL ENERGY CONVERTER A POWER ELECTRONIC CONVERTER I E AN ELECTRICAL TO ELECTRICAL CONVERTER AND A CONTROLLER COMMUNICATION UNIT TODAY ELECTRICAL DRIVES ARE USED AS PROPULSION SYSTEMS IN HIGH SPEED TRAINS ELEVATORS ESCALATORS ELECTRIC SHIPS ELECTRIC FORKLIFT TRUCKS AND ELECTRIC VEHICLES ADVANCED CONTROL ALGORITHMS MOSTLY DIGITALLY IMPLEMENTED ALLOW TORQUE CONTROL OVER A HIGH BANDWIDTH HENCE PRECISE MOTION CONTROL CAN BE ACHIEVED EXAMPLES ARE DRIVES IN ROBOTS PICK AND PLACE MACHINES FACTORY AUTOMATION HARDWARE ETC MOST DRIVES CAN OPERATE IN MOTORING AND GENERATING MODE WIND TURBINES USE ELECTRICAL DRIVES TO CONVERT WIND ENERGY INTO ELECTRICAL ENERGY MORE AND MORE VARIABLE SPEED DRIVES ARE USED TO SAVE ENERGY FOR EXAMPLE IN AIR CONDITIONING UNITS COMPRESSORS BLOWERS PUMPS AND HOME APPLIANCES KEY TO ENSURE STABLE OPERATION OF A DRIVE IN THE AFOREMENTIONED APPLICATIONS ARE TORQUE CONTROL ALGORITHMS IN ADVANCED ELECTRICAL DRIVES A UNIQUE APPROACH IS FOLLOWED TO DERIVE MODEL BASED TORQUE CONTROLLERS FOR ALL TYPES OF LORENTZ FORCE MACHINES I E DC SYNCHRONOUS AND INDUCTION MACHINES THE ROTATING TRANSFORMER MODEL FORMS THE BASIS FOR THIS GENERALIZED MODELING APPROACH THAT ULTIMATELY LEADS TO THE DEVELOPMENT OF UNIVERSAL FIELD ORIENTED CONTROL ALGORITHMS IN CASE OF SWITCHED RELUCTANCE MACHINES TORQUE OBSERVERS ARE PROPOSED TO IMPLEMENT DIRECT TORQUE ALGORITHMS FROM A DIDACTIC VIEWPOINT TUTORIALS ARE INCLUDED AT THE END OF EACH CHAPTER THE READER IS ENCOURAGED TO EXECUTE THESE TUTORIALS TO FAMILIARIZE HIM OR HERSELF WITH ALL ASPECTS OF DRIVE TECHNOLOGY HENCE ADVANCED ELECTRICAL DRIVES ENCOURAGES LEARNING BY DOING FURTHERMORE THE EXPERIENCED DRIVE SPECIALIST MAY FIND THE SIMULATION TOOLS USEFUL TO DESIGN HIGH PERFORMANCE CONTROLLERS FOR ALL SORTS OF ELECTRICAL DRIVES

