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Eventually, you will certainly discover a further experience and talent by spending more cash. yet when? reach you endure that you require to acquire those all needs considering having significantly cash? Why dont you try to acquire something basic in the beginning? Thats something that will lead you to understand even more in relation to the globe, experience, some places, past history, amusement, and a lot more?

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[Memorial Tributes](#)
 Jan 13 2021 This is the 17th Volume in the series Memorial Tributes compiled by the National Academy of Engineering as a personal remembrance of the lives and outstanding achievements of its members and foreign associates. These volumes are intended to stand as an enduring record of the many contributions of engineers and engineering to the benefit of humankind. In most cases, the authors of the tributes are contemporaries or colleagues who had personal knowledge of the interests and the engineering accomplishments of the deceased. Through its members and foreign associates, the Academy carries out the responsibilities for which it was established in 1964. Under the charter of the National Academy of Sciences, the National Academy of Engineering was formed as a parallel organization of outstanding engineers. Members are elected on the basis of significant contributions to engineering theory and practice and to the literature of engineering or on the basis of demonstrated unusual accomplishments in the pioneering of new and developing fields of technology. The National Academies share a responsibility to advise the federal government on matters of science and technology. The expertise and credibility that the National Academy of Engineering brings to that task stem directly from the abilities, interests, and achievements of our members and foreign associates, our colleagues and friends, whose special gifts we remember in this book.

[Cardiovascular Biomechanics](#)
 Jun 17 2021 This book provides a balanced presentation of the fundamental principles of cardiovascular biomechanics research, as well as its valuable clinical applications. Pursuing an integrated approach at the interface of the life sciences, physics and engineering, it also includes extensive images to explain the concepts discussed. With a focus on explaining the underlying principles, this book examines the physiology and mechanics of circulation, mechanobiology and the biomechanics of different components of the cardiovascular system, in-vivo techniques, in-vitro techniques, and the medical applications of this research. Written for undergraduate and postgraduate students and including sample problems at the end of each chapter, this interdisciplinary text provides an essential introduction to the topic. It is also an ideal reference text for researchers and clinical practitioners, and will benefit a wide range of students and researchers including engineers, physicists, biologists and clinicians who are interested in the area of cardiovascular biomechanics.

[Nuclear Engineering Handbook](#)
 Aug 20 2021 Building upon the success of the first edition, the Nuclear Engineering Handbook, Second Edition, provides a comprehensive, up-to-date overview of nuclear power engineering. Consisting of chapters written by leading experts, this volume spans a wide range of topics in the areas of nuclear power reactor design and operation, nuclear fuel cycles, and radiation detection. Plant safety issues are addressed, and the economics of nuclear power generation in the 21st century are presented. The Second Edition also includes full coverage of Generation IV reactor designs, and new information on MRS technologies, small modular reactors, and fast reactors.

[International Assessment of Research and Development in Simulation-based Engineering and Science](#)
 Jul 07 2020 Simulation-Based Engineering and Science (SBE&S) cuts across disciplines, showing tremendous promise in areas from storm prediction and climate modeling to understanding the brain and the behavior of numerous other complex systems. In this groundbreaking volume, nine distinguished leaders assess the latest research trends, as a result of 52 site visits in Europe and Asia and hundreds of hours of expert interviews, and discuss the implications of their findings for the US government. The authors conclude that while the US remains the quantitative leader in SBE&S research and development, it is very much in danger of losing that edge to Europe and Asia. Commissioned by the National Science Foundation, this multifaceted study will capture the attention of Fortune 500 companies and policymakers.

[Mechanics of Biological Systems and Materials & Micro-and Nanomechanics & Research Applications](#)
 May 17 2021 Mechanics of Biological Systems & Micro-and Nanomechanics, Volume 5 of the Proceedings of the 2020 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, the fifth volume of seven from the Conference, brings together contributions to important areas of research and engineering. The collection presents early findings and case studies on a wide range of topics, including: Cell Mechanics & Traumatic Brain Injury Micromechanical Testing Adhesion and Fracture MEMS Devices and Technology Nano-scale Deformation Mechanisms 1D & 2D Materials Tribology & Wear Research and Applications in Progress

[Project Directory ...](#)
 Aug 08 2020

[Hispanic Engineer & IT](#)
 Sep 08 2020 Hispanic Engineer & Information Technology is a publication devoted to science and technology and to promoting opportunities in those fields for Hispanic Americans.

