2025 CATALOG

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EXPANDING RESOURCES FOR ENGINEERING COLLABORATION

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ASME® SETTING THE STANDARD

2025 CATALOG

ASME DIGITAL COLLECTION

TABLE OF CONTENTS

EXPANDING RESOURCES FOR ENGINEERING COLLABORATION

Dear Colleague,

I take pleasure in presenting the **2025 American Society of Mechanical Engineers (ASME) Digital Collection catalog.** The ASME Digital Collection platform **(asmedigitalcollection.asme.org)** provides online access to one of the world's leading scientific and technical publishing portfolios. **Our published content is closely aligned with ASME's core mission: to serve as an essential resource for scientists seeking engineering solutions to real world challenges to the benefit of humanity.**

Challenges we are facing such as climate change remain an import focus. **Through ASME's publications, programs, and events, we actively encourage knowledge sharing, collaboration and skills development to meet these challenges**. We continue to provide and improve upon the high-quality content and resources for which we are globally recognized, which includes the launch of our newest journal, ***ASME Letters in Translational Robotics.***

LISTENING to Our Library Community

ASME prides itself on serving the needs of our library community. We are mindful of the pressures and constraints upon our library colleagues and recognize the vital role you play in the dissemination of engineering knowledge. ASME Publishing's Library Advisory Board (LAB) was established for the mutual benefit of the library community and ASME. We will continue to support this effort and seek to expand opportunities for participation from librarians in all regions of the world.

EMBRACING Diversity, Equity, and Inclusion and Partnership

Diversity, equity, and inclusion continue to be of paramount importance to ASME – and this culture is embraced by the Publishing program that supports, encourages, and celebrates diverse voices.

ASME pledges to deliver high-quality, validated information and we are proud of our continuing partnership with the engineering community. Your resilience during this time of rapid change and disruption is much appreciated. Thank you for your continued business!

Kind regards,

Christine Reilley

Managing Director, Publishing
The American Society of Mechanical Engineers® (ASME®)

BEYOND MECHANICAL ENGINEERING...

Founded in 1880 as The American Society of Mechanical Engineers, ASME is a not-for-profit professional organization that enables collaboration, knowledge sharing, and skills development across all engineering disciplines, while promoting the vital role of the engineer in society.

The ASME Digital Collection provides unparalleled depth, breadth, and quality of peer-reviewed content:

- **ASME's Journals** from 1880 – present
- **ASME's Conference Proceedings** from 2000 – present, plus select proceedings back to 1955
- **ASME's eBooks** from 1993 – present, plus select titles back to 1944

Expanded Content – Currently on the Digital Collection

- **ASTM Digital Library – journals collection**
- **AWS – American Welding Society – eBook collection**
- **BEP – Business Expert Press – select eBook Titles**

Fostering Interdisciplinary Engineering Collaboration

Beyond mechanical engineering. ASME produces a portfolio of reputable journals, proceedings and eBooks recognized throughout the engineering research community for the quality and integrity of its research content. This portfolio, recently expanded beyond ASME content to include research and applied science content from several notable publishers (ASTM, AWS, BEP), includes special and virtual issue topical collections, archival research, and user-friendly navigation functionality to quicken researchers access to the content they need. This **promotes interdisciplinary problem solving and collaboration – enabling users to imagine and realize a better future through engineering.**

Authors and readers turn to ASME publications because they are a validated and reliable source of information contributing to advancements not only in mechanical engineering, but across the range of engineering specialties.

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AN EXPANDING RESOURCE FOR THE ENGINEERING COMMUNITY

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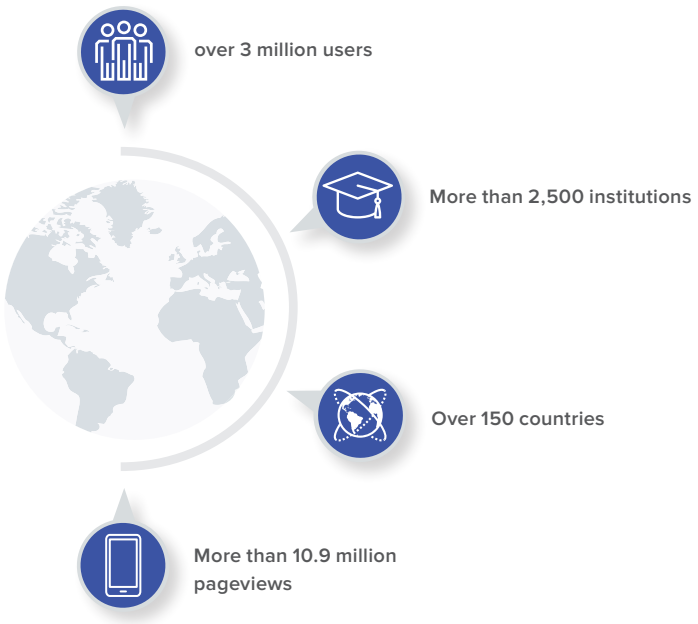
In 2023, **over 3 million users** at more than **2,500 institutions** in over **150 countries** accounted for more than **10.9 million pageviews** across journal articles, conference proceedings papers, and eBook chapters.

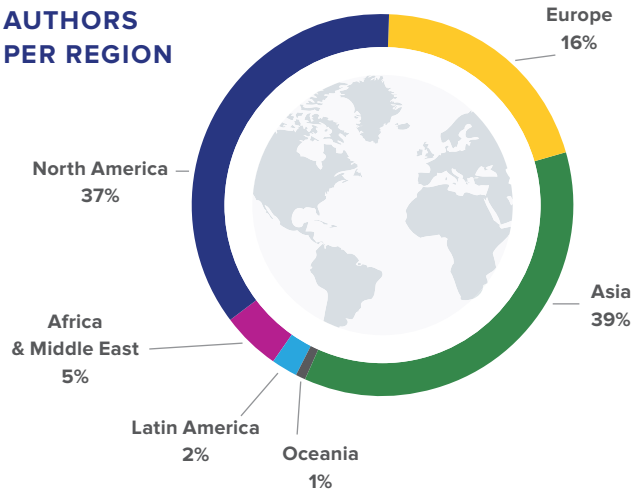


Speed to Publication

ASME Publishing continues to **improve the time to publication across the entire ASME Journal Program. ASME has reduced the time from submission to publication by 27% since 2017,** while maintaining the integrity, thoroughness, and quality of the peer reviews that define the program.

International Authorship

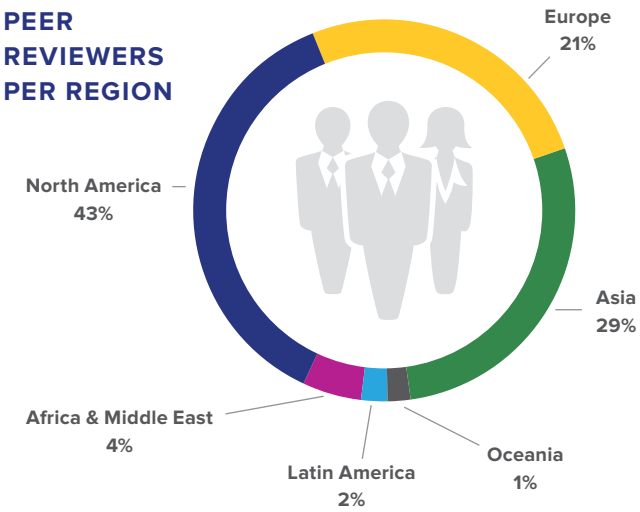
In 2023, more than 2,600 articles were published through the ASME Journal Program with a global footprint of authors that contributes to and supports the ASME Journal Program.



Expert and Fair Peer Review

In 2023, over 7,000 individuals served as peer reviewers for the ASME Journal Program.

Reviewers are invited to participate in the ASME Journal Program because of their **expertise in their fields and their ability to offer thorough and accurate criticism of current research** in order to move the knowledge of the world forward to benefit all people.



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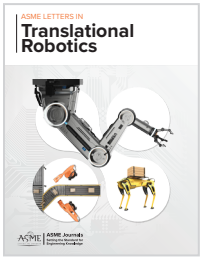


ASME Letters in Translational Robotics

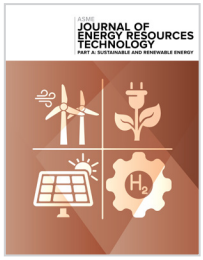
Editor-in-Chief: Qiaode Jeffrey Ge,
Stony Brook University-SUNY, USA

ASME Letters in Translational Robotics will provide rapid publication of high quality, translational research results, demonstrated with a prototype leading to a minimally viable product. It will also include archival innovations that lead to new best practice in design, realization and deployment of robotic devices and systems. It will bring advances in robotics research to the practicing engineer by emphasizing creative solutions to real-world problems and sharing innovations in implementation details. By considering shorter-form papers, as well as traditional length papers in an accelerated timeframe, this journal will expedite the application and translation of science, engineering and design principles in robotics into new or improved technological products. It will support use-inspired, translational research that will drive future robotic technologies and engineering solutions with societal impact.

TOPICS

- Use-inspired design (function, form, architecture, operation), innovations and associated risks, and the practical implementation
- Challenges and solutions for integration of large multidisciplinary projects
- Application-driven robot architectures that encompass agents, tasks, and operational environment. Identify challenges, find innovative solutions, and develop performance measurements. Provide examples of such innovation and invention
- Innovative designs (components, subsystems, and systems)
- Validation of innovation and impact on real-world problems
- Methods for design, analysis and algorithms leading to real, reliable robots
- Innovations in system integration, and use-inspired cyber-physical systems
- 8. Case studies of application by a manufacturer or end user
- Innovations and practices in robot design for safe implementation of robotic devices and systems
- Reduction of robot patents to practice

2025: Volume 1, 4 issues
ISSN: 2997-9765
e-ISSN: 2997-9773
asmedigitalcollection.asme.org/letterstransrobotics



Journal of Energy Resources Technology – Part A: Sustainable and Renewable Energy

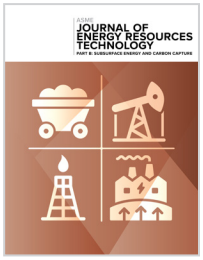
Editor-in-Chief: Tatiana Morozyuk,
Technische Universität Berlin, Germany

The ***Journal of Energy Resources Technology, Part A: Sustainable and Renewable Energy*** disseminates technical information – peer-reviewed scholarly work, research papers, technical briefs, feature articles and authoritative review articles – of permanent interest to the journal's readership. Emphasis is given to conversion of any form of chemical, thermal and mechanical energies, including various electricity generation technologies, refrigeration/heat pump and cryogenic processes, energy storage, and wide spectrum of technologies associated with renewables.

Evaluation of the systems using methods of thermodynamics, economics and environmental sciences, including sustainability aspects, and policy assessments. Application of optimization methods. A small number of published papers describe case histories, review advanced technologies or describe a new methodology/ industrial process, applications of machine learning and big data analysis. Discussion papers addressing energy policy or regulatory issues that affect energy resources and energy demand and supply are also published.

