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The Transfer of Power in India Orient Blackswan The author recounts in detail the events that occurred from September 1939 to August 1947, during the final stages of India s bid for freedom, and how power was actually transferred. Power to the Transfer Critical Race Theory and a Transfer Receptive Culture MSU Press Currently, U.S. community colleges serve nearly half of all students of color in higher education who, for a multitude of reasons, do not continue their education by transferring to a university. For those students who do transfer, often the responsibility for the application process, retention, graduation, and overall success is placed on them rather than their respective institutions. This book aims to provide direction toward the development and maintenance of a transfer receptive culture, which is defined as an institutional commitment by a university to support transfer students of color. A transfer receptive culture explicitly acknowledges the roles of race and racism in the vertical transfer process from a community college to a university and unapologetically centers transfer as a form of equity in the higher education pipeline. The framework is guided by critical race theory in education, which acknowledges the role of white supremacy and its contemporary and historical role in shaping institutions of higher learning. Trilogy of Wireless Power Transfer Wireless Power Transfer Between Distance and Efficiency Springer Focusing on inductive wireless power transfer (WPT), which relies on coil resonators and power converters, this book begins by providing the background and basic theories of WPT, which are essential for newcomers to the field. Then two major challenges of WPT – power transfer distance and efficiency – are subsequently addressed, and multi-resonator WPT systems, which not only offer a way to extend power transfer distance but also provide more flexibility, are investigated. Recent findings on techniques to maximize the power transfer efficiency of WPT systems, e.g. maximum efficiency point tracking, are also introduced. Without the constraint of cables, wireless power transfer (WPT) is an elegant technique for charging or powering a range of electrical devices,

e.g. electric vehicles, mobile phones, artificial hearts, etc. Given its depth of coverage, the book can serve as a technical guideline or reference guide for engineers and researchers working on WPT. Wireless Power Transfer for Medical Microsystems Springer Science & Business Media This book provides an in-depth introduction to the newest technologies for designing wireless power transfer systems for medical applications. The authors present a systematic classification of the various types of wireless power transfer, with a focus on inductive power coupling. Readers will learn to overcome many challenges faced in the design a wirelessly powered implant, such as power transfer efficiency, power stability, and the size of power antennas and circuits. This book focuses exclusively on medical applications of the technology and a batteryless capsule endoscopy system and other, real wirelessly powered systems are used as examples of the techniques described. Wireless Power Transfer Theory, Technology, and Applications Energy Engineering This book covers the very latest in theory and technology for Wireless Power Transfer (WPT), for both coupling as well as radiative WPT. It describes the theory as well as the technology and applications. Wireless Power Transfer for Electric Vehicles and Mobile Devices John Wiley & Sons From mobile, cable-free re-charging of electric vehicles, smart phones and laptops to collecting solar electricity from orbiting solar farms, wireless power transfer (WPT) technologies offer consumers and society enormous benefits. Written by innovators in the field, this comprehensive resource explains the fundamental principles and latest advances in WPT and illustrates key applications of this emergent technology. Key features and coverage include: The fundamental principles of WPT to practical applications on dynamic charging and static charging of EVs and smartphones. Theories for inductive power transfer (IPT) such as the coupled inductor model, gyrator circuit model, and magnetic mirror model. IPTs for road powered EVs, including controller, compensation circuit, electro-magnetic field cancel, large tolerance, power rail segmentation, and foreign object detection. IPTs for static charging for EVs and large tolerance and capacitive charging issues, as well as IPT mobile applications such as free space omnidirectional IPT by dipole coils and 2D IPT for robots. Principle and applications of capacitive power transfer. Synthesized magnetic field focusing, wireless nuclear instrumentation, and future WPT. A technical asset for engineers in the power electronics, internet of things and automotive sectors, Wireless Power Transfer for Electric Vehicles and Mobile Devices is an essential design and analysis guide and an important reference for graduate and higher undergraduate students preparing for careers in these industries. Wireless Power Transfer River Publishers Nikola Tesla's dream in the early 20th century of a "World Wireless System" led him to build the Wardenclyffe Tower, a prototype base station serving as an emitter for his "World Wireless System." The base station was to supply wireless electrical energy to a distant receiver. This book builds upon that dream and is a result of intensive research in powerline, machine to machine communications, and wireless power

