

Sample Research Proposal In Electrical Engineering

ISBN 9789672145790 Authors : Safiah Sidek , Massila Kamalrudin , Mustafa Mat Deris Writing a Research Proposal is the ultimate reference for drafting a clear and convincing research proposal. This book provides readers with a full coverage of writing a research proposal from drafting a research title, problem statement, research objectives, literature review, and research methodology to planning the research activities and budget. Recognizing the different styles of writing proposal for different field of research, readers are provided with real examples taken from winning research proposal from three main clusters: Engineering, Computer Science (ICT) and Management/Social Science. Common mistakes made by researchers when drafting research proposals and checklists for the important elements required in each section of the proposal are also highlighted at the end of every chapter. The sample of student research proposal in the Appendix helps readers to have a clear picture of the real research proposal. The key features of "Writing a Research Proposal":

- Guides readers through how to write Executive Summary/Abstract, Introduction Chapter containing the problem statement, research objectives, research questions, significance and scope of research, Literature Review Chapter, Research Methodology Chapter and Planning Research Activities and Budget;
- Numerous true examples of the important sections of a research proposal taken from different research domain;
- Checklists of the important elements to be included in the sections/chapters of a research proposal; and
- varieties of figures, diagrams and dialogue boxes for easy understanding.

Written by authors experienced in writing research grants and conducting research methodology courses for post graduates, this book is a must for researchers as well as research students who need guidance to produce a clear and convincing research proposal.

The long-awaited 2nd edition of this best-selling research methods handbook is fully updated and includes brand new coverage of online research methods and techniques, mixed methodology and qualitative analysis. This edition includes two new contributed chapters: Professor Julie McLeod, Sue Childs and Elizabeth Lomas focus on research data management, applying evidence from the recent JISC funded DATUM project; Dr Andrew Shenton examines strategies for analysing existing documents. The first to focus entirely on the needs of the information and communications community, this handbook guides the would-be researcher through the variety of possibilities open to them under the heading research and provides students with the confidence to embark on their dissertations. The focus here is on the doing and although the philosophy and theory of research is explored to provide context, this is essentially a practical exploration of the whole research process with each chapter fully supported by examples and exercises tried and tested over a whole teaching career. Readership: Students of information and communications studies and archives and records management, and practitioners beginning a piece of research.

The electric power delivery system that carries electricity from large central generators to customers could be severely damaged by a small number of well-informed attackers. The system is inherently vulnerable because transmission lines may span hundreds of miles, and many key facilities are unguarded. This vulnerability is exacerbated by the fact that the power grid, most of which was originally designed to meet the needs of individual vertically integrated utilities, is being used to move power between regions to support the needs of competitive markets for power generation. Primarily because of ambiguities introduced as a result of recent restricting the of the industry and cost pressures from consumers and regulators, investment to strengthen and upgrade the grid has lagged, with the result that many parts of the bulk high-voltage system are heavily stressed. Electric systems are not designed to withstand or quickly recover from damage inflicted simultaneously on multiple components. Such an attack could be carried out by knowledgeable attackers with little risk of detection or interdiction. Further well-planned and coordinated attacks by terrorists could leave the electric power system in a large region of the country at least partially disabled for a very long time. Although there are many examples of terrorist and military attacks on power systems elsewhere in the world, at the time of this study international terrorists have shown limited interest in attacking the U.S. power grid. However, that should not be a basis for complacency. Because all parts of the economy, as well as human health and welfare, depend on electricity, the results could be devastating. Terrorism and the Electric Power Delivery System focuses on measures that could make the power delivery system less vulnerable to attacks, restore power faster after an attack, and make critical services less vulnerable while the delivery of conventional electric power has been disrupted.

