# Electrical Circuit Theory By Nageswara Rao

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Major Applications of Carbon Nanotube Field-Effect Transistors (CNTFET) Raj, Balwinder 2019-12-06 With recent advancements in electronics, specifically nanoscale devices, new technologies are being implemented to improve the properties of automated systems. However, conventional materials are failing due to limited mobility, high leakage currents, and power dissipation. To mitigate these challenges, alternative resources are required to advance electronics further into the nanoscale domain. Carbon nanotube field-effect transistors are a potential solution yet lack the information and research to be properly utilized. Major Applications of Carbon Nanotube Field-Effect Transistors (CNTFET) is a collection of innovative research on the methods and applications of converting semiconductor devices from micron technology to nanotechnology. The book provides readers with an updated status on existing CNTs, CNTFETs, and their applications and examines practical applications to minimize short channel effects and power dissipation in nanoscale devices and circuits. While highlighting topics including interconnects, digital circuits, and single-wall CNTs, this book is ideally designed for electrical engineers, electronics engineers, students, researchers, academicians, industry professionals, and practitioners working in nanoscience, nanotechnology, applied physics, and electrical and electronics engineering.

Advances in Computing and Information Technology Natarajan Meghanathan 2012-08-11 The international conference on Advances in Computing and Information technology (ACITY 2012) provides an excellent international forum for both academics and professionals for sharing knowledge and results in theory, methodology and applications of Computer Science and Information Technology. The Second International Conference on Advances in Computing and Information technology (ACITY 2012), held in Chennai, India, during July 13-15, 2012, covered a number of topics in all major fields of Computer Science and Information Technology including: networking and communications, network security and applications, web and internet computing, ubiquitous computing, algorithms, bioinformatics, digital image processing and pattern recognition, artificial intelligence, soft computing and applications. Upon a strength review process, a number of high-quality, presenting not only innovative ideas but also a founded evaluation and a strong argumentation of the same, were selected and collected in the present proceedings, that is composed of three different volumes.

Machine Learning for Embedded System Security Basel Halak 2022-04-22 This book comprehensively covers the state-of-the-art security applications of machine learning techniques. The first part explains the emerging solutions for anti-tamper design, IC Counterfeits detection and hardware Trojan identification. It also explains the latest development of deep-learning-based modeling attacks on physically unclonable functions and outlines the design principles of more resilient PUF architectures. The second discusses the use of machine learning to mitigate the risks of security attacks on cyber-physical systems, with a particular focus on power plants. The third part provides an in-depth insight into the principles of malware analysis in embedded systems and describes how the usage of supervised learning techniques provides an effective approach to tackle software vulnerabilities.

Communication Software and Networks Suresh Chandra Satapathy 2020-10-03 This book highlights a collection of high-quality peer-reviewed research papers presented at the Sixth International Conference on Information System Design and Intelligent Applications (INDIA 2019), held at Lendi Institute of Engineering & Technology, Vizianagaram, Andhra Pradesh, India, from 1 to 2 November 2019. It covers a wide range of topics in computer science and information technology, from wireless networks, social networks, wireless sensor networks, information and network security, to web security, Internet of Things, bioinformatics, geoinformatics and computer

networks.

## CONTEMPORARY ISSUES IN MULTIDISCIPLINARY SUBJECTS: VOLUME-1 Sruthi. S

Proceedings of the International Conference on Information Systems Design and Intelligent Applications 2012 (India 2012) held in Visakhapatnam, India, January 2012 Suresh Chandra Satapathy 2011-12-14 This volume contains the papers presented at INDIA-2012: International conference on Information system Design and Intelligent Applications held on January 5-7, 2012 in Vishakhapatnam, India. This conference was organized by Computer Society of India (CSI), Vishakhapatnam chapter well supported by Vishakhapatnam Steel, RINL, Govt of India. It contains 108 papers contributed by authors from six different countries across four continents. These research papers mainly focused on intelligent applications and various system design issues. The papers cover a wide range of topics of computer science and information technology discipline ranging from image processing, data base application, data mining, grid and cloud computing, bioinformatics among many others. The various intelligent tools like swarm intelligence, artificial intelligence, evolutionary algorithms, bio-inspired algorithms have been applied in different papers for solving various challenging IT related problems.