Scope: Specific areas of importance, but not limited to: Conventional Engineering and Advanced Thermodynamics; Exergy and Exergy-based Methods; Energy Conversion Processes (in Power Plants, Refrigeration/ Cryogenic Systems, combined and hybrid systems, and their components); Fuel Combustion (Fundamentals, Process Simulation and Experimental Research); Alternative and Renewable Energy Sources and Technologies; Energy Resource Recovery from Biomass and Solid Waste; Internal Combustion Engines; Mechanical, Thermal and Chemical Energy Storage Systems.

2025: Voume 1, 6 issues (Jan – Nov)
ISSN: 2997-0253
eISSN: 2997-0261
asmedigitalcollection.asme.org/energyresourcesrenewable



Journal of Energy Resources Technology- Part B: Subsurface Energy and Carbon Capture

Editor-in-Chief: Ray (Zhenhua) Rui, China
University of Petroleum-Beijing, China

The Journal of Energy Resources Technology, Part B: Subsurface Energy and Carbon Capture disseminates technical information – peer-reviewed scholarly work, research papers, technical briefs, feature articles and authoritative review articles – of permanent interest to the journal's readership. Emphasis is given to extraction and conversion of any form of chemical, thermal and mechanical energies, including various electricity generation technologies, refrigeration/heat pump and cryogenic processes, energy storage, and technologies associated with carbon capture, utilization and storage. Evaluation of the systems using methods of thermodynamics, economics and environmental sciences, including sustainability aspects, and policy assessments. Application of optimization methods. A small number of published papers describe case histories, review advanced technologies or describe a new methodology/ industrial process, applications of machine learning and big data analysis. Discussion papers addressing energy policy or regulatory issues that affect energy resources and energy demand and supply are also published.

Scope: Specific areas of importance, but not limited to: Petroleum exploration and production; enhancing hydrocarbon recovery; drilling and completions; production and reservoir engineering; geomechanics; geothermal energy; geo-energy transportation; natural gas/Hydrogen storage; AI and data analytics in subsurface energy; CO2 capture processes; CO2 utilization; CO2 transportation; CO2 -EOR; CO2 geological storage; Carbon Capture Utilization and Storage (CCUS) safety evaluation; major theoretical progress and case studies of subsurface energy; economic assessments and management.

2025: Volume 1: 6 issues (Feb – Dec)
ISSN: 2998-1638
eISSN: 2998-1646
asmedigitalcollection.asme.org/energyresourcessubsurface

ASME JOURNAL PROGRAM

Since its founding in 1880, ASME has published a journal portfolio that is one of the premier research resources for the global engineering community.

Through **rigorous peer review,** the **ASME Journal Program** publishes the highest quality research for engineers looking to keep abreast of current theory, practice, and application.

With the addition of **more than 3,000 published papers each year,** this continually expanding resource serves as one of the many ways that ASME fulfills its mission to advance engineering for the benefit of humanity.

Publishing in ASME journals contributes directly to **career advancement and professional recognition.**

ASME supports compliance with government and funder mandates for Open Access publication and **offers authors the choice to publish their papers Open Access** in all journals with payment of an Article Publishing Charge (APC). ASME also participates in the CHORUS initiative whereby research papers of participating U.S. funders are made available after a one-year embargo. Authors also have the option to archive their final post-refereed manuscripts in an approved repository with permission.

Diversity and Inclusion: The Technical Committee on Publications and Communications endorses the commitment of ASME to support diversity and to create and ensure inclusive and ethical practices for publishing as well as the science and engineering professions.

For more information about the ASME Journal Program on The ASME Digital Collection, visit asmedigitalcollection.asme.org/journals

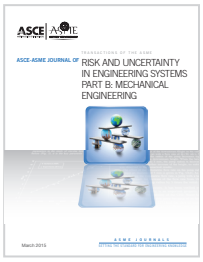
Applied Mechanics Reviews

Editor-in-Chief: Yonggang Huang, Northwestern University, USA

Applied Mechanics Reviews is an international review journal that serves as a premier venue for dissemination of material across all sub-disciplines of applied mechanics and engineering science, including fluid and solid mechanics, heat transfer, dynamics and vibration, and applications. The journal provides an archival repository for state-of-the-art and retrospective survey articles and reviews of research areas and curricular developments. It invites topical reviews that serve to document recent progress in emerging and long-standing areas of applied mechanics; describe analytical, numerical, and experimental techniques; and point to the need for continued research. Also invited is commentary on research and education policy, as well as original tutorial and educational material in applied mechanics targeting non-specialist audiences, including undergraduate and K-12 students.

Scope: State-of-the-art surveys; Retrospective reviews; Curricular reviews; Research and education policy commentary; Tutorials; Experimental mechanics; Theoretical and applied mechanics; Computational mechanics; Engineering science.

2025: Volume 77, 6 issues
ISSN: 0003-6900
eISSN: 2379-0407
asmedigitalcollection.asme.org/appliedmechanicsreviews



ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering

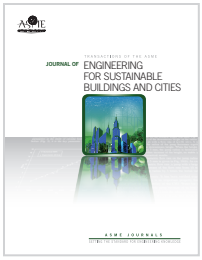
Editor-in-Chief: Michael Beer, Leibniz University Hannover, Germany

The ***ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering*** disseminates research findings, best practices and concerns, and discussion and debate on risk and uncertainty related issues. The journal reports on the full range of risk and uncertainty analysis state of art and state of practice relating to mechanical engineering, including but not limited to risk quantification based on hazard identification, scenario development and rate quantification, consequence assessment, valuations, perception, communication, risk-informed decision making, design for resilience, uncertainty analysis and modeling, and other related areas.

Scope: Risk and reliability analysis methods; Uncertainty analysis and quantification; Resilience assessment and design for resilience, Optimization under uncertainty; Computational methods; Applications areas including every aspect of mechanical engineering systems, such as mechanical assets and infrastructure, materials and electromechanical systems, energy, manufacturing, automotive, aerospace, and marine systems, bioengineering, and nuclear engineering.

Part A: Civil Engineering of the ***ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems*** is published by ASCE, **ascelibrary.org/journal/ajrua6**, with a scope similar to Part B focusing on civil engineering systems.

2025: Volume 11, 6 issues
ISSN: 2332-9017
eISSN: 2332-9025
asmedigitalcollection.asme.org/risk



ASME Journal of Engineering for Sustainable Buildings and Cities

Editors-in-Chief: Jorge E. Gonzalez, University at Albany, USA

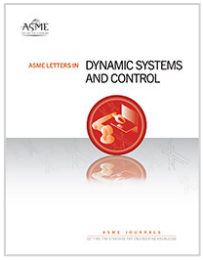
Moncef Krarti, University of Colorado Boulder, USA

ASME Journal of Engineering for Sustainable Buildings and Cities is the primary, high-quality resource for dissemination of research on integrated and sustainable building equipment and systems (ISBES) for individual buildings, as well as urban centers. The main topics of the journal are related to sustainable, resilient, and smart building energy systems including, but not limited to innovative technologies to integrate various building components, accurate energy equipment and building energy modeling tools, efficient combined heat and power, cost-effective building-specific energy storage systems (i.e., passive and active technologies), advanced optimized control strategies for operating mechanical energy systems in buildings, and grid-interactive buildings. In addition, the journal considers new equipment, systems, and methods that can enhance the resiliency of buildings associated to climate change and recurrent extreme events.

In particular, the journal disseminates new developments of energy efficient heating and cooling systems that are able to adapt to large variations in weather conditions especially in urban areas.

Scope: Design, development, and research of sustainable and resilient mechanical systems and equipment for buildings; Machine learning and AI Applications in Buildings; Building envelope technologies; Smart building structures; Power equipment and technologies for buildings; Equipment for heating, ventilation, and air conditioning; Control theory and practice for buildings equipment and systems; District cooling and heating for buildings; Energy engineering of high rise buildings; Management of building energy loads; Equipment and systems for indoor air quality; Sensor systems for building equipment and systems; Energy harvesting for buildings and cities; Smart energy systems for buildings, cities, and grids; Hydronics systems for buildings; Fire science and fire-protection systems for buildings; Simulation of building equipment and systems; Elevators and building mobility systems; Architecture of sustainable and resilient building equipment and systems; Renewable energy systems for buildings; Economics of buildings equipment and systems.

2025: Volume 8, 4 issues
ISSN: 2642-6641
eISSN: 2642-6625
asmedigitalcollection.asme.org/sustainablebuildings



ASME Letters in Dynamic Systems and Control

Editor-in-Chief: Qian Wang, Pennsylvania State University, USA

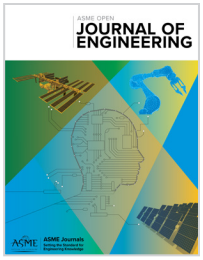
ASME Letters in Dynamic Systems and Control offers rapid dissemination of novel, high-quality, cutting-edge original findings on theoretical or applied topics from the dynamics and control community. Papers are subjected to ASME's standard high-quality peer review process.

Submissions are limited to 2500-5000 words (approximately 3-6 pages) with rapid online publication of accepted papers targeted within six weeks of submission. This Letters journal publishes the state of the art in dynamic systems and control research, with a focus on topics of interest to the dynamic systems and control community. ***ASME Letters in Dynamic Systems and Control*** provides the global engineering community with a forum to communicate the emerging research ideas that will shape the future efforts in dynamic systems and control.

Scope: Topics include, but not limited to: Modeling; Identification; Diagnostics; Intelligent systems; Mechatronics; Automotive and transportation systems; Biosystems and health care; Energy systems; Robotics; Vibrations; Smart structures.

2025: Volume 5, 4 issues
ISSN: 2689-6117
eISSN: 2689-6125
asmedigitalcollection.asme.org/lettersdynsys

ASME Letters in Translational Robotics
Refer to page 8 for information



ASME Open Journal of Engineering

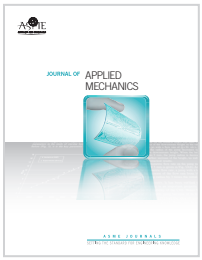
Editor-in-Chief: Hameed Metghalchi, Northeastern University, USA

ASME Open Journal of Engineering is a rapid turnaround, multidisciplinary, open access, and rigorously peer-reviewed publication that expands the ASME Journal Program to offer original research across the broad spectrum of all ASME technical communities.

ASME Open Journal of Engineering offers: high-impact, innovative articles that expand the scope of ASME's traditional journals, including cross-cutting or multidisciplinary research in new or emerging areas; original findings on theoretical or applied topics related to mechanical engineering and allied disciplines; new or improved engineering methods and solutions; and compliance with funder mandates that require full open access.