ELECTRIC MACHINERY 2018

DISCOVER THE ANALYTICAL FOUNDATIONS OF ELECTRIC MACHINE POWER ELECTRONICS ELECTRIC DRIVES AND ELECTRIC POWER SYSTEMS IN INTRODUCTION TO THE ANALYSIS OF ELECTROMECHANICAL SYSTEMS AN ACCOMPLISHED TEAM OF ENGINEERS DELIVERS AN ACCESSIBLE AND ROBUST ANALYSIS OF FUNDAMENTAL TOPICS IN ELECTRICAL SYSTEMS AND ELECTRICAL MACHINE MODELING ORIENTED TO THEIR CONTROL WITH POWER CONVERTERS THE BOOK BEGINS WITH AN INTRODUCTION TO THE ELECTROMAGNETIC VARIABLES IN ROTATORY AND STATIONARY REFERENCE FRAMES BEFORE MOVING ONTO DESCRIPTIONS OF ELECTRIC MACHINES THE AUTHORS DISCUSS DIRECT CURRENT ROUND ROTOR PERMANENT MAGNET ALTERNATING CURRENT AND INDUCTION MACHINES AS WELL AS BRUSHLESS DIRECT CURRENT AND INDUCTION MOTOR DRIVES SYNCHRONOUS GENERATORS AND VARIOUS OTHER ASPECTS OF ELECTRIC POWER SYSTEM ENGINEERING ARE COVERED AS WELL SHOWING READERS HOW TO DESCRIBE THE BEHAVIOR OF ELECTROMAGNETIC VARIABLES AND HOW TO APPROACH THEIR CONTROL WITH MODERN POWER CONVERTERS INTRODUCTION TO THE ANALYSIS OF ELECTROMECHANICAL SYSTEMS PRESENTS ANALYSIS TECHNIQUES AT AN INTRODUCTORY LEVEL AND AT SUFFICIENT DETAIL TO BE USEFUL AS A PREREQUISITE FOR HIGHER LEVEL COURSES IT ALSO OFFERS SUPPLEMENTARY MATERIALS IN THE FORM OF ONLINE ANIMATIONS AND VIDEOS TO ILLUSTRATE THE CONCEPTS CONTAINED WITHIN READERS WILL ALSO ENJOY A THOROUGH INTRODUCTION TO BASIC SYSTEM ANALYSIS INCLUDING PHASOR ANALYSIS POWER CALCULATIONS ELEMENTARY MAGNETIC CIRCUITS STATIONARY COUPLED CIRCUITS AND TWO AND THREE PHASE SYSTEMS COMPREHENSIVE EXPLORATIONS OF THE BASICS OF ELECTRIC MACHINE ANALYSIS AND POWER ELECTRONICS INCLUDING SWITCHING CIRCUIT FUNDAMENTALS CONVERSION AND ELECTROMAGNETIC FORCE AND TORQUE PRACTICAL DISCUSSIONS OF POWER SYSTEMS INCLUDING THREE PHASE TRANSFORMER CONNECTIONS SYNCHRONOUS GENERATORS REACTIVE POWER AND POWER FACTOR CORRECTION AND DISCUSSIONS OF TRANSIENT STABILITY PERFECT FOR RESEARCHERS AND INDUSTRY PROFESSIONALS IN THE AREA OF POWER AND ELECTRIC DRIVES INTRODUCTION TO THE ANALYSIS OF ELECTROMECHANICAL SYSTEMS WILL ALSO EARN ITS PLACE IN THE LIBRARIES OF SENIOR UNDERGRADUATE AND GRADUATE STUDENTS AND PROFESSORS IN THESE FIELDS