In recent years, the development of advanced structures for providing sustainable energy has been a topic at the forefront of public and political conversation. Many are looking for advancements on pre-existing sources and new and viable energy options to maintain a modern lifestyle. The Handbook of Research on Power and Energy System Optimization is a critical scholarly resource that examines the usage of energy in relation to the perceived standard of living within a country and explores the importance of energy structure augmentation. Featuring coverage on a wide range of topics including energy management, micro-grid, and distribution generation, this publication is targeted towards researchers, academicians, and students seeking relevant research on the augmentation of current energy structures to support existing standards of living.

A component in the America's Energy Future study, Electricity from Renewable Resources examines the technical potential for electric power generation with alternative sources such as wind, solar-photovoltaic, geothermal, solar-thermal, hydroelectric, and other renewable sources. The book focuses on those renewable sources that show the most promise for initial commercial deployment within 10 years and will lead to a substantial impact on the U.S. energy system. A quantitative characterization of technologies, this book lays out expectations of costs, performance, and impacts, as well as barriers and research and development needs. In addition to a principal focus on renewable energy technologies for power generation, the book addresses the challenges of incorporating such technologies into the power grid, as well as potential improvements in the national electricity grid that could enable better and more extensive utilization of wind, solar-thermal, solar photovoltaics, and other renewable technologies.

This book provides an account of the field of synchronized Phasor Measurement technology, its beginning, its technology and its principal applications. It covers wide Area Measurements (WAM) and their applications. The measurements are done using GPS systems and eventually will replace the existing technology. The authors created the field about twenty years ago and most of the installations planned or now in existence around the world are based on their work.

Aimed at assisting doctoral candidates and early-career researchers and their supervisors globally, this book is the first of its type to address the challenges faced by students when proposing new programs of research in the disciplines of gender, race, identity, indigeneity, and diversity within management and business. The problems researchers face derive from a lack of familiarity with the needed alignment of the methodology, conceptual framework, and the nature of epistemologies used in creating a coherent proposal. This results in project delays and unnecessary time in review as doctoral students and committees attempt to provide the required alignment. Essential reading for students and faculty engaged in these fields of study, the book provides a practical guide on how to navigate through these challenges and to arrive at a workable proposal that meets the requirements of the academy. To assist doctoral students in conducting their research, the book provides narratives that illustrate the complexities of researching gender, race, identity, indigeneity, and diversity in broad terms. It explains the importance of such research in creating positive social change and helping students identify the appropriate conceptual framework, align the problem statement with a purpose, construct the research question and the nature of the study, and identify the correct method to conduct the research. An essential guide for students and doctoral researchers, this book explains the dominant and marginalized epistemological orientations to acquaint doctoral researchers with the effects of their selections on the outcomes of their research. It provides guidance as to the appropriateness of quantitative or qualitative methods based on the selected epistemology and the problem statement.

"This book uses a top-down approach to introduce readers to the SPICE simulator. It begins by describing techniques for simulating circuits, then presents the various SPICE and OrCAD commands and their applications to electrical and electronic circuits. Lavishly illustrated, this new edition includes even more hands-on exercises, suggestions, sample problems, and circuit models of actual devices. It is an ideal supplement for courses in electric or electronic circuitry and is also a solid professional reference."--BOOK JACKET. Title Summary field provided by Blackwell North America, Inc. All Rights Reserved

Educational Research: A Guide to the Process is a different kind of research text. It emphasizes the process of research, that is, what researchers actually do as they go about designing and carrying out their research activities. Rather than passively reading about research operations, it promotes content mastery by using a three-step pedagogical model that involves: a manageable chunk of text, a comprehension or application exercise, and author feedback on the exercise. The text contains approximately 150 of these exercise-feedback units. The second edition has been thoroughly updated, expanded from 15 to 20 chapters, and reorganized into two parts. Part I covers basic aspects of the research process, provides an example of a student research proposal, and shows how to evaluate a research report. Part II provides a separate chapter for each research methodology, including two chapters on qualitative research. Other noteworthy changes include more annotated studies and more visual illustrations of statistical and research methods.