Intelligent Data Analytics for Power and Energy Systems Hasmat Malik 2022 This book brings together state-of-the-art advances in intelligent data analytics as driver of the future evolution of PaE systems. In the modern power and energy (PaE) domain, the increasing penetration of renewable energy sources (RES) and the consequent empowerment of consumers as a central and active solution to deal with the generation and development variability are driving the PaE system towards a historic paradigm shift. The small-scale, diversity, and especially the number of new players involved in the PaE system potentiate a significant growth of generated data. Moreover, advances in communication (between IoT devices and M2M: machine to machine, man to machine, etc.) and digitalization hugely increased the volume of data that results from PaE components, installations, and systems operation. This data is becoming more and more important for PaE systems operation, maintenance, planning, and scheduling with relevant impact on all involved entities, from producers, consumer,s and aggregators to market and system operators. However, although the PaE community is fully aware of the intrinsic value of those data, the methods to deal with it still necessitate substantial enhancements, development and research. Intelligent data analytics is thereby playing a fundamental role in this domain, by enabling stakeholders to expand their decision-making method and achieve the awareness on the PaE environment. The editors also included demonstrated codes for presented problems for better understanding for beginners.

Multidisciplinary Subjects For Research-IV, Volume-1 Dr. Dilip A. Ode 2021-01-29

Soft Computing: Theories and Applications Millie Pant 2020-02-24 The book focuses on soft computing and its applications to solve real-world problems in different domains, ranging from medicine and health care, to supply chain management, image processing and cryptanalysis. It includes high-quality papers presented at the International Conference on Soft Computing: Theories and Applications (SoCTA 2018), organized by Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab, India. Offering significant insights into soft computing for teachers and researchers alike, the book inspires more researchers to work in the field of soft computing.

Vehicular Cloud Computing for Traffic Management and Systems Grover, Jyoti 2018-06-22 Road accidents caused by impaired and distracted driving as well as traffic congestion are on the rise, with the numbers increasing dramatically every day. Intelligent transportation systems (ITS) aim to improve the efficiency and safety of traveling by consolidating vehicle operations, managing vehicle traffic, and notifying drivers with alerts and safety messages in real time. Vehicular Cloud Computing for Traffic Management and Systems provides innovative research on the rapidly advancing applications of vehicle-to-vehicle and vehicle-to-infrastructure communication. It also covers the need to fully utilize vehicular ad-hoc network (VANET) resources to provide updated and dynamic information about the conditions of road traffic so that the number of road accidents can be minimized. Featuring research on topics such as identity management, computational architecture, and resource management, this book is ideally designed for urban planners, researchers, policy makers, graduate-level students, transportation engineers, and technology developers seeking current research on vehicle computational design, architecture, security, and privacy.

International Conference on Communication, Computing and Electronics Systems V. Bindhu 2021-03-25 This book includes high-quality papers presented at the International Conference on Communication, Computing and Electronics Systems 2020, held at the PPG Institute of Technology, Coimbatore, India, on 21–22 October 2020. The book covers topics such as automation, VLSI, embedded systems, integrated device technology, satellite communication, optical communication, RF communication, microwave engineering, artificial intelligence, deep learning, pattern recognition, Internet of Things, precision models, bioinformatics, and healthcare informatics.

Computational Learning Theory and Natural Learning Systems: Making learning systems practical Russell Greiner 1997 This is the fourth and final volume of papers from a series of workshops called "Computational Learning Theory and 'Natural' Learning Systems." The purpose of the workshops was to explore the emerging intersection of theoretical learning research and natural learning systems. The workshops drew researchers from three historically distinct styles of learning research: computational learning theory, neural networks, and machine learning (a subfield of AI). Volume I of the series introduces the general focus of the workshops. Volume II looks at specific areas of interaction between theory and experiment. Volumes III and IV focus on key areas of learning systems that have developed recently. Volume III looks at the problem of "Selecting Good Models." The present volume, Volume IV, looks at ways of "Making Learning Systems Practical." The editors divide the twenty-one contributions into four sections. The first three cover critical problem areas: 1) scaling up from small problems to realistic ones with large input dimensions, 2) increasing efficiency and robustness of learning methods, and 3) developing strategies to obtain good generalization from limited or small data samples. The fourth section discusses examples of real-world learning systems. Contributors: Klaus Abraham-Fuchs, Yasuhiro Akiba, Hussein Almuallim, Arunava Banerjee, Sanjay Bhansali, Alvis Brazma, Gustavo Deco, David Garvin, Zoubin Ghahramani, Mostefa Golea, Russell Greiner, Mehdi T. Harandi, John G. Harris, Haym Hirsh, Michael I. Jordan, Shigeo Kaneda, Marjorie Klenin, Pat Langley, Yong Liu, Patrick M. Murphy, Ralph Neuneier, E. M. Oblow, Dragan Obradovic, Michael J. Pazzani, Barak A. Pearlmutter, Nageswara S. V. Rao, Peter Rayner, Stephanie Sage, Martin F. Schlang, Bernd Schurmann, Dale Schuurmans, Leon Shklar, V. Sundareswaran, Geoffrey Towell, Johann Uebler, Lucia M. Vaina, Takefumi Yamazaki, Anthony M. Zador