ELECTRICAL MACHINES AND DRIVES 1985

DISCOVER THE HISTORY UNDERPINNINGS AND APPLICATIONS OF ONE OF THE MOST IMPORTANT THEORIES IN ELECTRICAL ENGINEERING IN REFERENCE FRAME THEORY AUTHOR PAUL KRAUSE DELIVERS A COMPREHENSIVE AND THOROUGH EXAMINATION OF HIS SIXTY YEARS OF WORK IN REFERENCE FRAME THEORY FROM THE ARBITRARY REFERENCE FRAME TO THE COINING OF THE TITLE REFERENCE FRAME THEORY TO THE RECENT ESTABLISHMENT OF THE BASIS OF THE THEORY THE AUTHOR LEAVES NO STONE UNTURNED IN HIS EXAMINATION OF THE FOUNDATIONS AND NICETIES OF THIS AREA THE BOOK BEGINS WITH AN INTEGRATION OF TESLA S ROTATING MAGNETIC FIELD WITH REFERENCE FRAME THEORY BEFORE MOVING ON TO DESCRIBE THE LINK BETWEEN REFERENCE FRAME THEORY AND SYMMETRICAL INDUCTION MACHINES AND SYNCHRONOUS MACHINES ADDITIONAL CHAPTERS EXPLORE THE FIELD ORIENTATION OF BRUSHLESS DC DRIVES AND INDUCTION MACHINE DRIVES THE AUTHOR CONCLUDES WITH A DESCRIPTION OF MANY OF THE APPLICATIONS THAT MAKE USE OF REFERENCE FRAME THEORY THE COMPREHENSIVE AND AUTHORITATIVE REFERENCE FRAME THEORY ALSO COVERS TOPICS LIKE A BRIEF INTRODUCTION TO THE HISTORY OF REFERENCE FRAME THEORY DISCUSSIONS OF TESLA S ROTATING MAGNETIC FIELD AND ITS BASIS OF REFERENCE FRAME THEORY EXAMINATIONS OF SYMMETRICAL INDUCTION AND SYNCHRONOUS MACHINES INCLUDING FLUX LINKAGE EQUATIONS AND EQUIVALENT CIRCUITS APPLICATIONS OF REFERENCE FRAME THEORY TO NEGLECTING STATOR TRANSIENTS MULTIPLE REFERENCE FRAMES AND SYMMETRICAL COMPONENTS PERFECT FOR POWER ENGINEERS PROFESSORS AND GRADUATE STUDENTS IN THE AREA OF ELECTRICAL ENGINEERING REFERENCE FRAME THEORY ALSO BELONGS ON THE BOOKSHELVES OF AUTOMOTIVE ENGINEERS AND MANUFACTURING ENGINEERS WHO FREQUENTLY WORK WITH ELECTRIC DRIVES AND POWER SYSTEMS THIS BOOK SERVES AS A POWERFUL REFERENCE FOR ANYONE SEEKING ASSISTANCE WITH THE FUNDAMENTALS OR INTRICACIES OF REFERENCE FRAME THEORY

MULTIPHYSICS SIMULATION BY DESIGN FOR ELECTRICAL MACHINES, POWER ELECTRONICS AND DRIVES 2017-11-20

MOHAN S ELECTRIC MACHINES AND DRIVES IS PART OF A THREE BOOK SERIES DESIGNED FOR THE POWER SEQUENCE ELECTIVES ON ELECTRICAL ENGINEERING THE BOOK FOCUSES ON POWER TOPICS INCLUDING ADVANCES IN HYBRID ELECTRIC CARS AND ALTERNATIVE ENERGY SYSTEMS COUPLED WITH SEVERE ENVIRONMENTAL PROBLEMS ASSOCIATED WITH HYDROCARBON BASED FUELS THE TEXT BUILDS OFF MOHAN S SUCCESSFUL MNPERE TITLES AND ADOPTS A SYSTEMS APPROACH

DYNAMIC SIMULATION OF ELECTRIC MACHINERY 1998

THIS BOOK IS DEVOTED TO STUDENTS PHD STUDENTS POSTGRADUATES OF ELECTRICAL ENGINEERING RESEARCHERS AND SCIENTISTS DEALING WITH THE ANALYSIS DESIGN AND OPTIMIZATION OF ELECTRICAL MACHINE PROPERTIES THE PURPOSE IS TO PRESENT METHODS USED FOR THE ANALYSIS OF TRANSIENTS AND STEADY STATE CONDITIONS IN THREE CHAPTERS THE FOLLOWING METHODS ARE PRESENTED 1 A METHOD IN WHICH THE PARAMETERS RESISTANCES AND INDUCTANCES ARE CALCULATED ON THE BASIS OF GEOMETRICAL DIMENSIONS AND MATERIAL PROPERTIES MADE IN THE DESIGN PROCESS 2 A METHOD OF GENERAL THEORY OF ELECTRICAL MACHINES IN WHICH THE TRANSIENTS ARE INVESTIGATED IN TWO PERPENDICULAR AXES AND 3 FEM WHICH IS A MATHEMATICAL METHOD APPLIED TO ELECTRICAL MACHINES TO INVESTIGATE MANY OF THEIR PROPERTIES