Scope: Addresses the foundations and boundaries of: Advanced Energy Systems; Aerospace; Applied Mechanics; Bioengineering; Computers and Information in Engineering; Design Engineering; Dynamic Systems and Control; Electronic and Photonic Packaging; Energy Resources and Power Generation; Engineering Education; Environmental Engineering; Fluid Power Systems; Fluids Engineering; Gas Turbines; Heat Transfer; Internal Combustion Engines; Management; Manufacturing; Materials; Materials Handling; Microelectromechanics; Nanotechnology; Noise Control and Acoustics; Nondestructive Evaluation; Nuclear Engineering; Ocean, Offshore, and Arctic Engineering; Pipeline Systems; Plant Engineering and Maintenance; Pressure Vessels and Piping; Process Industries; Rail Transportation; Robotics and Automation; Safety and Risk Analysis; Solar Energy; Solid Waste Processing; Sustainable Engineering; Tribology.

2025: Volume 4
eISSN: 2770-3495
asmedigitalcollection.asme.org/openengineering



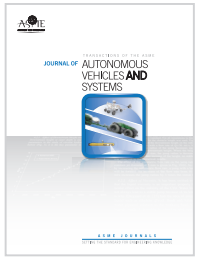
Journal of Applied Mechanics

Editor-in-Chief: Pradeep Sharma,
University of Houston, USA

The ***Journal of Applied Mechanics*** serves as a vehicle for the communication of original research results of permanent interest in all branches of mechanics. The majority of the papers published in the journal are full-length articles of considerable depth. Comments on published papers may be submitted in the form of discussion, which is subject to a rebuttal by the author.

Scope: All areas of theoretical and applied mechanics including, but not limited to: Aerodynamics; Aeroelasticity; Biomechanics; Boundary layers; Composite materials; Computational mechanics; Constitutive modeling of materials; Dynamics; Elasticity; Experimental mechanics; Flow and fracture; Heat transport in fluid flows; Hydraulics; Impact; Internal flow; Mechanical properties of materials; Mechanics of shocks; Micromechanics; Nanomechanics; Plasticity; Stress analysis; Structures; Thermodynamics of materials and in flowing fluids; Thermo-mechanics; Turbulence; Vibration; Wave propagation.

2025: Volume 92, 12 issues
ISSN: 0021-8936
eISSN: 1528-9036
asmedigitalcollection.asme.org/appliedmechanics



Journal of Autonomous Vehicles and Systems

Editors-in-Chief: David Gorsich,
US Army Ground Systems, USA

The purpose of ***Journal of Autonomous Vehicles and Systems*** is to provide an international platform for the communication and discussion of technical knowledge and solutions in the transformative areas of the research and engineering design of autonomous vehicles and systems that operate in all media and inter-medium environments: ground, air, space, and water.

The focus of this journal is on an autonomous vehicle system-of-systems approach to modeling, simulation, design, and physical and virtual testing. The vehicle applications include, but are not limited to personal and cargo transportation, construction and forestry, farming, scientific research, investigation of the underground, air and water, exploration of other planets, infrastructure monitoring, surveillance, and military, etc.

Partial Scope: Artificial intelligence and machine learning with application to autonomous vehicles; Artificial intelligence mimicking human intelligence for self-operation, shared mental and cooperative multi-physics environment models; Intelligent perception and cognitive architectures for autonomous operation, planning, global positioning, navigation and localization, decision making, controls and observation; Modeling, simulation and designing autonomous vehicle systems for their autonomy of different levels; Vehicle-to-X interaction with X being Human, Vehicle, Infrastructure, etc.;
Operator-vehicle interaction.

Refer to the journal's webpage for the full Scope

2025: Volume 5, 4 issues
ISSN: 2690-702X
eISSN: 2690-7038
asmedigitalcollection.asme.org/autonomousvehicles

Journal of Biomechanical Engineering

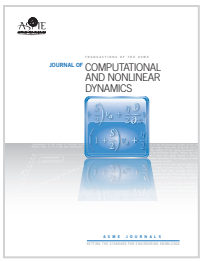
Editosr-in-Chief: Thao (Vicky) Nguyen,
Johns Hopkins University, USA

C. Ross Ethier, Georgia Institute of Technology & Emory University School of Medicine, USA

The ***Journal of Biomechanical Engineering*** reports research results involving the application of mechanical engineering principles to the improvement of human health. The scope of relevant topics ranges from basic biology to biomedical applications and includes theoretical, computational, experimental, and clinical studies.

Scope: Biofluid mechanics, including biomicrofluidic systems; Bioheat and biomass transfer; Biomechanics of protheses and artificial organs; Biomechanics of reproduction and women's health; Bone biomechanics and mechanobiology; Cardiovascular biomechanics; Cell mechanobiology and biomechanics; Gait and kinesiology; Growth and remodeling; Injury biomechanics; Mechanics of biomaterials; Novel biomechanical considerations in surgery and haptics; Orthopedic biomechanics; Physiological systems; Pulmonary biomechanics; Soft and hard tissue biomechanics.

2025: Volume 147, 12 issues
ISSN: 0148-0731
eISSN: 1528-8951
asmedigitalcollection.asme.org/biomechanical



Journal of Computational and Nonlinear Dynamics

Editor-in-Chief: Bogdan I. Epureanu,
University of Michigan, USA

The ***Journal of Computational and Nonlinear Dynamics*** provides a medium for rapid dissemination of original research results in computational dynamics and nonlinear dynamics. The journal serves as a forum for the exchange of new ideas and applications in computational dynamics, multi-body system dynamics, and all aspects (analytical, numerical, and experimental) of dynamics associated with nonlinear systems. The broad scope of the journal encompasses all computational problems and nonlinear problems, which occur in aeronautical, biological, civil, electrical, marine, mechanical, physical, and structural systems. For more information, please visit the companion website at **www.asmejcnd.org**.

Scope: Topics in the computational dynamics and multi-body system dynamics area include as follows: Theoretical, computational, and experimental methods; Novel formulations and algorithms for computation of kinematics and dynamics of rigid and flexible systems; Application of finite element and finite difference methods in dynamics; Numerical approaches in synthesis, optimization, and control; Parallel computations and software development. Topics in the nonlinear dynamics area include as follows: New theories and principles related to dynamical systems; Computational techniques for nonlinear systems; Dynamic stability, bifurcation, and control; Chaos, fractals, and pattern formation in physical and biological systems; System modeling, identification, and experimental methods; Frictional and discontinuous dynamical processes.

2025: Volume 20, 12 issues
ISSN: 1555-1415
eISSN: 1555-1423
asmedigitalcollection.asme.org/computationalnonlinear

Journal of Computing and Information Science in Engineering

Editor-in-Chief: Yan Wang,
Georgia Institute of Technology, USA

The ***Journal of Computing and Information Science in Engineering*** **(JCISE)** publishes articles related to algorithms, computational methods, computing infrastructure, computer-interpretable representations, human-computer interfaces, information science, and/or system architectures that aim to improve some aspect of product and system lifecycle (e.g., design, manufacturing, operation, maintenance, disposal, recycling, etc.). Applications considered in JCISE manuscripts should be relevant to the mechanical engineering discipline. Papers are focused on new modeling or computational methodologies. For more information, visit the companion website at **www.asmejcise.org**.

Partial Scope: Advanced computing infrastructure; Artificial intelligence; Collaborative design; Computer-aided engineering; Computer-aided manufacturing; Computational foundations for additive manufacturing; Computational foundations for engineering optimization; Computational metrology; Computational synthesis; Conceptual design; Cybermanufacturing; Cyber-physical security for factories; Cyber-physical system design and operation; Data-driven engineering applications; Engineering informatics; Geometric reasoning; GPU computing for design and manufacturing; Human-computer interfaces/interactions; Industrial internet of things; Knowledge engineering; Information management; Inverse methods for engineering applications; Machine learning for engineering applications; Manufacturing planning; Manufacturing automation; Model-based systems engineering; Multiphysics modeling and simulation; Multiscale modeling and simulation; Multidisciplinary optimization; Physics-based simulations; Process modeling for engineering applications; Qualification, verification, and validation of computational models; Tolerance modeling; Virtual prototyping.

2025: Volume 25, 12issues
ISSN: 1530-9827
eISSN: 1944-7078
asmedigitalcollection.asme.org/computingengineering

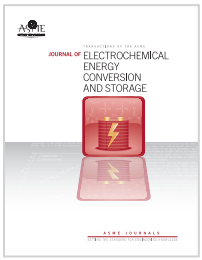
Journal of Dynamic Systems, Measurement, and Control

Editor-in-Chief: Anna Stefanopoulou,,
University of Michigan, USA

The ***Journal of Dynamic Systems, Measurement, and Control*** publishes original papers, both theoretical and applied, focusing on modeling, sensing, identification, and control of dynamical systems in traditional mechanical engineering and associated interdisciplinary areas. Theoretical papers should present new theoretical developments and knowledge for control of dynamical systems together with clear engineering motivation for the new theory. New theory or results that are only of mathematical interest without a clear engineering motivation or have a cursory relevance only are discouraged. "Application" is understood to include simulation of realistic systems and corroboration of theory with emphasis on demonstrated practicality.

Scope: Adaptive control; Aerospace systems; Automotive systems; Biosystems; Computer control; Control based on data analytics and machine learning; Distributed parameter systems and control; Energy systems and control; Fluid control systems; Instrumentation and components; Manufacturing technology; Mechatronics; Modeling and identification; Nonlinear systems and control; Optimal control; Power systems; Production systems; Real-time control; Robotics; Robust control; Servomechanisms; Signal processing; Systems theory; Transportation systems; Uncertain systems.

2025: Volume 147, 6 issues
ISSN: 0022-0434
eISSN: 1528-9028
asmedigitalcollection.asme.org/dynamicsystems



Journal of Electrochemical Energy Conversion and Storage

Editor-in-Chief: Partha P. Mukherjee,
Purdue University, USA

The ***Journal of Electrochemical Energy Conversion and Storage*** is a multidisciplinary journal publishing original research covering all engineering aspects including materials, chemistry, and physics related to electrochemical energy conversion and storage. The journal focuses on processes, materials, components, devices, and systems that store and convert electrical and chemical energy. The journal publishes peer-reviewed, archival scholarly articles, research papers, technical briefs, review articles, perspective articles and focused issues.

Scope: Specific areas of interest include Electrochemical engineering; Electrochemical Energy Storage, Electrochemical Conversion, Novel materials; Analysis and design of components, devices, and systems; Balance of plant; Novel numerical and analytical simulations; Advanced materials characterization; Innovative material synthesis and manufacturing methods; Thermal management; Reliability, durability, and damage tolerance. Papers are solicited in, but not limited to, the following technological areas: Batteries; Flow batteries; Fuel cells; Electrolyzers; Electrochemical separation membranes; Electrochemical capacitors; Thermogalvanic cells; Photoelectrochemical cells.