Writing A Research Proposal UTeM Press

Master the essential skills for designing and conducting a successful research project Essentials of Research Design and Methodology contains practical information on how to design and conduct scientific research in the behavioral and social sciences. This accessible guide covers basic to advanced concepts in a clear, concrete, and readable style. The text offers students and practitioners in the behavioral sciences and related disciplines important insights into identifying research topics, variables, and methodological approaches. Data collection and assessment strategies, interpretation methods, and important ethical considerations also receive significant coverage in this user-friendly guide. Essentials of Research Design and Methodology is the only available resource to condense the wide-ranging topics of the field into a concise, accessible format for handy and quick reference. As part of the Essentials of Behavioral Science series, this book offers a thorough review of the most relevant topics in research design and methodology. Each concise chapter features numerous callout boxes highlighting key concepts, bulleted points, and extensive illustrative material, as well as "Test Yourself" questions that help you gauge and reinforce your grasp of the information covered.

ISAmI is the International Symposium on Ambient Intelligence, and aims to bring together researchers from various disciplines that are interested in all aspects of Ambient Intelligence. The symposium provides a forum to present and discuss the latest results, innovative projects, new ideas and research directions, and to review current trends in this area. This volume presents the papers that have been accepted for the 2011 edition, both for the main event and workshop. The ISAmI workshop WoRIE promises to be a very interesting event that complements the regular program with an emerging topic on reliability of intelligent environments

Video compression coding is the enabling technology behind a new wave of communication applications. From streaming internet video to broadcast digital television and digital cinema, the video codec is a key building block for a host of new multimedia applications and services. Video Codec Design sets out to de-mystify the subject of video coding and present a practical, design-based approach to this emerging field. Featuring: * Guidance on the practical design and implementation of video coding technology. * Explanation of the major video coding standards, including MPEG-2, MPEG-4, H.263 and H.26L. * Detailed coverage of key video coding techniques and core algorithms. * Examination of critical design issues including transmission, Quality of Service and processing platforms. * A wealth of illustrations and practical examples, including quantitative comparisons of design alternatives. Video Codec Design provides communications engineers, system designers, researchers and technical managers with an essential handbook to image and video compression technology. The clear presentation and emphasis on real-life examples make this book an excellent teaching tool for computer science and electronic engineering instructors.

Investigators, their home institutions, and funding agencies play significant roles in the development and outcomes of scientific projects. Submitting a proposal to a funding agency is only one dimension of a multivariable and complex funding process, and understanding this is a good first step toward unlocking the puzzle behind why some research proposals receive awards while others are declined. The Handbook of Scientific Proposal Writing offers researchers and research administrators a broad perspective on the process of initiating and conducting funded scientific research projects. Written for students and researchers in all fields and disciplines, this reference offers a holistic approach to conceiving and then converting new ideas into effective proposals. It focuses on the technical aspects of writing proposals rather than the fund-raising issues. Chapters provide full coverage of the scientific method, including information on how scientific research should be conducted. Providing the tools necessary to organize ideas and obtain the funds needed to effectively manage projects, the Handbook of Scientific Proposal Writing includes: 56 figures and 25 tables to help convey key ideas More than 150 citations that provide pointers to additional sources for further reading Examples to help the reader ease through more abstract concepts End-of-chapter questions to stimulate further examination and comprehension

Hispanic Engineer & Information Technology is a publication devoted to science and technology and to promoting opportunities in those fields for Hispanic Americans.