ELECTRIC MACHINES 1980

THE EXCITING NEW SIXTH EDITION OF ELECTRIC MACHINERY HAS BEEN EXTENSIVELY UPDATED WHILE RETAINING THE EMPHASIS ON FUNDAMENTAL PRINCIPLES AND PHYSICAL UNDERSTANDING THAT HAS BEEN THE OUTSTANDING FEATURE OF THIS CLASSIC BOOK THIS BOOK COVERS FUNDAMENTAL CONCEPTS IN DETAIL AS WELL AS ADVANCED TOPICS FOR READERS WHO WISH TO COVER THE MATERIAL IN MORE DEPTH SEVERAL NEW CHAPTERS HAVE BEEN ADDED INCLUDING A CHAPTER ON POWER ELECTRONICS AS WELL AS ONE ON SPEED AND TORQUE CONTROL OF DC AND AC MOTORS THIS EDITION HAS ALSO BEEN EXPANDED WITH ADDITIONAL EXAMPLES AND PRACTICE PROBLEMS THE USE OF MATLAB HAS BEEN INTRODUCED TO THE NEW EDITION BOTH IN EXAMPLES WITHIN THE TEXT AS WELL AS IN THE CHAPTER PROBLEMS

ADVANCED ELECTRICAL DRIVES 2010-11-30

A GUIDE TO DRIVES ESSENTIAL TO ELECTRIC VEHICLES WIND TURBINES AND OTHER MOTOR DRIVEN SYSTEMS ANALYSIS AND CONTROL OF ELECTRIC DRIVES IS A PRACTICAL AND COMPREHENSIVE TEXT THAT OFFERS A CLEAR UNDERSTANDING OF ELECTRIC DRIVES AND THEIR INDUSTRIAL APPLICATIONS IN THE REAL WORLD INCLUDING ELECTRIC VEHICLES AND WIND TURBINES THE AUTHORS NOTED EXPERTS ON THE TOPIC REVIEW THE BASIC KNOWLEDGE NEEDED TO UNDERSTAND ELECTRIC DRIVES AND INCLUDE THE PERTINENT MATERIAL THAT EXAMINES DC AND AC MACHINES IN STEADY STATE USING A UNIQUE PHYSICS BASED APPROACH THE BOOK ALSO ANALYZES ELECTRIC MACHINE OPERATION UNDER DYNAMIC CONDITIONS ASSISTED BY SPACE VECTORS THE BOOK IS FILLED WITH ILLUSTRATIVE EXAMPLES AND INCLUDES INFORMATION ON ELECTRIC MACHINES WITH INTERIOR PERMANENT MAGNETS TO ENHANCE LEARNING THE BOOK CONTAINS END OF CHAPTER PROBLEMS AND ALL TOPICS COVERED USE COMPUTER SIMULATIONS WITH MATLAB SIMULINK AND SCIAMBLE WORKBENCH SOFTWARE THAT IS AVAILABLE FREE ONLINE FOR EDUCATIONAL PURPOSES THIS IMPORTANT BOOK EXPLORES ADDITIONAL TOPICS SUCH AS ELECTRIC MACHINES WITH INTERIOR PERMANENT MAGNETS INCLUDES MULTIPLE EXAMPLES AND END OF CHAPTER HOMEWORK PROBLEMS PROVIDES SIMULATIONS MADE USING MATLAB SIMULINK AND SCIAMBLE WORKBENCH FREE SOFTWARE FOR EDUCATIONAL PURPOSES CONTAINS HELPFUL PRESENTATION SLIDES AND SOLUTIONS MANUAL FOR INSTRUCTORS SIMULATION FILES ARE AVAILABLE ON THE ASSOCIATED WEBSITE FOR EASY IMPLEMENTATION A UNIQUE FEATURE OF THIS BOOK IS THAT THE SIMULATIONS IN SCIAMBLE WORKBENCH SOFTWARE CAN SEAMLESSLY BE USED TO CONTROL EXPERIMENTS IN A HARDWARE LABORATORY WRITTEN FOR UNDERGRADUATE AND GRADUATE STUDENTS ANALYSIS AND CONTROL OF ELECTRIC DRIVES IS AN ESSENTIAL GUIDE TO UNDERSTANDING ELECTRIC VEHICLES WIND TURBINES AND INCREASED EFFICIENCY OF MOTOR DRIVEN SYSTEMS