2025: Volume 22, 4 issues
ISSN: 2381-6872
eISSN: 2381-6910
asmedigitalcollection.asme.org/electrochemical

Journal of Electronic Packaging

Editor-in-Chief: Shi-Wei Ricky Lee,
The Hong Kong University of Science and Technology, Hong Kong

The ***Journal of Electronic Packaging*** publishes papers that use experimental and theoretical (analytical and computer-aided) methods, approaches, and techniques to address and solve various mechanical, materials, and reliability problems encountered in the analysis, design, manufacturing, testing, and operation of electronic and photonics components, devices, and systems.

The journal serves researchers and engineers working in academic and industrial settings. In addition, leaders in the field are invited to publish review articles on hot, emerging and fundamental topics.

Scope: Flexible electronics; Materials with nano structures; Applied mechanics; Microsystems packaging; Systems integration; General small-scale systems.

2025: Volume 147, 4 issues
ISSN: 1043-7398
eISSN: 1528-9044
asmedigitalcollection.asme.org/electronicpackaging

Journal of Engineering and Science in Medical Diagnostics and Therapy

Editors-in-Chief: Ahmed Al-Jumaily, Auckland University of Technology, New Zealand

The ***Journal of Engineering and Science in Medical Diagnostics and Therapy*** is a unique publishing forum for the international community of engineers, scientists, and medical researchers with a shared vision to use knowledge from mechanical engineering as well as other engineering and scientific disciplines to accelerate biomedical innovation, trial, and commercialization.

The journal focuses not only on basic, theoretical, or experimental bioengineering research, but also on lab-proven biomedical and biotechnology applications that contribute to achieving T1 translational research objectives and moving research from bench to bedside (T1 transfers knowledge from basic research to clinical research).

Scope: Clinical diagnostics, imaging, and characterization; Therapeutic technologies, techniques, equipment, and procedures; Clinical applications of biomaterials, chemical processes, and pharmaceuticals; Micro- and nanotechnology in medicine; Cell physiology and applied mechanics; Computing in medicine and biotechnology; Drug and biological delivery science and biopharmaceuticals; Cancer diagnosis and treatments; Electromechanical and chemical sensors technology; Wave propagations in medical applications, including vibration, acoustics, ultrasound, and electrography; Rehabilitation robots, devices and methodologies; Sports medicine and prevention of impact injury; Mechanopharmacology, mechanopharmaceutics, and mechanobiochemistry; Clinical system dynamics and control; Engineering and science in clinical applications.

2025: Volume 8, 4 issues
ISSN: 2572-7958
eISSN: 2572-7966
asmedigitalcollection.asme.org/medicaldiagnostics

Journal of Energy Resources Technology – Part A & Part B

Refer to page 8 for information

Journal of Engineering for Gas Turbines and Power

Editor-in-Chief: Jerzy T. Sawicki,
Cleveland State University, USA

The ***Journal of Engineering for Gas Turbines and Power*** publishes original papers, both theoretical and applied, in the broad technical areas of gas and steam turbines, aircraft engines, internal combustion engines, and power generation. It covers the specific technical areas described in the Scope section below. Research papers are peer-reviewed full-length articles of considerable depth. The journal also publishes technical briefs, design innovation papers, topical reviews, discussions of published papers, book reviews, and editorials. Papers of high mathematical interest must also have a strong relevance to engineering.

Scope: Aircraft engines; Coal, biomass and alternative fuels; Combustion, fuels and emissions; Compressor stall and surge; Computational fluid dynamics (CFD) analysis; Controls, diagnostics, instrumentation, and measurement techniques; Cycle innovations; Diffuser and exhaust systems; Energy conversion, thermodynamic cycles and power plants; Heat transfer and thermal management; Internal combustion engines; New and emerging technologies; Oil and gas applications; Power generation plants; Steam turbines; Structures and dynamics including rotordynamics, bearings and seals, blading and aeromechanics; Compressor and mechanical design and performance applied to turbomachinery.

2025: Volume 147, 12 issues
ISSN: 0742-4795
eISSN: 1528-8919
asmedigitalcollection.asme.org/gasturbinespower

Journal of Engineering Materials and Technology

Editor-in-Chief: Abigail Hunter,
Los Alamos National Laboratory,USA

The ***Journal of Engineering Materials and Technology*** is a global publishing forum that addresses a broad spectrum of issues focused on interrelated experimental, computational, and theoretical studies on mechanics of materials perspectives and fundamental understanding of the behavior of metals, polymers, ceramics, composites, biomaterials, and nanostructured materials at physical scales ranging from the atomistic to the macro.

Scope: Multiscale modeling and experiments; High-temperature creep, fatigue, and fracture; Elastic-plastic behavior; Dynamic behavior; Environmental effects on material response, constitutive relations, materials processing, and microstructural thermomechanical behavior.

2025: Volume 147, 4 issues
ISSN: 0094-4289
eISSN: 1528-8889
asmedigitalcollection.asme.org/materialstechnology

Journal of Fluids Engineering

Editor-in-Chief: Keith Walters,
University of Arkansas, USA

The ***Journal of Fluids Engineering*** disseminates technical information in fluid mechanics of interest to researchers and designers in mechanical engineering and other engineering disciplines. The majority of papers present original analytical, numerical, or experimental results and physical interpretation of lasting scientific value. In addition, contributions to the journal emphasize investigative techniques, analytical methods, computational fluid dynamics, and experimental methods such as laser Doppler velocimetry, hot film and hot wire anemometry, particle image velocimetry, and other innovative advances as they appear.

Scope*: Aerodynamics; Boundary layers; Bubbly flows; Cavitation; Compressible flows; Convective heat/mass transfer as affected by fluid flow; Duct and pipe flows; Free shear layers; Flows in biological systems; Fluid-structure interaction; Fluid transients and wave motion; Jets; Microfluidics; Multiphase flows; Naval hydrodynamics; Pumps; Sprays; Stability and transition; Turbines; Turbulence; Wakes; Other fundamental/applied fluid mechanical phenomena and processes.

2025: Volume 147, 12 issues
ISSN: 0098-2202
eISSN: 1528-901X
asmedigitalcollection.asme.org/fluidsengineering

***ASME research content from 1880 – 1929 is now accessible under the Journal of Fluids Engineering on the Digital Collection.**

Journal of Heat and Mass Transfer

Editor-in-Chief: Timothy S. Fisher, UCLA, USA

The ***Journal of Heat and Mass Transfer*** disseminates information of permanent interest in the areas of heat and mass transfer. Contributions may consist of results from fundamental research that apply to thermal energy or mass transfer in all fields of mechanical engineering and related disciplines. Also, archival results of research focusing on the evaluation of thermophysical properties associated with heat and mass transfer, and on the theory of heat and mass transfer, are published. The journal publishes papers contributing to the advancement of our fundamental knowledge of the fields of heat and mass transfer and related novel applications in technologies.

The ***Journal of Heat and Mass Transfer*** is complementary to the ***Journal of Thermal Science and Engineering Applications***, which focuses on applications.

Partial Scope: Topical areas including, but not limited to: Biological heat and mass transfer; Combustion and reactive flows; Conduction; Electronic and photonic cooling; Evaporation, boiling, and condensation; Experimental techniques; Forced convection; Heat exchanger fundamentals; Heat transfer enhancement; Combined heat and mass transfer; Heat transfer in materials processing and formation; Jets, wakes, and impingement cooling; Melting and solidification; Microscale and nanoscale heat and mass transfer; Natural and mixed convection; Porous media; Radiative heat transfer; Solar-thermal processes; Thermal systems; Two-phase flow and heat transfer. Such topical areas may may occur in applications involving: Aeronautics and astronautics; The environment; Gas turbines; Biotechnology; Electronic and photonic processes and equipment; Energy systems; Fire and combustion; Heat pipes; Manufacturing and materials processing; Low-temperature heat transfer; Refrigeration and air conditioning; Renewable energy components and devices; Multiphase devices; Microscale and nanoscale materials and devices.

2025: Volume 147 12 issues
ISSN: 0022-1481
eISSN: 1528-8943
asmedigitalcollection.asme.org/heattransfer

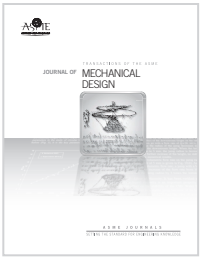
Journal of Manufacturing Science and Engineering

Editor-in-Chief: Albert Shih,
University of Michigan, USA

The ***Journal of Manufacturing Science and Engineering*** disseminates original, theoretical, and applied research results of permanent interest in all branches of manufacturing including emerging areas. Research papers are peer-reviewed full-length articles of considerable depth. The journal also publishes technical briefs, design innovation papers, reviews, discussions of published papers with rebuttal, book reviews, and editorials. The Editorial Board consists of a team of international experts who provide expertise and conduct the peer-review process for the different topical areas covered by the journal.

Partial Scope: Areas of interest including, but not limited to: Additive manufacturing; Advanced materials and processing; Assembly; Biomedical manufacturing; Bulk deformation processes (e.g., extrusion, forging, wire drawing, etc.); CAD/ CAM/CAE; Computer-integrated manufacturing; Control and automation; Cyber-physical systems in manufacturing; Data science-enhanced manufacturing; Design for manufacturing; Inspection and quality control; Laser processes; Robotics and flexible tooling; Semiconductor manufacturing; Smart manufacturing; Sustainable manufacturing.

2025: Volume 147, 12 issues
ISSN: 1087-1357
eISSN: 1528-8935
asmedigitalcollection.asme.org/manufacturingscience



Journal of Mechanical Design

Editor-in-Chief: Haijun Su,
The Ohio State University, USA

The ***Journal of Mechanical Design (JMD)*** serves the broad design community as the venue for scholarly, archival research in all aspects of the engineering design activity and welcomes contributions from all areas of design with an emphasis on design synthesis. While the journal has traditionally served the ASME Design Engineering Division, it embraces interdisciplinary design research topics and encourages submissions from teams of interdisciplinary researchers who work on theories and methods to support the design of emerging engineered products and systems. The journal communicates original contributions, primarily in the form of research articles of considerable depth, but also technical briefs, design innovation papers, book reviews, review articles on research topics or history of engineering design, and editorials. For more information, visit the companion website at **www.asmejmd.org**

Partial Scope: Design automation, including design representation, virtual reality, geometric design, design evaluation, design optimization, data-driven design, artificial intelligence in design, simulation-based design under uncertainty, design of complex systems, design of engineered materials systems, shape and topology optimization, engineering design for global development, ergonomic and aesthetic considerations in design methodology, and design for market systems; Design of energy, fluid, and power handling systems; Design for manufacturing and the lifecycle, including design for the environment, DFX, and sustainable design; Design of mechanisms and robotic systems, including design of macro-, micro- and nano-scaled mechanical systems, machine and robotic components, and machine system design; Design theory and methodology, including creativity in design, decision analysis, preference modeling, user-centered design, design cognition, entrepreneurship and teams in design, design prototyping, and design synthesis.