Applied Mechanics Reviews 1994

Wastewater Reuse and Watershed Management Ajai Singh 2019-06-26 Water is a finite resource, and the demand for clean water is constantly growing. Clean freshwater is needed to meet irrigation demands for agriculture, for consumption, and for industrial uses. The world produces billions of tons of wastewater every year. This volume looks at a multitude of ways to capture, treat, and reuse wastewater and how to effectively manage watersheds. It presents a selection of new technologies and methods to recycle, reclaim, and reuse water for agricultural, industrial, and environmental purposes. The editor states that more than 75–80% of the wastewater we produce goes back to nature without being properly treated, leading to pollution and all sorts of negative health and productivity consequences. Topics cover a wide selection of research, including molluscs as a tool for river health assessment, flood risk modeling, biological removal of toxins from groundwater, saline water intrusion into coastal areas, urban drainage simulations, rainwater harvesting, irrigation topics, and more. Key features: • explores the existing methodologies in the field of reuse of wastewater • looks at different approaches in integrated water resources management • examines the issues of groundwater management and development • discusses saline water intrusion in coastal areas • presents various watershed management approaches • includes case studies and analyses of various water management efforts

Nanofluids and Their Engineering Applications K.R.V. Subramanian 2019-06-18 Nanofluids are solid-liquid composite material consisting of solid nanoparticles suspended in liquid with enhanced thermal properties. This book introduces basic fluid mechanics, conduction and convection in fluids, along with nanomaterials for nanofluids, property characterization, and outline applications of nanofluids in solar technology, machining and other special applications. Recent experiments on nanofluids have indicated significant increase in thermal conductivity compared with liquids without nanoparticles or larger particles, strong temperature dependence of thermal conductivity, and significant increase in critical heat flux in boiling heat transfer, all of which are covered in the book. Key Features Exclusive title focusing on niche engineering applications of nanofluids Contains high technical content especially in the areas of magnetic nanofluids and dilute oxide based nanofluids Feature examples from research applications such as solar technology and heat pipes Addresses heat transfer and thermodynamic features such as efficiency and work with mathematical rigor Focused in content with precise

**Microelectronics, Electromagnetics and Telecommunications** Suresh Chandra Satapathy 2015-12-24 This volume contains 73 papers presented at ICMEET 2015: International Conference on Microelectronics, Electromagnetics and Telecommunications. The conference was held during 18 – 19 December, 2015 at Department of Electronics and Communication Engineering, GITAM Institute of Technology, GITAM University, Visakhapatnam, INDIA. This volume contains papers mainly focused on Antennas, Electromagnetics, Telecommunication Engineering and Low Power VLSI Design.

**Organized Networks of Carbon Nanotubes** K.R.V. Subramanian 2020-03-17 In this book, meshes and networks formed out of multiwalled carbon nanotubes are investigated and analyzed, including their use in niche applications such as electro-optic devices, advanced mechanical, thermal and electrical property enhancement, and gene editing. Different properties of multi-walled carbon nanotubes, including random network formation, ordering the meshes and networks by mechanical agitation and application of an external field, using crystallization and cross-linking induced phase separation in homopolymers-CNT composites are discussed with theoretical analysis. The book is aimed at researchers and graduate students in Electrical Engineering; Materials Science and Engineering; Chemical Engineering and Nanotechnology, Electronic circuit design, manufacturing, and characterization.