ELECTRIC MACHINES AND DRIVES 1992

ELECTRIC DRIVES PROVIDES A PRACTICAL UNDERSTANDING OF THE SUBTLETIES INVOLVED IN THE OPERATION OF MODERN ELECTRIC DRIVES THE THIRD EDITION OF THIS BESTSELLING TEXTBOOK HAS BEEN FULLY UPDATED AND GREATLY EXPANDED TO INCORPORATE THE LATEST TECHNOLOGIES USED TO SAVE ENERGY AND INCREASE PRODUCTIVITY STABILITY AND RELIABILITY EVERY PHRASE EQUATION NUMBER AND REFERENCE IN THE TEXT HAS BEEN REVISITED WITH THE NECESSARY CHANGES MADE THROUGHOUT IN ADDITION NEW REFERENCES TO KEY RESEARCH AND DEVELOPMENT ACTIVITIES HAVE BEEN INCLUDED TO ACCURATELY REFLECT THE CURRENT STATE OF THE ART NEARLY 120 NEW PAGES COVERING RECENT ADVANCES SUCH AS THOSE MADE IN THE SENSORLESS CONTROL OF A C MOTOR DRIVES HAVE BEEN ADDED AS HAVE TWO NEW CHAPTERS ON ADVANCED SCALAR CONTROL AND MULTIPHASE ELECTRIC MACHINE DRIVES ALL SOLVED NUMERICAL EXAMPLES HAVE BEEN RETAINED AND THE 10 MATLAB SIMULINK PROGRAMS REMAIN ONLINE THUS ELECTRIC DRIVES THIRD EDITION OFFERS AN UP TO DATE SYNTHESIS OF THE BASIC AND ADVANCED CONTROL OF ELECTRIC DRIVES WITH AMPLE MATERIAL FOR A TWO SEMESTER COURSE AT THE UNIVERSITY LEVEL

INTRODUCTION TO THE ANALYSIS OF ELECTROMECHANICAL SYSTEMS 2021-12-06

THIS WORK PRESENTS NONLINEAR CONTROL ALGORITHMS FOR A BENCHMARK MECHANICAL SYSTEM ACTUATED BY DIFFERENT TYPES OF ELECTRIC MACHINERY EMPHASIZING SYSTEM STABILITY AND ROBUSTNESS PIVOTAL IN THE DEVELOPMENT OF OPTIMAL

POSITION TRAJECTORY CONTROLLERS FOR COMMON MOTORS COLLEGE OR UNIVERSITY BOOKSTORES MAY ORDER FIVE OR MORE COPIES AT A SPECIAL STUDENT PRICE AVAILABLE ON REQUEST FROM MARCEL DEKKER