2025: Volume 147, 12 issues
ISSN: 1050-0472
eISSN: 1528-9001
asmedigitalcollection.asme.org/mechanicaldesign

Journal of Mechanisms and Robotics

Editor-in-Chief: Venkat N. Krovi,
Clemson University, USA

The ***Journal of Mechanisms and Robotics*** publishes research contributions to the fundamental theory, algorithms, and applications for mechanisms, machine systems, and robotics. For more information, visit the companion website at **www.asmejmr.org.**

Scope: Fundamental theory, algorithms, design, manufacture, and experimental validation for macro-, micro- and nano-scaled mechanical systems and robots; Theoretical and applied kinematics; Mechanism synthesis and design; Analysis and design of robot manipulators, mobile robots, hands and legs, soft robotics, compliant mechanisms, origami and folded robots, 3D printed robots, exoskeletons, and haptic devices; Novel fabrication; Actuation and control techniques for mechanisms and robotics; Bio-inspired approaches to mechanism and robot design; Mechanics and design of micro- and nano-scale devices.

2025: Volume 17, 12 issues
ISSN: 1942-4302
eISSN: 1942-4310
asmedigitalcollection.asme.org/mechanismsrobotics

Journal of Medical Devices

Editors-in-Chief: Xiaoming He,
University of Maryland, USA

Carl Nelson,
University of Nebraska-Lincoln, USA

The **Journal of Medical Devices** is a unique international forum for rapid publication of significant research on the development and characterization of devices including instruments aimed for biomedical applications. Of interest are devices of all scales from quantum to nano, micro, and macro; and for all biomedical applications including experimental, diagnostic, therapeutic, and interventional usages. The journal is particularly interested in multidisciplinary research integrating engineering with other fields (materials, medicine, biology, physics, computer science, chemistry, and more).

Partial Scope: Tissue engineered systems including organoids; microphysiological systems; cellular systems for immunotherapy and stem cell therapy; cell, tissue, organ culture, banking, and analysis devices; drug delivery systems including nanoparticles; drug discovery and screening systems; self-assembled systems; minimally invasive devices; microfluidic and nanofluidic devices; biomedical diagnostic devices; biomedical robotics; biomedical sensors and actuators; biomedical Instrumentation; 2D devices and materials; wearable and flexible electronics; artificial intelligence and machine/deep learning devices; internet of medical things devices.

2025: Volume 12: 4 issues
ISSN: 2 2166-0468
eISSN: 2166-0476
asmedigitalcollection.asme.org/medicaldevices

Journal of Micro and Nano Science and Engineering

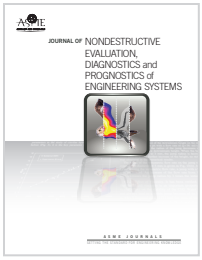
** Effective Fall 2024, New title for the Journal of Micro and Nano Science and Engineering*

Editor-in-Chief: Stefan Dimov,
University of Birmingham, England

The ***Journal of Micro and Nano Science and Engineering*** provides a forum for the rapid dissemination of original theoretical and applied research in the interdisciplinary MNSE field. The journal is devoted to reporting novel research onto scientific principles, design and development of Micro and Nano Manufacturing (MNM) technologies that enable applications in micro- and nano-fluidics, quantum devices, micro-optics, sensors and actuators, industrial photonics, lab-on-a-chip devices, power generation and energy storage devices, mould interconnect devices, packaging of MEMS and Integrated Circuits, wearable devices, life-sciences and biomedical devices, drug manufacturing, metamaterials and metasurfaces.

Partial Scope: Areas of interest including, but not limited to: MNSE for incorporating functional micro and nano features and structures into products and devices; Design, performance study and design for X of MNM enabled products and devices; Integration of design and manufacturing employing topology optimization and additive manufacturing; Integration of “smart” multi-functional surfaces in products and devices; Packaging solutions for integrating MEMS and Integrated Circuits; Process design for unit micro- and nano-manufacturing; Design and validation of process chains integrating micro/nano manufacturing technologies; Self-assembly and combining bottom-up and top-down fabrication methods; 3D micro/nano additive manufacturing, 3D printing, 3D bio-printing; 4D printing; Quantum materials, structures, and devices; Equipment development; Predictive modelling and simulation of materials and/or systems enabling point-of-need or scaled-up micro- and nano-manufacturing; Metrology at the micro- and nano-scales over large areas; On-machine and in-process metrology and/or monitoring of MNM technologies; Sensors and sensor integration;

2025: Volume 13, 4 issues
ISSN: 2994-7316
eISSN: 2994-7324
asmedigitalcollection.asme.org/micronanomanufacturing



Journal of Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems

Editor-in-Chief: Tribikram Kundu,
The University of Arizona, Tucson, USA

The ***Journal of Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems*** provides a venue for communication, discussion, and dissemination of advanced research related to ideas, opinions, and solutions on a variety of subjects related to NDE (Nondestructive Evaluation), SHM (Structural Health Monitoring), and prognosis. The journal addresses the need for an archival international journal and covers many aspects of interdisciplinary work in the fields of NDE and SHM and reports use of NDE and SHM in a wide range of applications in industry, government sector, and academia. The goal of the journal is to inform readers with state-of-the-art developments in NDE, SHM, and prognosis, disseminate new ideas on these subjects, and report related valuable applications. It is envisioned that the journal brings under one umbrella engineering and science disciplines contributing to NDE, SHM, and prognosis and features practical applications of NDE and SHM in many technical fields.

Scope: Applications across all engineering systems and processes; Fault and damage identification; Networked systems; On-line and off-line diagnostic approaches; Physics of failure in engineering systems; Product quality control; Real-time data processing, storage, and reduction; Sensors and other electronic hardware; System and structural diagnostics in harsh or extreme environments; Theoretical developments, numerical analysis (i.e., finite element, boundary element, peridynamics, and peri-ultrasound-based modeling techniques), and hardware-in-the-loop simulations supporting NDE and SHM methodologies; Traditional and emerging technologies (ultrasonics, radiography, etc.).

2025: Volume 8, 4 issues
ISSN: 2572-3901
eISSN: 2572-3898
asmedigitalcollection.asme.org/nondestructive

Journal of Nuclear Engineering and Radiation Science

Editor-in-Chief: Leon Cizelj,
Josef Stefan Institute, Slovenia

The ***Journal of Nuclear Engineering and Radiation Science*** is ASME's latest title within the energy sector. The publication is for specialists in the nuclear/power engineering areas of industry, academia, and government.

Scope: Areas of interest including, but not limited to: Next generation reactors and advanced reactors; Thermal hydraulics; Computational Fluid Dynamics (CFD) and coupled codes; Reactor physics and transport theory; Nuclear fuel and materials; Fuel cycle, radioactive waste management, and decommissioning; Instrumentation & Controls (I&C); Nuclear safety and security; Beyond design basis events; Codes, standards, licensing, and regulatory issues; Radiation protection and nuclear technology applications; Plant operations, maintenance, engineering, modifications, and lifecycle; Plant systems, construction, structures, and components; Nuclear education, public acceptance, and related issues; Fusion engineering; Panel discussion.

2025: Volume 11, 4 issues
ISSN: 2332-8983
eISSN: 2332-8975
asmedigitalcollection.asme.org/nuclearengineering

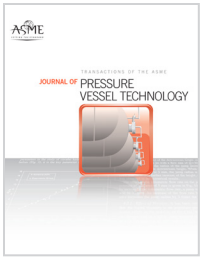
Journal of Offshore Mechanics and Arctic Engineering

Editor-in-Chief: Lance Manuel,
The University of Texas at Austin, USA

The ***Journal of Offshore Mechanics and Arctic Engineering*** is an international resource for original peer-reviewed research that advances the state of knowledge on all aspects of analysis, design, and technology development in ocean, offshore, arctic, and related fields. Its goals are to provide a forum for timely and in-depth exchanges of scientific and technical information among researchers and engineers. The journal emphasizes fundamental research and development studies as well as review articles that offer retrospective perspectives on well-established topics or exposures to innovative developments. The journal also documents significant developments in related fields and major accomplishments of renowned scientists by programming themed issues that record such events.

Scope: Offshore mechanics, fixed and floating production systems; Ocean engineering, hydrodynamics, and ship motions; Ocean climate statistics, storms, extremes, and hurricanes; Structural mechanics; Integrity management, data analytics, health monitoring, cyber-physical systems, digital twins; Safety, reliability, risk assessment, and uncertainty quantification; Riser mechanics, cable and mooring dynamics, and pipeline and subsea technology; Materials engineering, fatigue, fracture, non-destructive testing, inspection technologies, and corrosion protection and control; Fluid-structure interaction, computational fluid dynamics, and flow- and vortex-induced vibrations; Marine and offshore geotechnics, soil mechanics, and soil-pipeline interaction; Ocean renewable energy; Ocean space utilization, the blue economy, deep-sea mining, sustainability, aquaculture engineering, marine litter/debris solutions; Polar and arctic science and technology, ice mechanics, arctic structures, ice-structure and ship interaction, permafrost engineering, and arctic and thermal design.

2025: Volume 147, 6 issues
ISSN: 0892-7219
eISSN: 1528-896X
asmedigitalcollection.asme.org/offshoremechanics



Journal of Pressure Vessel Technology

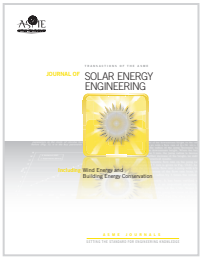
Editor-in-Chief: Spyros A. Karamanos, University of Thessaly, Greece

The ***Journal of Pressure Vessel Technology*** is the premier publication for the highest quality research and interpretive reports on the design, analysis, materials, fabrication, construction, inspection, operation, and failure prevention of pressure vessels, piping, pipelines, power and heating boilers, heat exchangers, reaction vessels, pumps, valves, and other pressure and temperature-bearing components, as well as the nondestructive evaluation of critical components in mechanical engineering applications. It publishes analytical, experimental, and numerical studies.

Not only does the journal cover all topics dealing with the design and analysis of pressure vessels, piping, and components, but it also contains discussions of their related Codes and Standards.

Scope: Applicable pressure technology areas of interest include: Dynamic and seismic analysis; Equipment qualification; Fabrication; Welding processes and integrity; Joining and fastening; Operation of vessels and piping; Fatigue and fracture prediction; Fluid-structure interaction; High pressure engineering; Elevated temperature analysis and design; Inelastic analysis; Life extension; Lifeline earthquake engineering; PVP materials and their property databases; NDE; Safety and reliability; Verification and qualification of software.

2025: Volume 147, 6 issues
ISSN: 0094-9930
eISSN: 1528-8978
asmedigitalcollection.asme.org/pressurevesseltech



Journal of Solar Energy Engineering

Editor-in-Chief: S.A. Sherif, University of Florida, USA

The ***Journal of Solar Energy Engineering*** — Including Wind Energy and Building Energy Conservation — publishes research papers that contain original work of permanent interest in all areas of solar energy, wind energy, and energy conservation, as well as discussions of policy and regulatory issues that affect renewable energy technologies and their implementation. Papers that do not include original work, but nonetheless present quality analysis or incremental improvements to past work may be published as Technical Briefs. Review papers are accepted but should be discussed with the Editor prior to submission. The journal also publishes a section called Solar Scenery that features photographs or graphical displays of significant new installations or research facilities.