[Electric Power System Basics for the Nonelectrical Professional](#)
 Feb 23 2022 The second edition of Steven W. Blume's bestseller provides a comprehensive treatment of power technology for the non-electrical engineer working in the electric power industry This book aims to give non-electrical professionals a fundamental understanding of large interconnected electrical power systems, better known as the "Power Grid", with regard to terminology, electrical concepts, design considerations, construction practices, industry standards, control room operations for both normal and emergency conditions, maintenance, consumption, telecommunications and safety. The text begins with an overview of the terminology and basic electrical concepts commonly used in the industry then it examines the generation, transmission and distribution of power. Other topics discussed include energy management, conservation of electrical energy, consumption characteristics and regulatory aspects to help readers understand modern electric power systems. This second edition features: New sections on renewable energy, regulatory changes, new measures to improve system reliability, and smart technologies used in the power grid system Updated practical examples, photographs, drawing, and illustrations to help the reader gain a better understanding of the material "Optional supplementary reading" sections within most chapters to elaborate on certain concepts by providing additional detail or background [Electric Power System Basics for the Nonelectrical Professional, Second Edition](#), gives business professionals in the industry and entry-level engineers a strong introduction to power technology in non-technical terms. Steve W. Blume is Founder of Applied Professional Training, Inc., APT Global, LLC, APT College, LLC and APT Corporate Training Services, LLC, USA. Steve is a registered professional engineer and certified NERC Reliability Coordinator with a Master's degree in Electrical Engineering specializing in power and a Bachelor's degree specializing in Telecommunications. He has more than 25 years' experience teaching electric power system basics to non-electrical professionals. Steve's engineering and operations experience includes generation, transmission, distribution, and electrical safety. He is an active senior member in IEEE and has published two books in power systems through IEEE and Wiley.

[Electrical Engineering at the University of Wisconsin in Madison, 1891-1991](#)
 Feb 11 2021

[Design Optimization using MATLAB and SOLIDWORKS](#)
 Nov 10 2020 A hands-on text integrating mathematics, numerics and applications of optimization, with MATLAB code illustrating every concept.

[Human-Centered Data Science](#)
 Apr 15 2021 Best practices for addressing the bias and inequality that may result from the automated collection, analysis, and distribution of large datasets. Human-centered data science is a new interdisciplinary field that draws from human-computer interaction, social science, statistics, and computational techniques. This book, written by founders of the field, introduces best practices for addressing the bias and inequality that may result from the automated collection, analysis, and distribution of very large datasets. It offers a brief and accessible overview of many common statistical and algorithmic data science techniques, explains human-centered approaches to data science problems, and presents practical guidelines and real-world case studies to help readers apply these methods. The authors explain how data scientists' choices are involved at every stage of the data science workflow—and show how a human-centered approach can enhance each one, by making the process more transparent, asking questions, and considering the social context of the data. They describe how tools from social science might be incorporated into data science practices, discuss different types of collaboration, and consider data storytelling through visualization. The book shows that data science practitioners can build rigorous and ethical algorithms and design projects that use cutting-edge computational tools and address social concerns.

[Slide Rules](#)
 Mar 03 2020 A complete road map to creating successful technical presentations Planning a technical presentation can be tricky. Does the audience know your subject area? Will you need to translate concepts into terms they understand? What sort of visuals should you use? Will this set of bullets truly convey the information? What will your slides communicate to future users? Questions like these and countless others can overwhelm even the most savvy technical professionals. This full-color, highly visual work addresses the unique needs of technical communicators looking to break free of the bulletted slide paradigm. For those seeking to improve their presentations, the authors provide guidance on how to plan, organize, develop, and archive technical presentations. Drawing upon the latest research in cognitive science as well as years of experience teaching seasoned technical professionals, the authors cover a myriad of issues involved in the design of presentations, clearly explaining how to create slide decks that communicate critical technical information. Key features include: Innovative methods for archiving and documenting work through slides in the technical workplace Guidance on how to tailor presentations to diverse audiences, technical and nontechnical alike A plethora of color slides and visual examples illustrating various strategies and best practices Links to additional resources as well as slide examples to inspire on-the-job changes in presentation practices Slide Rules is a first-rate guide for practicing engineers, scientists, and technical specialists as well as anyone wishing to develop useful, engaging, and informative technical presentations in order to become an expert communicator. Find the authors at [techartconsulting.com](#) or on Facebook at [SlideRulesTAC](#)