REFERENCE FRAME THEORY *2020-12-08*

THE UPDATED THIRD EDITION OF THE CLASSIC BOOK THAT PROVIDES AN INTRODUCTION TO ELECTRIC MACHINES AND THEIR EMERGING APPLICATIONS THE THOROUGHLY REVISED AND UPDATED THIRD EDITION OF ELECTROMECHANICAL MOTION DEVICES CONTAINS AN INTRODUCTION TO MODERN ELECTROMECHANICAL DEVICES AND OFFERS AN UNDERSTANDING OF THE USES OF ELECTRIC MACHINES IN EMERGING APPLICATIONS SUCH AS IN HYBRID AND ELECTRIC VEHICLES THE AUTHORS NOTED EXPERTS ON THE TOPIC PUT THE FOCUS ON MODERN ELECTRIC DRIVE APPLICATIONS THE BOOK INCLUDES BASIC THEORY ILLUSTRATIVE EXAMPLES AND CONTAINS HELPFUL PRACTICE PROBLEMS DESIGNED TO ENHANCE COMPREHENSION THE TEXT OFFERS INFORMATION ON TESLA S ROTATING MAGNETIC FIELD WHICH IS THE FOUNDATION OF REFERENCE FRAME THEORY AND EXPLORES IN DETAIL THE REFERENCE FRAME THEORY THE AUTHORS ALSO REVIEW PERMANENT MAGNET AC SYNCHRONOUS AND INDUCTION MACHINES IN EACH CHAPTER THE MATERIAL IS ARRANGED SO THAT IF STEADY STATE OPERATION IS THE MAIN CONCERN THE REFERENCE FRAME DERIVATION CAN BE DE EMPHASIZED AND FOCUS PLACED ON THE STEADY STATE EQUATIONS THAT ARE SIMILAR IN FORM FOR ALL MACHINES THIS IMPORTANT NEW EDITION FEATURES AN EXPANDED SECTION ON POWER ELECTRONICS COVERS TESLA S ROTATING MAGNETIC FIELD CONTAINS INFORMATION ON THE EMERGING APPLICATIONS OF ELECTRIC MACHINES AND ESPECIALLY MODERN ELECTRIC DRIVE APPLICATIONS INCLUDES ONLINE ANIMATIONS AND A SOLUTIONS MANUAL FOR INSTRUCTORS WRITTEN FOR ELECTRICAL ENGINEERING STUDENTS AND ENGINEERS WORKING IN THE UTILITY OR AUTOMOTIVE INDUSTRY ELECTROMECHANICAL MOTION DEVICES OFFERS AN INVALUABLE BOOK FOR STUDENTS AND PROFESSIONALS INTERESTED IN MODERN MACHINE THEORY AND APPLICATIONS

ELECTRIC MACHINES AND DRIVES *2012-01-03*

ENCOURAGED BY THE RESPONSE TO THE FIRST EDITION AND TO KEEP PACE WITH RECENT DEVELOPMENTS FUNDAMENTALS OF ELECTRICAL DRIVES SECOND EDITION INCORPORATES GREATER DETAILS ON SEMI CONDUCTOR CONTROLLED DRIVES INCLUDES COVERAGE OF PERMANENT MAGNET AC MOTOR DRIVES AND SWITCHED RELUCTANCE MOTOR DRIVES AND HIGHLIGHTS NEW TRENDS IN DRIVE TECHNOLOGY CONTENTS WERE CHOSEN TO SATISFY THE CHANGING NEEDS OF THE INDUSTRY AND PROVIDE THE APPROPRIATE COVERAGE OF MODERN AND CONVENTIONAL DRIVES WITH THE LARGE NUMBER OF EXAMPLES PROBLEMS AND SOLUTIONS PROVIDED FUNDAMENTALS OF ELECTRICAL DRIVES SECOND EDITION WILL CONTINUE TO BE A USEFUL REFERENCE FOR PRACTICING ENGINEERS AND FOR THOSE PREPARING FOR ENGINEERING SERVICE EXAMINATIONS