transfer globally. Wireless energy transfer or Witricity (WIreless elecTRICITY) transfers electricity instead of data. The technology is useful in cases where instantaneous or continuous energy is needed but interconnecting wires are inconvenient, hazardous, or impossible. The transfer is made through inductive coupling and electromagnetic radiation. Inductive coupling provides optimum power delivery to a receiver load if both the emitter and the receiver achieve magnetic resonance concurrently. Energy transfer systems mostly use antennas operating in their near field regions. As fossil energy sources are being depleted rapidly worldwide and oil prices soar, solar energy enhanced with wireless power transfer (WPT) has become a reasonable alternative for renewable energy and power harvesting. They are finding use in transportation, electric and hybrid vehicles, very fast trains, and the emerging field of Internet of Things. Leading experts on the subject wrote this book on wireless energy transfer technology and its applications. The publication introduces and explains the technology in great detail and provides the theory and practice of WPT through the two approaches of coupled mode theory and circuit theory. Both approaches are dependent on resonance techniques. The level of presentation is suitable for design and training. In-depth coverage is provided on near field concepts; coupled-mode theory and models; circuit models of inductive antennas; radiative and inductive wireless power transfer, wireless power relay concepts, optimization techniques for wireless power transfer systems, control of wireless power transfer systems, and wireless charging concepts; and wireless energy transfer applications in electric vehicles, embedded medical systems, and the propagation in human tissues. Each chapter covers a selected aspect of wireless energy transfer. The authors have gone to great lengths to provide worked examples in order to assist the reader in working through some of the difficult concepts and allow more understanding. The book is an excellent foundation for applying wireless energy transfer technologies in most fields, including transportation, communication, home automation, biomedical systems, and home appliances. It is a recommended read for practitioners and engineers in the power industry, students in universities, and research institutes. Honors and post graduate students in Physics, electrical/electronic engineering, and computer science will find the text easy to read and apply because of the mode of presentation. Transfer of Power Simon and Schuster On a busy Washington morning, amid the shuffle of tourists and the brisk rush of government officials, the stately calm of the White House is shattered in a hail of gunfire. A group of terrorists has descended on the Executive Mansion, and gained access by means of a violent massacre that has left dozens of innocent bystanders murdered. The president is evacuated to his underground bunker - but not before almost one hundred hostages are taken. While the politicians and the military leaders argue over how to negotiate with the terrorists, one man is sent to break through the barrage of panicked responses and political agendas surrounding the crisis. Mitch Rapp, the CIA's top

counterterrorism agent, makes his way into the White House and soon discovers that the president is not as safe as Washington's power elite had thought. And, in a race against time, he makes a chilling discovery that could determine the fate of America - and realizes that the terrorist attack is only the beginning of a master scheme to undermine an entire nation. Look out for the new Vince Flynn novel, The Survivor, published in autumn 2015! Wireless Power Transfer Using Magnetic and Electric Resonance Coupling Techniques Springer Nature This book describes systematically wireless power transfer technology using magnetic resonant coupling and electric resonant coupling and presents the latest theoretical and phenomenological approaches to its practical implementation, operation and its applications. It also discusses the difference between electromagnetic induction and magnetic resonant coupling, the characteristics of various types of resonant circuit topologies and the unique features of magnetic resonant coupling methods. Designed to be self-contained, this richly illustrated book is a valuable resource for a broad readership, from researchers to engineers and anyone interested in cutting-edge technologies in wireless power transfer. Wireless Power Transfer Fundamentals and Technologies BoD – Books on Demand Wireless power transfer techniques have been gaining researchers' and industry attention due to the increasing number of battery-powered devices, such as mobile computers, mobile phones, smart devices, intelligent sensors, mainly as a way to replace the standard cable charging, but also for powering battery-less equipment. The storage capacity of batteries is an extremely important element of how a device can be used. If we talk about battery-powered electronic equipment, the autonomy is one factor that may be essential in choosing a device or another, making the solution of remote powering very attractive. A distinction has to be made between the two forms of wireless power transmission, as seen in terms of how the transmitted energy is used at the receiving point: - Transmission of information or data, when it is essential for an amount of energy to reach the receiver to restore the transmitted information; - Transmission of electric energy in the form of electromagnetic field, when the energy transfer efficiency is essential, the power being used to energize the receiving equipment. The second form of energy transfer is the subject of this book. Inductive Links for Wireless Power Transfer Fundamental Concepts for Designing High-efficiency Wireless Power Transfer Links Springer Nature This book presents a system-level analysis of inductive wireless power transfer (WPT) links. The basic requirements, design parameters, and utility of key building blocks used in inductive WPT links are presented, followed by detailed theoretical analysis, design, and optimization procedure, while considering practical aspects for various application domains. Readers are provided with fundamental, yet easy to follow guidelines to help them design high-efficiency inductive links, based on a set of application-specific target specifications. The authors discuss a wide variety of recently proposed approaches to achieve the maximum