[Industrial Data Analytics for Diagnosis and Prognosis](#)
 Jan 01 2020 Discover data analytics methodologies for the diagnosis and prognosis of industrial systems under a unified random effects model In [Industrial Data Analytics for Diagnosis and Prognosis - A Random Effects Modelling Approach](#), distinguished engineers Shiyu Zhou and Yong Chen deliver a rigorous and practical introduction to the random effects modeling approach for industrial system diagnosis and prognosis. In the book's two parts, general statistical concepts and useful theory are described and explained, as are industrial diagnosis and prognosis methods. The accomplished authors describe and model fixed effects, random effects, and variation in univariate and multivariate datasets and cover the application of the random effects approach to diagnosis of variation sources in industrial processes. They offer a detailed performance comparison of different diagnosis methods before moving on to the application of the random effects approach to failure prognosis in industrial processes and systems. In addition to presenting the joint prognosis model, which integrates the survival regression model with the mixed effects regression model, the book also offers readers: A thorough introduction to describing variation of industrial data, including univariate and multivariate random variables and probability distributions Rigorous treatments of the diagnosis of variation sources using PCA pattern matching and the random effects model An exploration of extended mixed effects model, including mixture prior and Kalman filtering approach, for real time prognosis A detailed presentation of Gauss process model as a flexible approach for the prediction of temporal degradation signals Ideal for senior year undergraduate students and postgraduate students in industrial, manufacturing, mechanical, and electrical engineering, [Industrial Data Analytics for Diagnosis and Prognosis](#) is also an indispensable guide for researchers and engineers interested in data analytics methods for system diagnosis and prognosis.

[The Landlooker](#)
 Oct 02 2022 Fifteen-year-old Emil finds both adventure and tragedy in the rough-and-tumble Wisconsin wilderness when he goes there to sell harness in

1871.

Viscoelastic Materials Jan 25 2022 This graduate text on viscoelastic materials addresses design applications as diverse as earplugs, computer disks and medical diagnostics.

Materials Science of Polymers for Engineers Jun 05 2020 This unified approach to polymer materials science is divided in three major sections:

Vehicular Engine Design Nov 22 2021 The mechanical engineering curriculum in most universities includes at least one elective course on the subject of reciprocating piston engines. The majority of these courses today emphasize the application of thermodynamics to engine efficiency, performance, combustion, and emissions. There are several very good textbooks that support education in these aspects of engine development. However, in most companies engaged in engine development there are far more engineers working in the areas of design and mechanical development. University studies should include opportunities that prepare engineers desiring to work in these aspects of engine development as well. My colleagues and I have undertaken the development of a series of graduate courses in engine design and mechanical development. In doing so it becomes quickly apparent that no suitable textbook exists in support of such courses. This book was written in the hopes of beginning to address the need for an engineering-based introductory text in engine design and mechanical development. It is of necessity an overview. Its focus is limited to reciprocating-piston internal-combustion engines – both diesel and spark-ignition engines. Emphasis is specifically on automobile engines, although much of the discussion applies to larger and smaller engines as well. A further intent of this book is to provide a concise reference volume on engine design and mechanical development processes for engineers serving the engine industry. It is intended to provide basic information and most of the chapters include recent references to guide more in-depth study.

Food Process Engineering Apr 27 2022 Food Process Engineering: Safety Assurance and Complements pursues a logical sequence of coverage of industrial processing of food and raw material where safety and complementary issues are germane. Measures to guarantee food safety are addressed at start, and the most relevant intrinsic and extrinsic factors are reviewed, followed by description of unit operations that control microbial activity via the supply of heat supply or the removal of heat. Operations prior and posterior are presented, as is the case of handling, cleaning, disinfection and rinsing, and effluent treatment and packaging, complemented by a brief introduction to industrial utilities normally present in a food plant. Key Features: Overviews the technological issues encompassing properties of food products Provides comprehensive mathematical simulation of food processes Analyzes the engineering of foods at large, and safety and complementary operations in particular, with systematic derivation of all relevant formulae Discusses equipment features required by the underlying processes