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Are you new to research and daunted by the idea of constructing your own research proposal? Then this is the book you need! This book and accompanying web resource will answer all your questions about healthcare research by introducing you to the concepts, theories and practicalities surrounding it. The aim of both the book and the web resource is to help you to write a good healthcare research proposal – which is the starting point for any would-be student researcher. The book takes a look at the theory of research, the core of the topic, but also provides practical help and advice along the way. It takes the reader through the stages of the research process from developing the question to communicating the findings, demystifying the process on the way. The web resource works alongside the book, supplementing and expanding on the chapters, giving you the ability to prepare your very own research proposal. Explains key concepts in a clear, easy to understand way Includes activities and scenarios for you to work through which will also increase your understanding of research and research proposals Easily navigable web resource (<http://www.researchproposalsforhealthprofessionals.com/> www.researchproposalsforhealthprofessionals.com/a) Both book and website are arranged in the same order in which you would develop and write a research proposal Website includes downloadable research proposal template to complete step-by-step as you work through the book and web resource Learn how to plan for success with this hands-on guide to conducting high-quality engineering research. Plan and implement your next project for maximum impact: step-by-step instructions cover every stage in engineering research, from the identification of an appropriate research topic through to the successful presentation of results. Improve your research outcomes: discover essential

tools and methods for producing high-quality, rigorous research, including statistical analysis, survey design, and optimisation techniques. Research with purpose and direction: clear explanations, real-world examples, and over 50 customisable end-of-chapter exercises, all written with the practical and ethical considerations of engineering in mind. A unique engineering perspective: written especially for engineers, and relevant across all engineering disciplines, this is the ideal book for graduate students, undergraduates, and new academics looking to launch their research careers.

Artificial intelligence has been applied to many areas of science and technology, including the power and energy sector. Renewable energy in particular has experienced the tremendous positive impact of these developments. With the recent evolution of smart energy technologies, engineers and scientists working in this sector need an exhaustive source of current knowledge to effectively cater to the energy needs of citizens of developing countries. Computational Methodologies for Electrical and Electronics Engineers is a collection of innovative research that provides a complete insight and overview of the application of intelligent computational techniques in power and energy. Featuring research on a wide range of topics such as artificial neural networks, smart grids, and soft computing, this book is ideally designed for programmers, engineers, technicians, ecologists, entrepreneurs, researchers, academicians, and students.

One of the pathways by which the scientific community confirms the validity of a new scientific discovery is by repeating the research that produced it. When a scientific effort fails to independently confirm the computations or results of a previous study, some fear that it may be a symptom of a lack of rigor in science, while others argue that such an observed inconsistency can be an important precursor to new discovery. Concerns about reproducibility and replicability have been expressed in both scientific and popular media. As these concerns came to light, Congress requested that the National Academies of Sciences, Engineering, and Medicine conduct a study to assess the extent of issues related to reproducibility and replicability and to offer recommendations for improving rigor and transparency in scientific research. Reproducibility and Replicability in Science defines reproducibility and replicability and examines the factors that may lead to non-reproducibility and non-replicability in research. Unlike the typical expectation of reproducibility between two computations, expectations about replicability are more nuanced, and in some cases a lack of replicability can aid the process of scientific discovery. This report provides recommendations to researchers, academic institutions, journals, and funders on steps they can take to improve reproducibility and replicability in science.

The book describes methods of modeling, planning and implementing electric energy storage systems. Energy storage becomes an important issue when more and more electric power is generated by wind mills and photovoltaics systems, because green energy is more volatile. So energy storage is necessary to guarantee safe and secure electric energy supply. Market and power system oriented operations of electric energy storage require different planning methods and different algorithms for searching the optimal solution. These methods are described in detail for energy storage implementations in generation, transmission and distribution levels. Economic aspects are considered. For many years, the authors have been developing smart grid solutions as well as a methodology of modeling and planning electric energy storage usage. The aim has been to increase the flexibility of the power system heading for an energy system which is completely generated by green energy.