**International Books in Print** 1991

**IETE Technical Review** 2001

**Contemporary Computing** Manish Parashar 2012-08-10 This volume constitutes the refereed proceedings of the 5th International Conference on Contemporary Computing, IC3 2010, held in Noida, India, in August 2011. The 42 revised full papers presented together with 7 short papers were carefully reviewed and selected from 162 submissions. The papers are organized in topical sections on: algorithm; applications; systems (hardware and software); biomedical informations; poster papers.

**Innovations in Computer Science and Engineering** H. S. Saini 2022-03-25 This book features a collection of high-quality, peer-reviewed research papers presented at the 9th International Conference on Innovations in Computer Science & Engineering (ICICSE 2021), held at Guru Nanak Institutions, Hyderabad, India, on September 3–4, 2021. It covers the latest research in data science and analytics, cloud computing, machine learning, data mining, big data and analytics, information security and privacy, wireless and sensor networks and IoT applications, artificial intelligence, expert systems, natural language processing, image processing, computer vision, and artificial neural networks.

**Mining Multimedia Documents** Wahiba Ben Abdessalem Karaa 2017-04-21 The information age has led to an explosion in the amount of information available to the individual and the means by which it is accessed, stored, viewed, and transferred. In particular, the growth of the internet has led to the creation of huge repositories of multimedia documents in a diverse range of scientific and professional fields, as well as the tools to extract useful knowledge from them. Mining Multimedia Documents is a must-read for researchers, practitioners, and students working at the intersection of data mining and multimedia applications. It investigates various techniques related to mining multimedia documents based on text, image, and video features. It provides an insight into the open research problems benefitting advanced undergraduates, graduate students, researchers, scientists and practitioners in the fields of medicine, biology, production, education, government, national security and economics.

*Computational Intelligence and Big Data Analytics* Ch. Satyanarayana 2018-09-08 This book highlights major issues related to big data analysis using computational intelligence techniques, mostly interdisciplinary in nature. It comprises chapters on computational intelligence technologies, such as neural networks and learning algorithms, evolutionary computation, fuzzy systems and other emerging techniques in data science and big data, ranging from methodologies, theory and algorithms for handling big data, to their applications in bioinformatics and related disciplines. The book describes the latest solutions, scientific results and methods in solving intriguing problems in the fields of big data analytics, intelligent agents and computational intelligence. It reflects the state of the art research in the field and novel applications of new processing techniques in computer science. This book is useful to both doctoral students and researchers from computer science and engineering fields and bioinformatics

Related domains.

Pulse and Digital Circuits Rao K Venkata 2010 Pulse and Digital Circuits is designed to cater to the needs of undergraduate students of electronics and communication engineering. Written in a lucid, student-friendly style, it covers key topics in the area of pulse and digital circuits. This is an introductory text that discusses the basic concepts involved in the design, operation and analysis of waveshaping circuits. The book includes a preliminary chapter that reviews the concepts needed to understand the subject matter. Each concept in the book is accompanied by self-explanatory circuit diagrams. Interspersed with numerous solved problems, the text presents detailed analysis of key concepts. Multivibrators and sweep generators are covered in great detail in the book.

Technical Manpower Council of Scientific & Industrial Research (India) 1963

Computational and Combinatorial Methods in Systems Theory Christopher I. Byrnes 1986

International Conference on Computing, Communication, Electrical and Biomedical Systems Arulmurugan Ramu This book presents selected papers from the International Conference on Computing, Communication, Electrical and Biomedical Systems (ICCCEBS 2021), held in March 2021 at KPR College of Engineering and Technology, Coimbatore, Tamil Nadu, India. The conference explores the interface between industry and real-time environments with newly developed techniques in computing and communications engineering. The papers describe results of conceptual, constructive, empirical, experimental, and theoretical work in areas of computing, communication, electrical, and biomedical systems. Contributors include academic scientists, researchers, industry representatives, postdoctoral fellows, and research scholars from around the world. Presents proceedings of the International Conference on Computing, Communication, Electrical and Biomedical Systems Includes topics such as blockchain, cognitive computing, affective computing, machine learning, and mining platforms Provides a platform for researchers, practitioners, and educators to discuss trends across engineering and computing.