Advancing the Regional Role of Two-Year Colleges Dec 24 2021 In the midst of a challenging economic recovery, the nation's policy makers and education leaders are seeking new and potentially more effective strategies to align personal and public educational investments with job creation, increased levels of employment, small business development, and entrepreneurial activity. Reaching the 2020 national college completion goal will require powerful and fully implemented innovations in two-year colleges, particularly in states and regions where economic difficulties are more deeply entrenched. Grounded in the Midwest context, this special issue examines several promising policies and innovations that re-envision the role of two-year colleges in developing regional rather than local solutions to the emerging economic and educational challenges. This is the 157th volume of this Jossey-Bass quarterly report series. Essential to the professional libraries of presidents, vice presidents, deans, and other leaders in today's open-door institutions, New Directions for Community Colleges provides expert guidance in meeting the challenges of their distinctive and expanding educational mission.

US Black Engineer & IT Dec 12 2020

Engineering the Environment Mar 27 2022 This is the first history of phytotrons, huge climate-controlled laboratories that enabled plant scientists to experiment on the environmental causes of growth and development of living organisms. Made possible by computers and other modern technologies of the early Cold War, such as air conditioning and humidity control, phytotrons promised an end to global hunger and political instability, spreading around the world to thirty countries after World War II. The United States built nearly a dozen, including the first at Caltech in 1949. By the mid-1960s, as support and funding for basic science dwindled, phytotrons declined and ultimately disappeared—until, nearly thirty years later, the British built the Ecotron to study the impact of climate change on biological communities. By recalling the forgotten history of phytotrons, David P. D. Munns reminds us of the important role they can play in helping researchers unravel the complexities of natural ecosystems in the Anthropocene.

US Black Engineer & IT Jul 27 2019

Automotive Emissions Regulations and Exhaust Aftertreatment Systems May 29 2022 The objective of this book is to present a fundamental development of the science and engineering underlying the design of exhaust aftertreatment systems for automotive internal combustion engines. No pre-requisite knowledge of the field is required: our objective is to acquaint the reader, whom we expect to be new to the field of emissions control, with the underlying principles, control methods, common problems, and fuel effects on catalytic exhaust aftertreatment devices. We do this in hope that they can better understand the previous and current generations of emissions control, and improve upon them. This book is designed for the engineer, researcher, designer, student, or any combination of those, who is concerned with the control of automotive exhaust emissions. It includes discussion of theory and fundamentals applicable to hardware development.

Professional Short Course Jun 25 2019

The College Buzz Book Oct 10 2020 A guide to the nation's colleges publishes extensive surveys—all written by current or past students—from over three hundred educational institutions, covering admission, academics, quality of life, social life, and employment prospects.

Hispanic Engineer & IT Oct 29 2019 Hispanic Engineer & Information Technology is a publication devoted to science and technology and to promoting opportunities in those fields for Hispanic Americans.

Composites And Metamaterials Apr 03 2020 This book is an excellent primer for students to learn about physical properties, particularly mechanical properties of heterogeneous and multiphase materials and the cultivation of physical insight. Written by a prominent author who pioneered many of the concepts, this book provides a comprehensive coverage of current topics in new heterogeneous materials. Topics covered include:

Handbook of Food Engineering Sep 28 2019 As the complexity of the food supply system increases, the focus on processes used to convert raw food materials and ingredients into consumer food products becomes more important. The Handbook of Food Engineering, Third Edition, continues to provide students and food engineering professionals with the latest information needed to improve the efficiency of the food supply system. As with the previous editions, this book contains the latest information on the thermophysical properties of foods and kinetic constants needed to estimate changes in key components of foods during manufacturing and distribution. Illustrations are used to demonstrate the applications of the information to process design. Researchers should be able to use the information to pursue new directions in process development and design, and to identify future directions for research on the physical properties of foods and kinetics of changes in the food throughout the supply system. Features Covers basic concepts of transport and storage of liquids and solids, heating and cooling of foods, and food ingredients New chapter covers nanoscale science in food systems Includes chapters on mass transfer in foods and membrane processes for liquid concentration and other applications Discusses specific unit operations on freezing, concentration, dehydration, thermal processing, and extrusion The first four chapters of the Third Edition focus primarily on the properties of foods and food ingredients with a new chapter on nanoscale applications in foods. Each of the eleven chapters that follow has a focus on one of the more traditional unit operations used throughout the food supply system. Major revisions and/or updates have been incorporated into chapters on heating and cooling processes, membrane processes, extrusion processes, and cleaning operations.