Scope: Fundamentals; Solar optics; Solar collectors; Solar thermal power; Photovoltaic applications; Solar chemistry and bioconversion; Solar space applications; Wind energy; Heating and cooling; Energy storage; Testing and measurement; Conservation and solar buildings; Emerging technologies; Energy policy.

2025: Volume 147, 6 issues
ISSN: 0199-6231
eISSN: 1528-8986
asmedigitalcollection.asme.org/solarenergyengineering

Journal of Thermal Science and Engineering Applications

Editor-in-Chief: Srinath Ekkad, North Carolina State University, USA

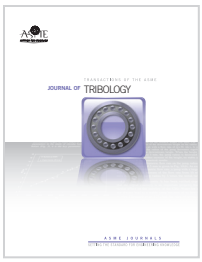
The ***Journal of Thermal Science and Engineering Applications*** focuses on the dissemination of information of permanent interest in applied thermal sciences and engineering emphasizing new and emerging technologies, significant questions, pressing problems and concerns, and new methods and approaches that can be applied to industrial problems.

Contributions must have clear relevancy to an industry, an industrial process, or a device. Subject areas could be as narrow as a particular phenomenon or device or as broad as a system. The journal publishes original research of an applied nature; application of thermal sciences to processes or systems; technology reviews; and identification of research needs to solve industrial problems at all time and length scales. Contributions should describe research in applied areas pertaining to thermal energy transport in equipment and devices, thermal and chemical systems, and thermodynamic processes.

The ***Journal of Thermal Science and Engineering Applications*** complements the ***Journal of Heat and Mass Transfer***, which focuses on fundamental research.

Scope: Applications in: Aerospace systems; Gas turbines; Biotechnology; Defense systems; Electronic and photonic equipment; Energy systems; Manufacturing; Refrigeration and air conditioning; Homeland security systems; Micro- and nanoscale devices; Petrochemical processing; Medical systems; Energy efficiency; Sustainability; Solar systems; Combustion systems.

2025: Volume 17, 12 issues
ISSN: 1948-5085
eISSN: 1948-5093
asmedigitalcollection.asme.org/thermalscienceapplication



Journal of Tribology

Editor-in-Chief: Robert L. Jackson, Auburn University, USA

The ***Journal of Tribology*** publishes outstanding peer-reviewed technical articles of permanent interest to the tribology community annually. Known as a premier journal in the field, it attracts articles by tribologists from around the world. The journal features a mix of experimental, numerical, and theoretical articles dealing with all aspects of the field. In addition to being of interest to engineers and other scientists doing research in the field, the journal is also of great importance to engineers who design or use mechanical components such as bearings, gears, seals, magnetic recording heads and disks, or prosthetic joints, or who are involved with manufacturing processes.

Scope: Friction and wear; Fluid film lubrication; Elastohydrodynamic lubrication; Surface properties and characterization; Contact mechanics; Magnetic recordings; Tribological systems; Seals; Bearing design and technology; Gears; Metalworking; Lubricants; Artificial joints.

2025: Volume 147, 12 issues
ISSN: 0742-4787
eISSN: 1528-8897
asmedigitalcollection.asme.org/tribology

Journal of Turbomachinery

Editor-in-Chief: David G. Bogard, The University of Texas at Austin, USA

The ***Journal of Turbomachinery*** publishes technical studies that advance the state of the art of turbomachinery technology, particularly those related to gas turbine engines. Papers include theoretical, analytical, computational, and experimental studies which provide insight into improved performance or predictions of performance for gas turbine engines or various components of these engines. Basic engineering sciences in these studies include fluid dynamics, heat transfer, and aeromechanics technology. Emphasis is placed on gas-path flows associated compressors, combustors, and turbines, and with associated cooling technologies.

Scope: Aerodynamic design, analysis, optimization, and testing of compressor and turbine airfoils; Compressor stall, surge, and operability issues; Turbine cooling including internal and film cooling design, analysis, optimization, and testing; Cavity and leakage flows; Aeromechanical instabilities; Computational fluid dynamics (CFD) applied to turbomachinery; and Turbine testing with associated measurement techniques and instrumentation development.

2025: Volume 147, 12 issues
ISSN: 0889-504X
eISSN: 1528-8900
asmedigitalcollection.asme.org/turbomachinery

Journal of Verification, Validation and Uncertainty Quantification

Editor-in-Chief: Aaron Koskelo,
Los Alamos National Laboratory, USA

The ***Journal of Verification, Validation and Uncertainty Quantification*** **(VVUQ)** disseminates original research in the development and application of methods for performing code and solution (calculation) verification, simulation validation, and simulation and experimental uncertainty quantification. The application of verification, validation, and uncertainty quantification to discipline-specific examples are considered important contributions to this journal. Validation experiments and data uncertainty, simulation challenge problems, new approaches to VVUQ, discipline-specific examples and methods, and developments in and demonstration of standards of practice for verification and validation are examples of relevant topics to this journal.

The journal is cross cutting and serves a broad audience of engineers and scientists in many disciplines for which modeling and simulation and the methods to assess accuracy of their results are important.

Scope: Areas of interest including, but not limited to: Code verification; Solution verification; Validation; Uncertainty quantification; Model prediction; Model adequacy; Model accuracy; Predictive capacity; Model maturity; Phenomena identification and ranking table (PIRT); Design of experiments; Experimental uncertainty; Uncertainty in measurement; Model uncertainty; Model discrepancy; Sensitivity analysis; Model fidelity; Intended use; Context of use; Regulatory science; Aleatoric uncertainty; Epistemic uncertainty; Comparator; Quantification of margins and uncertainties (QMU); Fundamentals of probability; Applications of probability; Bayesian inference; V&V standards development; Challenge problems; Model calibration methods; Uncertainty propagation; Application examples of VVUQ.

2025: Volume 10, 4 issues
ISSN: 2377-2158
eISSN: 2377-2166
asmedigitalcollection.asme.org/verification

Journal of Vibration and Acoustics

Editor-in-Chief: Christopher D. Rahn,
The Pennsylvania State University, USA

The ***Journal of Vibration and Acoustics*** sponsored jointly by the Design Engineering and the Noise Control and Acoustics Divisions of ASME. The journal is the premier international venue for publication of original research concerning mechanical vibration and sound. Our mission is to serve researchers and practitioners who seek cutting-edge theories and computational and experimental methods that advance these fields. Published studies reveal how mechanical vibration and sound impact the design and performance of engineered devices and structures and how to control their negative influences.

Scope: Vibration of continuous and discrete dynamical systems; Linear and nonlinear vibrations; Random vibrations; Wave propagation; Modal analysis; Mechanical signature analysis; Structural dynamics and control; Vibration energy harvesting; Vibration suppression; Vibration isolation; Passive and active damping; Machinery dynamics; Rotor dynamics; Dynamics of MEMS/NEMS; Dynamics and acoustics of metamaterials; Bio-inspired dynamical and acoustical systems; Vehicle dynamics; Smart structures and materials; Acoustic emission; Noise control; Machinery noise; Structural acoustics; Fluid-structure interaction; Aeroelasticity; Flow-induced vibration and noise; Underwater acoustics.

2025: Volume 147, 6 issues
ISSN: 0094-9930
eISSN: 1528-8978
asmedigitalcollection.asme.org/pressurevesseltech

MECHANICAL ENGINEERING MAGAZINE SELECT ARTICLES

Mechanical Engineering Magazine Select Articles

Mechanical Engineering® magazine is the award-winning flagship publication of ASME. Published since 1880, the magazine delivers an interdisciplinary view into engineering trends and breakthroughs, giving readers a roadmap to better understand today's technology and tomorrow's innovations. Feature articles published in the magazine are available on The ASME Digital Collection as ***Mechanical Engineering Magazine Select Articles***.

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ASME CONFERENCE PROCEEDINGS

Every year, more than 20,000 authors from across all continents share their research with colleagues throughout the world by presenting papers at ASME conferences. The demand to publish new research is such that it has raised the status of conferences as the first venue for presentation and subsequent publication.

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MULTIDISCIPLINARY

International Mechanical Engineering Congress and Exposition (IMECE)

Proceedings of IMECE cover cutting-edge engineering research and applications in all mechanical engineering disciplines including aerospace, manufacturing, biomedical and biotechnology, dynamics and control, energy, fluids engineering, heat transfer, mechanics of solids, structures, fluids, acoustics, micro- and nanosystems, transportation, and emerging technologies.
(Content from 2002 to current year as becomes available)

AJK Joint Fluids Engineering (AJKFLUIDS)

Proceedings of this global collaboration in advanced fluids engineering address areas of convergence of fluid dynamics and mechanical engineering including the scientific method of exploration and generation of petroleum and natural gas, innovative mechanical and chemical processes for production of non-organic fluid material in production units, and comprehensive evaluation of diverse aspects of fluid mechanics such as multiphase fluid flows, liquid-solid flows, measurement methods of fluids, and instruments and tools used for analysis of fluid behavior.
(Content for 2011, 2015, and 2019)

ASME/JSME Thermal Engineering Joint Conference (AJTEC)

Content of this AJTEC Conference focuses on efforts to integrate thermal engineering with other disciplines and to broaden perspective to include a broad range of time scales (from ultra-rapid to long term) and length scales (from nanoscale to global).
(Content for 2011)

Fluids Engineering Division Summer Meeting (FEDSM)

Proceedings of the FEDSM Conferences feature technical papers on topics in fluid mechanics including pumping machinery, liquid-solid flows, and environmental applications.
(Content from 2002 to current year as becomes available)

Heat Transfer Summer Conference (SHTC)

Proceedings cover cutting-edge research in thermal science and engineering and related areas such as heat transfer in energy systems, aerospace heat transfer, gas turbine heat transfer, and others.
(Content from 2003-2005, 2007-2009, 2012-2013, 2016-2017, and 2019)

International Heat Transfer (IHTC)

Proceedings content ranges from fundamentals of thermal phenomena and traditional thermal applications to the emerging domains of thermal transport in nanomaterials, biosystems, power generation, MEMS, microsystems, information systems, energy conversion devices, aerospace, and hostile environment systems.
(Content for 2010)

International Joint Tribology Conference (IJTC)

Proceedings of the IJTC Conferences cover topics such as nanotribology, biotribology, engineered surfaces, boundary lubrication, fluid film lubrication, machine components tribology, and contact mechanics.
(Content from 2002-2012/excludes 2005)

Water Quality, Drought, Human Health and Engineering Conference (WATER)

Proceedings from this WATER Conference cover the latest information regarding plans for improving the quantity and quality of water, the impact on human health and engineering, and current regulation and policies.
(Content for 2006)

World Tribology Congress (WTC)