efficiency point, such as the use of additional resonant coils, matching networks, modulation of the load quality factor (Q-modulation), and adjustable DC-DC converters. Additionally, the attainability of the maximum efficiency point together with output voltage regulation is addressed in a closed-loop power control mechanism. Numerous examples, including MATLAB/Octave calculation scripts and LTspice simulation files, are presented throughout the book. This enables readers to check their own results and test variations, facilitating a thorough understanding of the concepts discussed. The book concludes with real examples demonstrating the practical application of topics discussed. Covers both introductory and advanced levels of theory and practice, providing readers with required knowledge and tools to carry on from simple to advanced wireless power transfer concepts and system designs; Provides theoretical foundation throughout the book to address different design aspects; Presents numerous examples throughout the book to complement the analysis and designs; Includes supplementary material (numerical and circuit simulation files) that provide a "hands-on" experience for the reader; Uses real examples to demonstrate the practical application of topics discussed. Wireless Information and Power Transfer Theory and Practice Wiley-IEEE Press em style="mso-bidi-font-style: normal;"Wireless Information and Power Transfer offers an authoritative and comprehensive guide to the theory, models, techniques, implementation and application of wireless information and power transfer (WIPT) in energy-constrained wireless communication networks. With contributions from an international panel of experts, this important resource covers the various aspects of WIPT systems such as, system modeling, physical layer techniques, resource allocation and performance analysis. The contributors also explore targeted research problems typically encountered when designing WIPT systems. Wireless Power Transfer for Electric Vehicles: Foundations and Design Approach Springer Nature This book describes the fundamentals and applications of wireless power transfer (WPT) in electric vehicles (EVs). Wireless power transfer (WPT) is a technology that allows devices to be powered without having to be connected to the electrical grid by a cable. Electric vehicles can greatly benefit from WPT, as it does away with the need for users to manually recharge the vehicles' batteries, leading to safer charging operations. Some wireless chargers are available already, and research is underway to develop even more efficient and practical chargers for EVs. This book brings readers up to date on the state-of-the-art worldwide. In particular, it provides: • The fundamental principles of WPT for the wireless charging of electric vehicles (car, bicycles and drones), including compensation topologies, bi-directionality and coil topologies. • Information on international standards for EV wireless charging. • Design procedures for EV wireless chargers, including software files to help readers test their own designs. • Guidelines on the components and materials for EV wireless chargers. • Review and analysis of the main control algorithms applied to EV wireless chargers. • Review

and analysis of commercial EV wireless charger products coming to the market and the main research projects on this topic being carried out worldwide. The book provides essential practical guidance on how to design wireless chargers for electric vehicles, and supplies MATLAB files that demonstrate the complexities of WPT technology, and which can help readers design their own chargers. Recent Wireless Power Transfer Technologies Wireless Power Transfer via Radiowaves John Wiley & Sons Recent advances in Wireless Power Transmission (WPT) technologies have enabled various engineering applications with potential product implementation. WPT can be utilized to charge batteries in various pieces of equipment without the need for a wired connection. Energy can be harvested from ambient RF and microwave radiation and 1 million kW microwaves can be transmitted from space to the ground. This book covers all the theory and technologies of WPT, such as microwave generators with semi-conductors and microwave tubes, antennas, phased arrays, beam efficiency, and rectifiers (rectenna). The authors also discuss coupling WPT. Applications, such as energy harvesting, sensor networks, point-to-point WPT, WPT to moving targets (airplane, vehicle, etc.) and Solar Power Satellite are also presented. Wireless Information and Power Transfer: A New Paradigm for Green Communications Springer This book presents breakthroughs in the design of Wireless Energy Harvesting (WEH) networks. It bridges the gap between WEH through radio waves communications and power transfer, which have largely been designed separately. The