ANALYSIS OF ELECTRICAL MACHINES *2020-05-20*

INTRODUCTION TO MODERN ANALYSIS OF ELECTRIC MACHINES AND DRIVES COMPREHENSIVE RESOURCE INTRODUCING MAGNETIC CIRCUITS AND ROTATING ELECTRIC MACHINERY INCLUDING MODELS AND DISCUSSIONS OF CONTROL TECHNIQUES INTRODUCTION TO MODERN ANALYSIS OF ELECTRIC MACHINES AND DRIVES IS WRITTEN FOR THE JUNIOR OR SENIOR STUDENT IN ELECTRICAL ENGINEERING AND COVERS THE ESSENTIAL TOPIC OF MACHINE ANALYSIS FOR THOSE INTERESTED IN POWER SYSTEMS OR DRIVES ENGINEERING THE ANALYSIS CONTAINED IN THE TEXT IS BASED ON TESLA S ROTATING MAGNETIC FIELD AND REFERENCE FRAME THEORY WHICH COMES FROM TESLA S WORK AND IS PRESENTED FOR THE FIRST TIME IN AN EASY TO UNDERSTAND FORMAT FOR THE TYPICAL STUDENT SINCE THE STATORS OF SYNCHRONOUS AND INDUCTION MACHINES ARE THE SAME FOR ANALYSIS PURPOSES THEY ARE ANALYZED JUST ONCE ONLY THE ROTORS ARE DIFFERENT AND THEREFORE ANALYZED SEPARATELY THIS APPROACH MAKES IT POSSIBLE TO COVER THE ANALYSIS EFFICIENTLY AND CONCISELY WITHOUT REPEATING DERIVATIONS IN FACT THE SYNCHRONOUS GENERATOR EQUATIONS ARE OBTAINED FROM THE EQUIVALENT CIRCUIT WHICH IS OBTAINED FROM WORK IN OTHER CHAPTERS WITHOUT ANY DERIVATION OF EQUATIONS WHICH DIFFERENTIATES INTRODUCTION TO MODERN ANALYSIS OF ELECTRIC MACHINES AND DRIVES FROM ALL OTHER TEXTBOOKS IN THIS AREA TOPICS EXPLORED BY THE TWO HIGHLY QUALIFIED AUTHORS IN INTRODUCTION TO MODERN ANALYSIS OF ELECTRIC MACHINES AND DRIVES INCLUDE COMMON ANALYSIS TOOLS COVERING STEADY STATE PHASOR CALCULATIONS STATIONARY MAGNETICALLY LINEAR SYSTEMS WINDING CONFIGURATIONS AND TWO AND THREE PHASE STATORS ANALYSIS OF THE SYMMETRICAL STATOR COVERING THE CHANGE OF VARIABLES IN TWO AND THREE PHASE TRANSFORMATIONS AND MORE SYMMETRICAL INDUCTION MACHINES COVERING SYMMETRICAL TWO POLE TWO PHASE ROTOR WINDINGS ELECTROMAGNETIC FORCE AND TORQUE AND P POLE MACHINES DIRECT CURRENT MACHINES AND DRIVES COVERING COMMUTATION VOLTAGE AND TORQUE EQUATIONS PERMANENT MAGNET DC MACHINES AND DC DRIVES INTRODUCTION TO MODERN ANALYSIS OF ELECTRIC MACHINES AND DRIVES IS APPROPRIATE AS EITHER A FIRST OR SECOND COURSE IN THE POWER AND DRIVES AREA ONCE THE READER HAS COVERED THE MATERIAL IN THIS BOOK THEY WILL HAVE A SUFFICIENT BACKGROUND TO START ADVANCED STUDY IN THE POWER SYSTEMS OR DRIVES AREAS

CONTROL OF ELECTRIC MACHINES *1973*

DYNAMO-ELECTRIC MACHINERY *1896*

ELECTRIC MACHINERY *1983*

ANALYSIS AND CONTROL OF ELECTRIC DRIVES *2020-08-27*

ELECTRIC DRIVES 2016-09-15

NONLINEAR CONTROL OF ELECTRIC MACHINERY *2019-01-22*

ELECTROMECHANICAL MOTION DEVICES *2020-03-04*

FUNDAMENTALS OF ELECTRICAL DRIVES *2002-06-13*

INTRODUCTION TO MODERN ANALYSIS OF ELECTRIC MACHINES AND DRIVES *2022-12-06*

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