Focused on nanotribology and its role in the fast-growing area of nanotechnology, papers from the WTC Conference cover related technologies such as tribochemistry, additives, materials, surface engineering, and aerospace.
(Content for 2005)

BIOMEDICAL AND BIOTECHNOLOGY

ASME Conference on Frontiers in Medical Devices: Applications of Computer Modeling and Simulation (FMD)

Proceedings cover computational modeling, imaging and simulation, novel computational methods, and patient-specific modeling.
(Content for 2013)

Design of Medical Devices Conference (DMD)***

The DMD Conference brings together medical device designers, manufacturers, researchers, and representatives from academia and the public sector.
(Content from 2017 to current year as becomes available)

Frontiers in Biomedical Devices (BIOMED)

Proceedings of the BIOMED Conferences cover the latest developments in biomedical devices and clinical practices in the areas of cardiovascular, orthopedics, and advanced technology.
(Content from 2006-2011)

Global Congress on NanoEngineering for Medicine and Biology (NEMB)

NEMB Proceedings focus on the integration of engineering sciences, mechanical engineering, and nanotechnology to address problems in biology and medicine in order to develop devices for the early detection and cure of diseases.
(Content for 2010 and 2013)

Summer Bioengineering Conference (SBC)

Focused on cutting-edge research in the fields of biomechanics, design, and rehabilitation, the proceedings feature papers on biotransport, human dynamics, fluids, tissue engineering, and other solid mechanics topics.
(Content from 2007-2013)

DESIGN

ASME Citrus Engineering Symposium (CES)***

This symposium focuses on current-day technical issues that strengthen the industry and promote the continuing improvement of citrus products.
(Content from 1955-2010, 2012, and 2014)

ASME/IEEE Joint Rail Conference (JRC)

Encompassing all aspects of rail transportation and engineering research, proceedings of the JRC cover topics that include railroad infrastructure engineering, rail equipment engineering, and planning and development.
(Content from 2006 to current year as becomes available)

Dynamic Systems and Control Conference (DSCC)

Conference Proceedings of the DSCC concentrate on control methods and devices – from servomechanisms and regulators to automatic controls – for dynamic systems involving forces, motion, and/or the flow of energy
or materials.
(Content from 2008 to current year as becomes available)

Engineering Systems Design and Analysis (ESDA)

Focused on engineering and related disciplines, ESDA Conference Proceedings feature technical papers ranging from theoretical developments through to industrial applications and case studies.
(Content from 2004-2014/biennial)

Fluid Power and Motion Control (FPMC)

Proceedings from the FPMC Conferences focus on advances in the design and analysis of fluid power components, such as hydraulic and pneumatic actuators, pumps, motors, and modulating components, in various systems and applications.
(Content from 2013 to current year as becomes available)

Fluid Power Net International Symposium (FPNI)

The FPNI Symposium provides a forum for scientists from all over the world, from both academia and industry, to exchange ideas and opinions on current research and future developments in fluid power technology.
(Content for 2014 and 2016)

Fluid Power Systems Technology (FPST)

Proceedings from this FPMC Conference focus on advances in the design and analysis of fluid power components, such as hydraulic and pneumatic actuators, pumps, motors and modulating components, in various systems and applications.
(Content from 2013 to current year as becomes available)

IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)

Proceedings of the AIM conference highlights advanced intelligent mechatronics systems expecting their promising contribution to our society
(Content for 2022)

Information Storage and Processing Systems (ISPS)

Papers presented cover interdisciplinary research and application topics related to information storage and processing systems.
(Content from 2013-2014 and 2016-2019)

International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC/CIE)

Proceedings of the IDETC/CIE Conferences feature cutting-edge research and accomplishments related to design concepts of machining, reliability, and manufacturability, and the application of computer simulation to the engineering process.
(Content from 2002 to current year as becomes available)

Noise Control and Acoustics Division Conference (NCAD)

These proceedings highlight the latest research in this emerging field.
(Content for 2008, 2012, 2015, and 2018)

Rail Transportation Division Conference (RTD)

Focused on the current state and challenges of the rail transportation industry, papers from this conference cover topics such as track and equipment health monitoring, advanced risk reduction data analysis, and more.
(Content from 2003 and 2007-2013)

Verification and Validation Symposium (VVS)***

This unique event brings together engineers and scientists from a wide array of disciplines that practice verification, validation, and uncertainty quantification (VVUQ) in their computational modeling and simulation. Papers discuss ideas and methods from leading experts for verification of codes and solutions, simulation validation, and assessment of uncertainties in mathematical models, computational solutions, and experimental data.
(Content from 2018 to current year as becomes available)

World Conference on Innovative Virtual Reality (WINVR)

Proceedings of the WINVR Conferences focus on the current challenges in the use of VR to solve industrial problems, barriers to developing VR, cost-benefit analysis, and future trends.
(Content from 2009-2011)

MANUFACTURING AND MATERIALS

Annual Review of Progress in Quantitative Nondestructive Evaluation (QNDE)

Current ideas and results in nondestructive evaluation (NDE) are focused on facilitating a rapid transfer to engineering development.
(Content for 2021)

ASME Aerospace Structures, Structural Dynamics, and Materials Conference (SSDM)

Gathers aerospace structures, structural dynamics, and materials engineers and researchers from industry, academia, and government agencies to discuss technical advancements in this growing sector.
(Content from 2023 to current year as becomes available)

Hypervelocity Impact Symposium (HVIS)***

Proceedings of the HVIS Conference highlight the latest advancements in the basic understanding of hypervelocity impact physics, related phenomenology, and engineering applications.
(Content for 2019)

International Additive Manufacturing Conference (I-AM)

Proceedings of I-AM focused on cutting-edge technology in additive manufacturing R&D.
(Content for 2022)

International Manufacturing Science and Engineering Conference (MSEC)

Proceedings of the MSEC Conferences highlight cutting-edge manufacturing research in materials, processing, properties, applications and systems, and micro- and nanotechnologies.
(Content from 2006 to current year as becomes available)

International Symposium on Flexible Automation (ISFA)

Proceedings cover topics in advanced manufacturing automation technologies essential to meeting industry's needs in flexibility, intelligence, lead-time reduction, lean manufacturing in emerging areas such as nanomanufacturing, biomanufacturing, energy manufacturing, sustainable design and manufacturing, automotive and consumer electronics, information technology, biomedical technology, aerospace and transportation systems, and renewable energy systems, etc.
(Content for 2012)

JSME 2020 Conference on Leading Edge Manufacturing/Materials and Processing (LEMP)

LEMP aims to provide an atmosphere for researchers and engineers to discuss, exchange, and expose ideas, methods and results in conventional, contemporary, and future topics related to a wide variety of manufacturing technologies.
(Content for 2020)

Multifunctional Nanocomposites and Nanomaterials International Conference (MN)

Focused on highlighting the importance of nanotechnology applications in mechanical engineering, the proceedings from this conference cover topics such as fabrication, design, and modeling of nanocomposites and nanomaterials.
(Content for 2006 and 2008)

Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS)

Proceedings of the SMASIS Conferences highlight the latest in smart materials, the cutting edge in adaptive structure applications, and the recent advances in device technologies.
(Content from 2008 to current year as becomes available)

MICROTECHNOLOGY AND NANOTECHNOLOGY

CANEUS: MNT for Aerospace Applications (CANEUS)

Focused on micro-nanotechnology (MNT) development for aerospace applications, the proceedings feature emerging MNT concepts, MNT system development, and end user needs and perspectives.
(Content for 2006)

Energy Nanotechnology International Conference (ENIC)

Papers from the ENIC Conferences cover state-of-the-art research and development in energy-related materials, nanoscale phenomena, devices, systems, manufacturing, and commercialization.
(Content for 2007 and 2008)

Integrated Nanosystems: Design, Synthesis, and Applications (NANO)

Aimed at furthering the development of nanotechnology, proceedings of the NANO Conference focus on the state of the art in devices and systems, nanoscale phenomena, and nanomanufacturing.
(Content for 2004 and 2005)

International Conference on Integration and Commercialization of Micro- and Nanosystems (MNC)

Papers from the MNC Conferences focus on state-of-the-art R&D in micro- and nanoscale phenomena, devices, systems, manufacturing, as well as on the commercialization of micro-and nanotechnologies.
(Content for 2007 and 2008)

International Conference on Micro/Nanoscale Heat Transfer (MNHT)

Focused on state-of-the-art R&D in micro/nanoscale heat transfer, proceedings of MNHT cover topics such as micro/nanofluidics, nanofluids, biomicrofluidics, boiling, and evaporation heat transfer.
(Content from 2008-2009, 2012-2013, 2016, and 2019)

International Conference on Nanochannels, Microchannels, and Minichannels (ICNMM)

Technical papers presented at the ICNMM Conferences are focused on identifying research needs in nanochannels encompassing engineering, MEMS, microfluidics, biomedicine, and many other frontier research disciplines.
(Content from 2003 to current year as becomes available)

International Electronic Packaging Technical Conference and Exhibition (InterPACK)

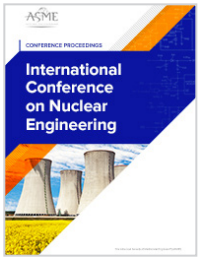
Focused on R&D, manufacturing, and application for packaging and integration of electronic and photonic systems, MEMS, and NEMS, the proceedings cover the latest research and emerging technologies.
(Content from 2003 to current year as becomes available/biennial)

CONFERENCE PROCEEDINGS

NUCLEAR

High Temperature Reactor Technology (HTR)

Proceedings of the HTR Conference are focused on identifying essential requirements needed to manage the implementation of HTR technology and discover uses of HTR beyond nuclear power.
(Content for 2008)



International Conference on Nuclear Engineering (ICONE)

Proceedings of this global conference address the needs of the nuclear industry and cover the latest nuclear technology applications and innovations.
(Content for 2002, 2004, 2006, 2008-2010, 2012-2014, and 2016-2018, and 2020)

International Conference on Radioactive Waste Management and Environmental Remediation (ICEM)

Papers from the ICEM Conferences focus on technologies, operations, management approaches, economics, and public policies in the areas of environmental remediation and radioactive waste management.
(Content for 2003, 2007, 2009-2011, and 2013)

Nuclear Forum (NUCLRF)

Nuclear Forum technical papers cover the most recent developments in the nuclear power industry comprising plants, operations, safety and security, materials and structures, modeling and simulations, advanced reactor concepts, thermal hydraulics and computational fluid dynamics, materials, structures, and components.
(Content for 2015, 2017, and 2018)

Small Modular Reactors Symposium (SMR)

Proceedings topics address the technical, business, and regulatory issues for the deployment of small modular reactors, including technical details for bringing SMRs from design concept into fabrication and building.
(Content for 2011 and 2014)

POWER AND ENERGY

ANES/ASME Joint National Solar Energy Week (ANES/ASME)

Compilation of papers reflecting work in renewable technologies in 2006.
(Content for 2006)

Asset Integrity Management-Ageing and Life Extension Conference (AIM-ALE)

These Proceedings address (a) management systems for a wide range of offshore components and structures and (b) relevant technologies, including emerging technologies for the measurement of damage levels, analytical tools to quantify degradation with a focus on probabilistic developments, and case histories and definition of the way forward to develop recommended practices and standards.
(Content for 2021. For the 2019 AIM-PIMG, please see ASME eBooks.)