authors present an overview of the RF-EHNs including system architecture and RF energy harvesting techniques and existing applications. They also cover the idea of WEH in novel discoveries of information, the theoretical bounds in WEH, wireless sensor networks, usage of modern channel coding together with WEH, energy efficient resource allocation mechanisms, distributed self-organized energy efficient designs, delay-energy trade-off, specific protocols for energy efficient communication designs, D2D communication and energy efficiency, cooperative wireless networks, and cognitive networks. Design of Ultra Wideband Power Transfer Networks John Wiley & Sons Combining analytic theory and modern computer-aided design techniques this volume will enable you to understand and design power transfer networks and amplifiers in next generation radio frequency (RF) and microwave communication systems. A comprehensive theory of circuits constructed with lumped and distributed elements is covered, as are electromagnetic field theory, filter theory, and broadband matching. Along with detailed roadmaps and accessible algorithms, this book provides up-to-date, practical design examples including: filters built with microstrip lines in C and X bands; various antenna matching networks over HF and microwave frequencies; channel equalizers with arbitary gain shapes; matching networks for ultrasonic transducers; ultra wideband microwave amplifiers constructed with lumped and distributed elements. A companion website details all Real Frequency Techniques (including line segment and

computational techniques) with design tools developed on MatLab. Essential reading for all RF and circuit design engineers, this is also a great reference text for other electrical engineers and researchers working on the development of communications applications at wideband frequencies. This book is also beneficial to advanced electrical and communications engineering students taking courses in RF and microwave communications technology. www.wiley.com/go/yarman_wideband Elements of Radio Frequency Energy Harvesting and Wireless Power Transfer Systems CRC Press This book focuses on elementary concepts of both radio frequency energy harvesting (RFEH) and wireless power transfer (WPT), and highlights their fundamental requirements followed by recent advancements. It provides a systematic overview of the key components required for RFEH and WPT applications and also comprehensively introduces the pioneering research advancements achieved to date. The state-of-the-art circuit design topologies for the two different applications are presented mainly in terms of antenna operating frequencies, polarization characteristics, efficient matching network circuits, rectifier topologies, and overall rectenna systems. The book serves as a single point of reference for practicing engineers and researchers searching for potential sources and elements involved in the RFEH system as well as in the WPT system, and need rapid training and design guidelines in the following areas: • Different sensing elements used in RFEH and WPT • Inclusions of mathematical expressions and design problems • Illustration of some design examples and performance enhancement techniques Drama and the Transfer of Power in Renaissance England Oxford University Press The state is at its most volatile when supreme power changes hands. This book studies five such moments of transfer in the sixteenth and early seventeenth centuries, from Henry VIII to the English Revolution, pazying particular attention to the political function and agency of drama in smoothing the transition. Masques and civic pageants served as an art form by which incoming authority could declare its power, and subjects could express their willing subordination to the new regime. The book contains vivid case studies of these dramatic works, some of which have never before been identified, and the circumstances for which they were written: the use of London street theatre in 1535 to promote Henry VIII's arrogation of Royal Supremacy; the aggressively Protestant court masque of 1559 which marked the accession of Elizabeth I, and the censorship which resulted when the same mode of dramatic discourse spread to more plebeian stages; the masques and entertainments of James I's initial year on the English throne, through which the new Stuart dynasty asserted its legitimacy and individual courtiers made their bids for influence; and the formal coronation entry to London, furnished with dramatic pageants, which London paid for but Charles I refused to undertake. The final chapter describes how, in 1642, a very different incoming regime planned to ignore drama altogether, until some surprisingly contingent circumstances forced its hand. Key Technologies of Magnetically-Coupled Resonant Wireless