Sanguine System Jan 31 2020

Stem Cell Mechanics Mar 15 2021 This book is a comprehensive overview of the latest state-of-the-art research on stem cell mechanics. The focus of this work deals with an in-depth look at the mechanical forces that play on the external development of stem cells within various systems. It incorporates details in enabling engineering technologies and scientific findings in terms of stem cell self-renewal, differentiation, and mechanotransduction both in vitro and in vivo.

United States Highway 12, US 12/WIS 26 North Fort Atkinson Interchange to Whitewater Bypass, Rock and Jefferson Counties May 05 2020

Lessons Amid the Rubble Jul 31 2022 The aftermath of September 11, 2001, brought the subject of engineering-failure forensics to public attention as had no previous catastrophe. In keeping with the engineering profession's long tradition of building a positive future out of disasters, Lessons amid the Rubble uses the collapse of the World Trade Center towers to explore the nature and future of engineering education in the United States. Sarah K. A. Pfatfeicher draws on historical and current practice in engineering design, construction, and curricula to discuss how engineers should conceive, organize, and execute a search for the reasons behind the failure of man-made structures. Her survey traces the analytical journey engineers take after a disaster and discusses the technical, social, and moral implications of their work. After providing an overview of the investigations into the collapse of the Twin Towers, Pfatfeicher explores six related events to reveal deceptively simple lessons about the engineering enterprise, each of which embodies an ethical dilemma at the heart of the profession. In tying these themes together, Pfatfeicher highlights issues of professionalism and professional identity infused in engineering education and encourages an explicit, direct conversation about their meaning. Sophisticated and engagingly written, this volume combines history, engineering, ethics, and philosophy to provoke a deep discussion about the symbolic meaning of buildings and other structures and the nature of engineering.

Combustion Engineering, Second Edition Sep 01 2022 Combustion Engineering, Second Edition maintains the same goal as the original: to present the fundamentals of combustion science with application to today's energy challenges. Using combustion applications to reinforce the fundamentals of combustion science, this text provides a uniquely accessible introduction to combustion for undergraduate students, first-year graduate students, and professionals in the workplace. Combustion is a critical issue impacting energy utilization, sustainability, and climate change. The challenge is to design safe and efficient combustion systems for many types of fuels in a way that protects the environment and enables sustainable lifestyles. Emphasizing the use of combustion fundamentals in the engineering and design of combustion systems, this text provides detailed coverage of gaseous, liquid and solid fuel combustion, including focused coverage of biomass combustion, which will be invaluable to new entrants to the field. Eight chapters address the fundamentals of combustion, including fuels, thermodynamics, chemical kinetics, flames, detonations, sprays, and solid fuel combustion mechanisms. Eight additional chapters apply these fundamentals to furnaces, spark ignition and diesel engines, gas turbines, and suspension burning, fixed bed combustion, and fluidized bed combustion of solid fuels. Presenting a renewed emphasis on fundamentals and updated applications to illustrate the latest trends relevant to combustion engineering, the authors provide a number of pedagogic features, including: Numerous tables with practical data and formulae that link combustion fundamentals to engineering practice Concise presentation of mathematical methods with qualitative descriptions of their use Coverage of alternative and renewable fuel topics throughout the text Extensive example problems, chapter-end problems, and references These features and the overall fundamentals-to-practice nature of this book make it an ideal resource for undergraduate, first level graduate, or professional training classes. Students and practitioners will find that it is an excellent introduction to meeting the crucial challenge of engineering sustainable combustion systems in a cost-effective manner. A solutions manual and additional teaching resources are available with qualifying course adoption.