BASIC MARKETING RESEARCH, 9E balances a reader-friendly approach with an ideal level of coverage. The authors introduce two dominant approaches to gathering marketing information: marketing analytics on data that exist within the firm and customer insights gathered for a specific purpose. The book merges these approaches in an ongoing example in the analysis section. Readers review data from multiple sources, including consumer communication and consumer behavior observed through technology. An overview details how organizations obtain and use data today. Readers learn how interactions among parts of the research process give managers and researchers confidence in the results. Readers review the information-gathering function from the perspectives of researchers who gather information and marketing managers who use it. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This book covers instantaneous power theory as well as the importance of design of shunt, series, and combined shunt-series power active filters and hybrid passive-active power filters Illustrates pioneering applications of the p-q theory to power conditioning, which highlights distinct differences from conventional theories Explores p-q-r theory to give a new method of analyzing the different powers in a three-phase circuit Provides exercises at the end of many chapters that are unique to the second edition

This book presents deep analysis of machine control for different applications, focusing on its implementation in embedded systems. Necessary peripherals for various microcontroller families are analysed for machine control and software architecture patterns for high-quality software development processes in motor control units are described. Abundant figures help the reader to understand the theoretical, simulation and practical implementation stages of machine control. Model-based design, used as a mathematical and visual approach to construction of complex control algorithms, code generation that eliminates hand-coding errors, and co-simulation tools such as Simulink, PSIM and finite element analysis are discussed. The simulation and verification tools refine, and retest the models without having to resort to prototype construction. The book shows how a voltage source inverter can be designed with tricks, protection elements, and space vector modulation. Practical Control of Electric Machines: Model-Based Design and Simulation is based on the author's experience of a wide variety of systems in domestic, automotive and industrial environments, and most examples have implemented and verified controls. The text is ideal for readers looking for an insight into how electric machines play an important role in most real-life applications of control. Practitioners and students preparing for a career in control design applied in electric machines will benefit from the book's easily understood theoretical approach to complex machine control. The book contains mathematics appropriate to various levels of experience, from the student to the academic and the experienced professional. Advances in Industrial Control reports and encourages the

transfer of technology in control engineering. The rapid development of control technology has an impact on all areas of the control discipline. The series offers an opportunity for researchers to present an extended exposition of new work in all aspects of industrial control.

This book presents recent results on fault diagnosis and condition monitoring of airborne electromechanical actuators, illustrating both algorithmic and hardware design solutions to enhance the reliability of onboard more electric aircraft. The book begins with an introduction to the current trends in the development of electrically powered actuation systems for aerospace applications. Practical examples are proposed to help present approaches to reliability, availability, maintainability and safety analysis of airborne equipment. The terminology and main strategies for fault diagnosis and condition monitoring are then reviewed. The core of the book focuses on the presentation of relevant case studies of fault diagnosis and monitoring design for airborne electromechanical actuators, using different techniques. The last part of the book is devoted to a summary of lessons learned and practical suggestions for the design of fault diagnosis solutions of complex airborne systems. The book is written with the idea of providing practical guidelines on the development of fault diagnosis and monitoring algorithms for airborne electromechanical actuators. It will be of interest to practitioners in aerospace, mechanical, electronic, reliability and systems engineering, as well as researchers and postgraduates interested in dynamical systems, automatic control and safety-critical systems. Advances in Industrial Control reports and encourages the transfer of technology in control engineering. The rapid development of control technology has an impact on all areas of the control discipline. The series offers an opportunity for researchers to present an extended exposition of new work in all aspects of industrial control.

How to Design, Write, and Present a Successful Dissertation Proposal, by Elizabeth A. Wentz, is essential reading for any graduate student entering the dissertation process in the social or behavioral sciences. The book addresses the importance of ethical scientific research, developing your curriculum vitae, effective reading and writing, completing a literature review, conceptualizing your research idea, and translating that idea into a realistic research proposal using research methods. The author also offers insight into oral presentations of the completed proposal, and the final chapter presents ideas for next steps after the proposal has been presented. Taking the view that we “learn by doing,” the author provides Quick Tasks, Action Items, and To Do List activities throughout the text that, when combined, develop each piece of your research proposal. Designed primarily for quantitative or mixed methods research dissertations, this book is a valuable start-to-finish resource.

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