Power Transfer Springer This thesis focuses on the key technologies involved in magnetically coupled Wireless Power Transfer (WPT). Starting from the basic structures and theories of WPT, it addresses four fundamental aspects of these systems. Firstly, it analyzes the factors affecting transfer efficiency and compares various methods for reducing the working frequency. Secondly, it discusses frequency splitting and offers a physical explanation. Thirdly, it proposes and assesses three multiple-load transfer structures. Lastly, it investigates WPT systems with active voltage-source and current-source load. As such, the thesis offers readers a deeper understanding of WPT technology, while also proposing insightful new advances. Analysis of Wireless Power Transfer by Coupled Mode Theory (CMT) and Practical Considerations to Increase Power Transfer Efficiency Recent Wireless Power Transfer Technologies via Radio Waves River Publishers Wireless Power Transfer (WPT) is considered to be an innovative game changing technology. The same radio wave and electromagnetic field theory and technology for wireless communication and remote sensing is applied for WPT. In conventional wireless communication systems, information is "carried" on a radio wave and is then transmitted over a distance. In WPT however, the energy of the radio wave itself is transmitted over a distance. Wireless communication technology has proven to be extremely useful, however in future it should be even more useful to apply both wireless communication and wireless power technologies together. There are various WPT technologies, e.g. inductive near field WPT, resonance coupling WPT, WPT via radio waves, and laser power transfer. Recent Wireless Power Transfer Technologies via Radio Waves focusses on recent technologies and applications of the WPT via radio waves in far field. The book also covers the history, and future, of WPT via radio waves, as well as safety, EMC and coexistence of radio waves for WPT. Technical topics discussed in the book include: Radio Wave GenerationRadio Wave Amplification with Solid States Circuit and Microwave TubesAntenna and Beam Forming TechnologiesRadio Wave Conversion/Rectification to ElectricityBattery-less Sensor Applications toward Internet of Things (IoT)Solar Power Satellite ApplicationSafety, EMC, Coexistence of Radio Waves for the WPT WPT is an old technology based on the basic theory of radio waves, however WPT is also a state-of-the-art technology for the latest applications in IoT, sensor networks, wireless chargers for mobile phones, and solar power satellite. The theory behind these technologies, as well as applications, are explained in this book. Wireless Power Transfer Algorithms, Technologies and Applications in Ad Hoc Communication Networks Springer This book is the first systematic exposition on the emerging domain of wireless power transfer in ad hoc communication networks. It selectively spans a coherent, large spectrum of fundamental aspects of wireless power transfer, such as mobility management in the network, combined wireless power and information transfer, energy flow among network devices, joint activities with wireless power transfer (routing, data gathering and solar energy

harvesting), and safety provisioning through electromagnetic radiation control, as well as fundamental and novel circuits and technologies enabling the wide application of wireless powering. Comprising a total of 27 chapters, contributed by leading experts, the content is organized into six thematic sections: technologies, communication, mobility, energy flow, joint operations, and electromagnetic radiation awareness. It will be valuable for researchers, engineers, educators, and students, and it may also be used as a supplement to academic courses on algorithmic applications, wireless protocols, distributed computing, and networking. Design Considerations for Inductively Coupled Power Transfer Systems Wireless Power Transfer and Data Communication for Intracranial Neural Recording Applications Springer Nature This book describes new circuits and systems for implantable wireless neural monitoring systems and explains the design of a batteryless, remotely-powered implantable micro-system, designed for continuous neural monitoring. Following new trends in implantable biomedical applications, the authors demonstrate a system which is capable of efficient remote powering and reliable data communication. Novel architecture and design methodologies are used for low power and small area wireless communication link. Additionally, hermetically sealed packaging and in-vivo validation of the implantable device is presented. Wireless Power Transfer Recent Development, Applications and New Perspectives Wireless power transfer (WPT) is a promising technology used to transfer electric energy from a transmitter to a receiver wirelessly without wires through various methods and technologies using time-varying electric, magnetic, or electromagnetic fields. It is an attractive solution for many industrial applications due to its many benefits over wired connections. This book discusses the theory and practical aspects of WPT technology. India Remembered A Personal Account of the Mountbattens During the Transfer of Power Pavilion In March 1947 Lord Louis Mountbatten became the last Viceroy of India, with the mandate to hand over ''the jewel in the crown'' of the British Empire within one year. Mountbatten worked with Nehru, Gandhi and the leader of the Muslim League, Jinnah, to devise a plan for partitioning the empire into two independent sovereign states, India and Pakistan, on August 15, 1947 and he remained as interim Governor-General of India until June 1948. During this time Lord Mountbatten’s daughter and India’s mother, Pamela, was with her parents and kept a diary recounting this extraordinary tale of history. The diaries include their trips to stay in Calcutta, Bombay, Madras, Orissa and Assam, and the exotic palaces of Indian rulers. 'India Remembered' is a scrapbook of private family photographs taken during this historical period (Edwina Mountbatten walking arm in arm with Nehru through a courtyard, or Gandhi taking tea for the first time at Viceroys House). Includes many anecdotes from Pamela Mountbatten’s diaries such as reminiscences of having to leave 10 minutes before dinner was actually announced as the walk from the bedroom to the dining hall was so far (if running really late, riding a bicycle through the corridors to make time).