Proceedings of the Third International Conference on Trends in Information, Telecommunication and Computing Vinu V. Das 2012-09-14 Third International Conference on Recent Trends in Information, Telecommunication and Computing – ITC 2012. ITC 2012 will be held during Aug 03-04, 2012, Kochi, India. ITC 2012, is to bring together innovative academics and industrial experts in the field of Computer Science, Information Technology, Computational Engineering, and Communication to a common forum. The primary goal of the conference is to promote research and developmental activities in Computer Science, Information Technology, Computational Engineering, and Communication. Another goal is to promote scientific information interchange between researchers, developers, engineers, students, and practitioners.

Guide to Indian Periodical Literature 1977

Deep Learning Techniques for IoT Security and Privacy Mohamed Abdel-Basset

Data-Centric Business and Applications Tamara Radivilova 2020-06-20 This book addresses the challenges and opportunities of information/data processing and management. It also covers a range of methods, techniques and strategies for making it more efficient, approaches to increasing its usage, and ways to minimize information/data loss while improving customer satisfaction. Information and Communication Technologies (ICTs) and the Service Systems associated with them have had an enormous impact on businesses and our day-to-day lives over the past three decades, and continue to do so. This development has led to the emergence of new application areas and relevant disciplines, which in turn present new challenges and opportunities for service system usage. The book provides practical insights into various aspects of ICT technologies for service systems: Techniques for information/data processing and modeling in service systems Strategies for the provision of information/data processing and management Methods for collecting and analyzing information/data Applications, benefits, and challenges of service system implementation Solutions to increase the performance of various service systems using the latest ICT technologies

Annual Review of Network Management and Security International Engineering Consortium 2006 A thorough, detailed look into the world of the telecommunications, the internet, and information industries and their relation to networks and security, global specialists have come together in this volume to reveal their ideas on related

topics. This reference includes notable discussions on the design of telecommunications networks, information management, network inventory, security policy and quality, and internet tomography and statistics.

Soft Computing and Signal Processing V. Sivakumar Reddy 2021-05-20 This book presents selected research papers on current developments in the fields of soft computing and signal processing from the Third International Conference on Soft Computing and Signal Processing (ICSCSP 2020). The book covers topics such as soft sets, rough sets, fuzzy logic, neural networks, genetic algorithms and machine learning and discusses various aspects of these topics, e.g., technological considerations, product implementation and application issues.

Sensors for Everyday Life Octavian Adrian Postolache 2016-10-27 Sensors were developed to detect and quantify structures and functions of human body as well as to gather information from the environment in order to optimize the efficiency, cost-effectiveness and quality of healthcare services as well as to improve health and quality of life. This book offers an up-to-date overview of the concepts, modeling, technical and technological details and practical applications of different types of sensors. It also discusses the trends for the next generation of sensors and systems for healthcare settings. It is aimed at researchers and graduate students in the field of healthcare technologies, as well as academics and industry professionals involved in developing sensing systems for human body structures and functions, and for monitoring activities and health.

Machine Learning for Robotics Applications Monica Bianchini 2021-04-23 Machine learning has become one of the most prevalent topics in recent years. The application of machine learning we see today is a tip of the iceberg. The machine learning revolution has just started to roll out. It is becoming an integral part of all modern electronic devices. Applications in automation areas like automotive, security and surveillance, augmented reality, smart home, retail automation and healthcare are few of them. Robotics is also rising to dominate the automated world. The future applications of machine learning in the robotics area are still undiscovered to the common readers. We are, therefore, putting an effort to write this edited book on the future applications of machine learning on robotics where several applications have been included in separate chapters. The content of the book is technical. It has been tried to cover all possible application areas of Robotics using machine learning. This book will provide the future vision on the unexplored areas of applications of Robotics using machine learning. The ideas to be presented in this book are backed up by original research results. The chapter provided here in-depth look with all necessary theory and mathematical calculations. It will be perfect for laymen and developers as it will combine both advanced and introductory material to form an argument for what machine learning could achieve in the future. It will provide a vision on future areas of application and their approach in detail. Therefore, this book will be immensely beneficial for the academicians, researchers and industry project managers to develop their new project and thereby beneficial for mankind. Original research and review works with model and build Robotics applications using Machine learning are included as chapters in this book.