Combustion Engineering Sep 20 2021 Combustion Engineering, Second Edition maintains the same goal as the original: to present the fundamentals of combustion science with application to today's energy challenges. Using combustion applications to reinforce the fundamentals of combustion science, this text provides a uniquely accessible introduction to combustion for undergraduate student

Encyclopedia of Snow, Ice and Glaciers Nov 30 2019 The earth's cryosphere, which includes snow, glaciers, ice caps, ice sheets, ice shelves, sea ice, river and lake ice, and permafrost, contains about 75% of the earth's fresh water. It exists at almost all latitudes, from the tropics to the poles, and plays a vital role in controlling the global climate system. It also provides direct visible evidence of the effect of climate change, and, therefore, requires proper understanding of its complex dynamics. This encyclopedia mainly focuses on the various aspects of snow, ice and glaciers, but also covers other cryospheric branches, and provides up-to-date information and basic concepts on relevant topics. It includes alphabetically arranged and professionally written, comprehensive and authoritative academic articles by well-known international experts in individual fields. The encyclopedia contains a broad spectrum of topics, ranging from the atmospheric processes responsible for snow formation; transformation of snow to ice and changes in their properties; classification of ice and glaciers and their worldwide distribution; glaciation and ice ages; glacier dynamics; glacier surface and subsurface characteristics; geomorphic processes and landscape formation; hydrology and sedimentary systems; permafrost degradation; hazards caused by cryospheric changes; and trends of glacier retreat on the global scale along with the impact of climate change. This book can serve as a source of reference at the undergraduate and graduate level and help to better understand snow, ice and glaciers. It will also be an indispensable tool containing specialized literature for geologists, geographers, climatologists, hydrologists, and water resources engineers; as well as for those who are engaged in the practice of agricultural and civil engineering, earth sciences, environmental sciences and engineering, ecosystem management, and other relevant subjects.

US Black Engineer & IT Aug 27 2019

Stem Cells and Regenerative Medicine Oct 22 2021 The commercialization of biotechnology has resulted in an intensive search for new biological resources for the

purposes of increasing food productivity, medicinal applications, energy production, and various other applications. Although biotechnology has produced many benefits for humanity, the exploitation of the planet's natural resources has also resulted in some undesirable consequences such as diminished species biodiversity, climate change, environmental contamination, and intellectual property right and patent concerns. This book discusses the role of biological, ecological, environmental, ethical, and economic issues in the interaction between biotechnology and biodiversity, using different contexts. No other book has discussed all of these issues in a comprehensive manner. Of special interest is their impact when biotechnology is shared between developed and developing countries, and the lack of recognition of the rights of indigenous populations and traditional farmers in developing countries by large multinational corporations.

Combustion Engineering Jun 29 2022 Combustion Engineering, Third Edition introduces the analysis, design, and building of combustion energy systems. It discusses current global energy, climate, and air pollution challenges and considers the increasing importance of renewable energy sources, such as biomass fuels. Mathematical methods are presented, along with qualitative descriptions of their use, which are supported by numerous tables with practical data and formulae, worked examples, chapter-end problems, and updated references. The new edition features new and updated sections on solid biofuels, spark-ignition, compression-ignition, soot and black carbon formation, and current energy policies. Features include: Builds a strong foundation for design and engineering of combustion systems. Provides fully updated coverage of alternative and renewable fuel topics throughout the text. Features new and updated sections on solid biofuels, spark-ignition, compression-ignition, soot and black carbon formation, and current energy policies. Includes updated data and formulae, worked examples, and additional chapter-end problems. Includes a Solutions Manual and figures slides for adopting instructors. This text is intended for undergraduate and first-year graduate mechanical engineering students taking introductory courses in combustion. Practicing heating engineers, utility engineers, and engineers consulting in energy and environmental areas will find this book a useful reference.

Introduction to Engineering Research Nov 03 2022 Undergraduate and first-year graduate students engaging in engineering research need more than technical skills and tools to be successful. From finding a research position and funding, to getting the mentoring needed to be successful while conducting research responsibly, to learning how to do the other aspects of research associated with project management and communication, this book provides novice researchers with the guidance they need to begin developing mastery. Awareness and deeper understanding of the broader context of research reduces barriers to success, increases capacity to contribute to a research team, and enhances ability to work both independently and collaboratively. Being prepared for what's to come and knowing the questions to ask along the way allows those entering researcher to become more comfortable engaging with not only the research itself but also their colleagues and mentors.

Annual Report - University of Wisconsin--Madison, Engineering Experiment Station

Jul 19 2021

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