Includes photographs evoking the atmosphere of the Mountbatten's favourite retreat, that of Viceregal Lodge in Simla. Underwater Wireless Power Transfer Smart Ocean Energy Converters Springer This book discusses, for the first time, wireless power transfer in the ocean environment. Topics covered include power electronic techniques, advanced control strategies, as well as classic and emerging applications such as smart ocean energy systems and wireless power transfer and charging of underwater autonomous vehicles. Emerging research topics are presented, along with methodologies, approaches, and industrial development of intelligent and energy-efficient techniques. Apart from the basic principles with an emphasis on inductive power transfer and mathematical analysis, the book discusses the emerging implementation for underwater wireless power transfer such as energy encryption, power and data transfer through common links, and secured data- and cyber-security. Specifically, the book comprehensively introduces significant discussions on UWPT coil theoretical and experimental analysis in seawater, optimal design, and intelligent controls. For example, since fast communication is not viable in an underwater environment, the proposed book discusses Maximum Power Efficiency Tracking (MPET) control, which achieves a maximum power efficiency (>85%) without communication or feedback from the transmitting side of the UWPT system. A k-nearest-neighbors-based machine learning approach is used to estimate the coupling coefficiency between the coils. This machine learning-based intelligent control method can offer important guidance for graduate students, academic researchers, and industrial engineers who want to understand the working principles and realize the developing trends in underwater wireless power transfer. Finally, the book includes details on the modeling and design of a smart ocean energy system--a new type of power harvesting system designed to convert ocean energy into electricity, which has the capability of making underwater wireless power connections with distributed marine devices. Wireless Power Transfer Power Repeaters for Inductive Power Transfer In most electrical and electronic systems, power is transferred by direct electrical contacts, which can cause inconvenience and electrical hazards, particularly in dirty and wet environments. Inductive power transfer (IPT) technology based on magnetic field coupling is proposed to transfer power across an air gap when direct wire connection is difficult or impossible. However, due to the nature of near magnetic field coupling, the power transfer capability of an IPT system decreases quickly with the distance between the primary transmitter and power pickup. One way to increase the power transfer capability is to use magnetic power repeaters to relay power. Power repeaters can be in form of a single coil or multiple coils in matrix forms that are known as matrix power repeaters. Although being effective, the operating mechanism and the actual effect of even a single coil passive power repeater on an IPT system is not clear, so the design of the power repeaters has been largely a trial and error exercise. As for matrix power

repeaters, only recently they are introduced in near field IPT systems. Therefore little is known about their effects on magnetic field distribution and power transfer capability. This thesis presents a general study of single and multiple coil power repeaters for enhancing the power transfer capability of IPT systems. The effects of the tuning conditions of single coil passive power repeaters on the power transfer capability of IPT systems are investigated by mathematical analysis, computer simulations, and practical experiments. An active power repeater is also proposed to maintain the maximum power transfer condition of an IPT system with variable load conditions and pickup positions. Furthermore, the effects of matrix power repeaters on the magnetic field distribution at the power pickup of IPT systems are studied to understand the field enhancement and shielding effects. The relationship between the system operating frequency and power transfer capability of an IPT system with a matrix power repeater is further studied to determine the optimal system frequencies corresponding to maximum and minimum power transfer conditions. The theoretical optimal tuning condition of a single coil power repeater for maximum output power at a power pickup is determined, as together with the boundary between enhancing and reducing the power transfer capability of an IPT system. The results have been experimentally verified by passively tuning a power repeater. A controller is also proposed to actively tune the power repeater to the optimal condition which leads to an increase in the output power by 21.6%. The effective permeability of a 4 × 4 matrix power repeater is found to be negative when the operating frequency is above the nominal frequency. The critical system operating frequency corresponding to the boundary between enhancing and reducing the magnetic field at a power pickup of an IPT system has been determined by taking the coupling coefficients among the primary transmitter, the power pickup, and the power repeater into consideration. The system operating frequency corresponding to the