Journal of the Institution of Engineers (India). 1965

The Applications of New Multi-Locus GWAS Methodologies in the Genetic Dissection of Complex Traits Yuan-Ming Zhang 2019-06-19 Genome-Wide Association Studies (GWAS) are widely used in the genetic dissection of complex traits. Most existing methods are based on single-marker association in genome-wide scans with population structure and polygenic background controls. To control the false positive rate, the Bonferroni correction for multiple tests is frequently adopted. This stringent correction results in the exclusion of important loci, especially for GWAS in crop genetics. To address this issue, multi-locus GWAS methodologies have been recommended, i.e., FASTmrEMMA, ISIS EM-BLASSO, mrMLM, FASTmrMLM, pLARmEB, pKWmEB and FarmCPU. In this Research Topic, our purpose is to clarify some important issues in the application of multi-locus GWAS methods. Here we discuss the following subjects: First, we discuss the advantages of new multi-locus GWAS methods over the widely-used single-locus GWAS methods in the genetic dissection of complex traits, metabolites and gene expression levels. Secondly, large experiment error in the field measurement of phenotypic values for complex traits in crop genetics results in relatively large P-values in GWAS, indicating the existence of small number of significantly associated SNPs. To solve this issue, a less stringent P-value critical value is often adopted, i.e., 0.001, 0.0001 and $1/m$ (m is the number of markers). Although lowering the stringency with which an association is made could identify more hits, confidence in these hits would significantly drop. In this Research Topic we propose a new threshold of significant QTN (LOD=3.0 or P-value=2.0e-4) in multi-locus GWAS to balance high power and low false positive rate. Thirdly, heritability missing in GWAS is a common phenomenon, and a series of

scientists have explained the reasons why the heritability is missing. In this Research Topic, we also add one additional reason and propose the joint use of several GWAS methodologies to capture more QTNs. Thus, overall estimated heritability would be increased. Finally, we discuss how to select and use these multi-locus GWAS methods.

*Nanosensors for Smart Agriculture* Adil Denizli 2021-11-26 Nanosensors for Smart Agriculture covers new breakthroughs in smart agriculture, highlighting new technologies, such as the internet of things, big data and artificial intelligence. In addition, the book provides the many advantages of nanosensors over their micro counterparts, such as lower power consumption, higher sensitivity, lower concentration of analytes, and smaller interaction distances between the object and sensor. Sections provide information on fundamental design concepts and emerging applications of nanosensors in smart agriculture. The book highlights how, when cultivating soil, nanosensors and their wireless networks can be used for soil quality monitoring (moisture/herbicides/organic compound/trace metals monitoring in soil, etc. Other applications cover how smart nanosensors can be used for virus detection and hygiene/pathogen controls in livestocks, their use as active transport tracking devices for smart tracking and tracing, and other various applications, such as (i) nanochips for identity (radio frequency identification), (ii) food inspection, (iii) intelligent food packaging, and (iv) smart storage. This is an important reference source for materials scientists and agricultural engineers who are looking to understand more about how nanosensor technology can be used to create more efficient and sustainable agricultural systems. Outlines the fabrication and fundamental design concepts of nanosensors for agricultural applications Explains how nanosensors are being used throughout the agricultural cycle – from crop growth to food manufacturing Assesses major challenges surrounding the application of nanosensors to agricultural applications in mass scale

Advances in Multi-Sensor Information Fusion: Theory and Applications 2017 Xue-Bo Jin 2018-06-26 This book is a printed edition of the Special Issue "Advances in Multi-Sensor Information Fusion: Theory and Applications 2017" that was published in Sensors

Proceedings of International Symposium on Sensor Networks, Systems and Security Nageswara S.V. Rao 2018-05-23 This book presents current trends that are dominating technology and society, including privacy, high performance computing in the cloud, networking and IoT, and bioinformatics. By providing chapters detailing accessible descriptions of the research frontiers in each of these domains, the reader is provided with a unique understanding of what is currently feasible. Readers are also given a vision of what these technologies can be expected to produce in the near future. The topics are covered comprehensively by experts in respective areas. Each section includes an overview that puts the research topics in perspective and integrates the sections into an overview of how technology is evolving. The book represents the proceedings of the International Symposium on Sensor Networks, Systems and Security, August 31 – September 2, 2017, Lakeland Florida.