maximum power transfer of an IPT system with a matrix power repeater is predicted with a maximum error of 2%. These results are helpful for understanding the performance of matrix power repeaters of IPT systems and guiding their optimal design. Far Field Wireless Power Transfer and Energy Harvesting This book covers the next generation of power transfer in which power is transmitted via energy harvesting applications. It describes far-field Wireless Power Transfers (WPT) and why it is considered a special type of power transfer where power is transmitted through wireless power sources like radio waves, Wi-Fi, and TV broadcasting signals rather than utilizing near field wireless power sources. The book is the first of its kind to explain far-field WPT and energy harvesting technology from the same viewpoint. It provides you with an application-oriented review of how the latest WPT and energy harvesting tech can solve practical real-world problems. You will also get insight to R & D activities and regulations for commercial products in the future market. The book helps you understand the theory of far field WPT, and you will learn about the rising market for power

transfer, factory automation (FA) and Internet-of-Things (IoT) sensors. With its comprehensive and unique coverage combining WPT and energy harvesting technology, this is an excellent resource for researchers, graduate students and engineers looking to further their knowledge on the theory of far field wireless power transfer. Wireless Power Transfer. Management Multiple source control management Emerging Capabilities and Applications of Wireless Power Transfer IGI Global Technologies that enable powering a device without the need for being connected with a cable to the grid are gaining attention in recent years due to the advantages that they provide. They are a commodity to users and provide additional functionalities that promote autonomy among the devices. Emerging Capabilities and Applications of Wireless Power Transfer is an essential reference source that analyzes the different applications of wireless power transfer technologies and how the technologies are adapted to fulfill the electrical, magnetic, and design-based requirements of different applications. Featuring research on topics such as transfer technologies, circuital analysis, and inductive power transfer, this book is a vital resource for academicians, electrical engineers, scientists, researchers, and industry professionals seeking coverage on device power and creating autonomy through alternative power options for devices. Inductive Resonant Wireless Power Transfer Systems Wiley-Blackwell Constitutional Relations Between Britain and India; the Transfer of Power, 1942-7 Incorporating Wireless Power Transfer in an LED Lighting Application There are various situations in which electrical energy is desired but cannot by conveniently supplied. Since the days of Hienrich Hertz and Nikola Tesla, scientists have tried to solve this problem using different methods of wireless power transfer. Today, wireless power transfer has only been commercially demonstrated at small distances through use of induction. This thesis demonstrated the transfer of wireless power at relatively large distances through radio frequencies in the development of a prototype for a commercial product ? a wireless household lamp. Four Dimensional Derivation of the Electrodynamic Jump Conditions, Tractions, and Power Transfer at a Moving Boundary Comparisons of Power Transfer Functions and Flow Transfer Functions Transfer functions may be used to calculate component feedbacks or temperature increments by convolution of the transfer function with the appropriate fractional change in system-quantity. Power-change transfer functions have been reported. The corresponding flow transfer functions for this case, and comparison with the power transfer functions, are reported here. Results of feedback simulation of ramped flow transients using flow transfer functions are also described. Wireless Power Transfer Technologies for Electric Vehicles Springer Nature This book introduces the most state-of-the-art wireless power transfer technologies for electric vehicles from the fundamental theories to practical designs and applications, especially on the circuit analysis methods, resonant compensation networks, magnetic couplers, and related power electronics

converters. Moreover, some other necessary design considerations, such as communication systems, detection of foreign and living objects, EMI issues, and battery charging strategies, are also introduced to provide sufficient insights into the industrial applications. Finally, some future points are mentioned in brief. Different from other works, all the WPT technologies in this book are applied in real EV applications, whose effectiveness and reliability have been already tested and verified. From this book, readers who are interested in the area of wireless power transfer can have a broad view of modern WPT technologies. Readers who have no experience in the WPT area can learn the basic concept, analysis methods, and design principles of the WPT system for EV charging. Even for the readers who are occupied in this area, this book also provides rich knowledge on engineering applications and future trends of EV wireless charging.