Energy Sustainability (ES)

Broad coverage of energy engineering technologies encompassing alternative energy, composite materials, offshore technology, plant engineering, structural dynamics, and more is featured.
(Content from 2007 to current year as becomes available)

Engineering Technology Conference on Energy (ETCE)

Broad coverage of energy engineering technologies encompassing alternative energy, composite materials, offshore technology, plant engineering, structural dynamics, and more is featured.
(Content for 2002)

Gas Turbine India Conference (GTINDIA)

Authors and presenters participate in this event to exchange ideas on research, development, and best practices on gas turbines and allied areas. Authors and presenters include the industry's leading professionals and key decision makers, whose innovation and expertise are shaping the future of turbomachinery.
(Content from 2012-2015, 2017/biennial as becomes available)

Internal Combustion Engine Division Fall Technical Conference (ICEF)

Covering topics related to internal combustion engines such as engine design and lubrication, ICEF brings together members of industry, government, and academia to discuss the latest in the field.
(Content from 2002-2007 and 2009 to current year as becomes available)

Internal Combustion Engine Division Spring Technical Conference (ICES)

Proceedings of the ICES Conferences feature technical papers focused on the design, development, and application of compression-ignition, spark ignition, rotary, and reciprocating engines.
(Content from 2002-2003, 2005-2009, and 2012)

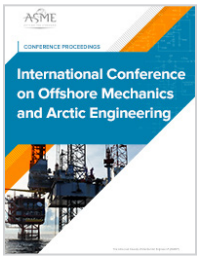
International Conference on Fluidized Bed Combustion (FBC)

Proceedings papers feature cutting-edge research in fluidized bed combustion technology developments and their applications and cover topics such as sustainable fuels, operations, and the environment.
(Content for 2003 and 2005)

International Conference on Fuel Cell Science, Engineering and Technology (FUELCELL)

Technical papers presented at the FUELCELL Conferences cover topics in solar and other renewable energy, fuel cells, and advanced energy technologies.
(Content from 2003 to 2017/excludes 2007)

International Conference on Offshore



Mechanics and Arctic Engineering (OMAE)

Proceedings of the OMAE Conferences feature topics in offshore technology, structures, safety and reliability, materials technology, pipeline and riser technology, and ocean space utilization.
(Content from 2002 to current year as becomes available)

Onshore Petroleum Technology Conference (OPTC)

Aims to help professionals in the onshore oil and gas value chain obtain access to cutting edge technical knowledge, and insights. Facilitates the learning and discussion of important issues to improve safety, reliability, and the environment and performance of stakeholders.
(Content from 2021 to current year as becomes available)

International Joint Power Generation Conference (IJPGC)

Proceedings topics include components, plants and design engineering, operations, maintenance and reliability, combined cycles, turbines and generators, fuels, combustion and emissions, and advanced energy systems.
(Content for 2002 and 2003)

International Offshore Wind Technical Conference (IOWTC)

Papers presented at this conference draw from members of the scientific community, researchers, academia, and the offshore wind engineering industry from around the world. Organized around scientific and project development tracks, topics cover fixed and floating offshore concepts, mooring and foundations, turbines modeling, and more.
(Content from 2018 to current year as becomes available)

International Solar Energy Conference (ISEC)

Technical papers from the ISEC Conferences cover research results, new developments, and novel thermal and mechanical concepts in the area of solar and renewable energy technologies.
(Content from 2002-2006)

Marine Technology and Standards (MTS)***

Topics range from technological impact on the marine industry to corresponding coverage in related Codes and Standards and government regulations.
(Content for 2010, 2013, and 2017)

North American Waste-to-Energy Conference (NAWTEC)

Papers from the NAWTEC Conferences cover topics related to municipal waste-to-energy, combustion engineering science, and emerging waste conversion and processing technologies.
(Content from 2002-2013)

Power Conference (POWER)

Focused on the latest technologies to improve how power plants operate, the proceedings cover topics including fuels, steam generators, heat exchangers, turbines, and plant operations and maintenance.
(Content from 2004 to current year as becomes available)

Turbine Blade Tip Symposium (TBTS)

Multidisciplinary content from this conference addresses the current state of the art in the design, analysis, and improvement of turbine blade tips. A major area of focus is the issue of blade tip burnout. Current proposals on enacted solutions are presented along with studies and industry input that provide insight into physics challenges.
(Content for 2013)

Turbo Expo (GT)

Turbo Expo Proceedings papers cover the latest in the design, manufacture, and operation of gas turbine and aeroengine machinery in various applications in aircraft, marine, and electric power generation.
(Content from 1956 to current year as becomes available)

Wind Energy Symposium (WIND)

These proceedings focus on wind turbine aerodynamics, materials and manufacturing, load and fatigue analysis, controls and structural analysis, and inflow, acoustic noise, and power.
(Content for 2002 and 2003)

PRESSURE TECHNOLOGY

ASME Asia Pacific Pipeline Conference (APPC)

Proceedings of this conference, organized by ASME and the China University of Petroleum, focus on the development of the pipeline industry around the world and highlight technological innovation in the design, safety, maintenance, and management of oil and gas pipelines.
(Content for 2019)

ASME India Oil and Gas Pipeline Conference (IOGPC)

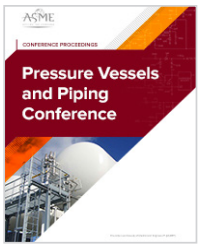
IOGPC Proceedings present research results, new developments, and encourage new initiatives in the oil and gas industry in India. Areas of impact include design and construction, pipeline materials, integrity management, health, safety, and environment.
(Content from 2013 to current year as becomes available/biennial)

ASME International Pipeline Geotechnical Conference (IPG)

The IPG Conference is an international event to promote knowledge sharing, technological progress, and international cooperation for advancing the management of natural forces impacting pipelines with the intent of protecting the public, environment, energy infrastructure assets and ensure safe and reliable operations.
(Content for 2013, 2015, 2017, and 2019/biennial)

ASME/NRC Pump and Valve Symposium (PVS)***

PVS presents comprehensive coverage of the latest issues, technology developments, and research in the preservice and in-service testing of nuclear power plants and components and how these developments are being considered by the ASME/NRC O&M Code Committees.
(Content for 2014, 2017, 2022)



ASME Symposium on Elevated Temperature Application of Materials for Fossil, Nuclear, and Petrochemical Industries (ETAM)***

Presentations focus on the design, fabrication, and construction practices of pressure equipment such as boilers, pressure vessels, and piping components that will operate at elevated temperatures where materials are subject to creep, creep-fatigue, embrittlement, and environmental effects.
(Content for 2014 and 2018)

International Pipeline Conference (IPC)

Papers from the IPC Conferences cover topics in production pipelines, design and construction, database development, facilities integrity management, operations, and maintenance.
(Content from 1996 to current year as becomes available/biennial)

Pressure Vessels and Piping Conference (PVP)

Proceedings of the PVP Conferences cover topics such as Codes and Standards and design and analysis related to pressure vessel and piping technologies for the power and process industries.
(Content from 2002 to current year as becomes available)

***PUBLIC ACCESS CONFERENCE PROCEEDINGS

ASME EBOOKS

ASME publishes high-quality professional and reference works, handbooks, as well as advanced monographs in established and emerging areas of interest to mechanical engineers and allied disciplines.

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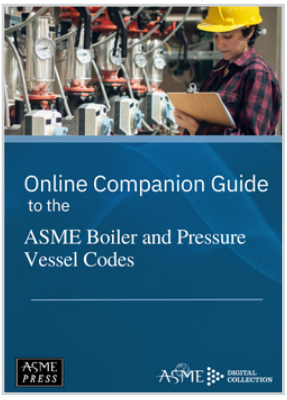
FEATURED EBOOK



Online Companion Guide to the ASME Boiler and Pressure Vessel Codes: Criteria and Commentary on Select Aspects of the Boiler & Pressure Vessel Codes

This new, **online, eBook edition** of the *Companion Guide to the ASME Boiler and Pressure Vessel Codes* is available only by subscription and will provide selected chapters updated annually as available for the latest release of the ASME BPV Standard. Up to 20 updated chapters (out of 40 total chapters) are expected each year, which will be available to online subscribers only.

In addition, each of the updated chapters now have new, professional abstracts, and full-text searching across all chapters, which were not available in previous electronic editions.

Printed hardcopies of the Companion Guide, Sixth Edition, Volumes 1 and 2, published in 2023, are available for purchase on **asme.org**.

e-ISBN: 9780791861981
https://doi.org/10.1115/1.861981

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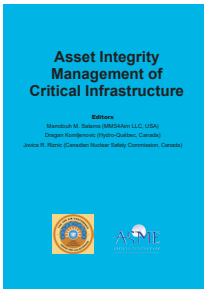
2024



FEATURED TITLE

Asset Integrity Management for Critical Infrastructure (AIM-CI)

As part of its Asset Integrty Management (AIM) conference series, ASME organized in 2024 a specialty conference on Asset Integrity Management of Critical Infrastructure (AIM-CI). The aim was to facilitate the exchange of concepts, processes, and technologies among industries including nuclear, power generation, offshore facilities, and hydrocarbon transportation. For this conference, ASME invited leading industry experts actively engaged in asset integrity management to contribute 18 peer-refereed papers. These papers were organized into four sections. The editors of the conference proceedings provided a review of each section, highlighting key points from the papers and addressing any additional relevant information not covered within them.

ISBN: 9780791887738

Collective Phenomena in Plasmas and Elsewhere: Kinetic and Hydrodynamic Approaches

The universe is made up of systems consisting of a very large number of particles interacting in a very complex way. When studying these systems, a precise microscopic approach is unattainable. In practice, the best strategy is one that is able to “distinguish” between superfluous information and the information needed to make predictions about the evolution of the system. There are two main competing approaches: kinetic and hydrodynamic. Collective Phenomena in Plasmas and Elsewhere presents an overview of the theoretical bases of these kinetic and hydrodynamic approaches, but also discusses their limitations, the links between them and their extension to quantum mechanics and relativity.

ISBN: 9781786307699

Decision and Decision-maker in an Industrial Environment

This book was developed around the observation that two different decision-makers, faced with the same problem, may not make the same decision. The book proposes explanations for this, ranging from the wholly rational to the irrational, and analyzes different factors in decision-making, such as the intention of the decision-maker, the environment in which their decision is made or the process leading to decision-making.

ISBN: 9781786307309

The Finite Element Method: From Theory to Practice

The finite element method, which emerged in the 1950s to deal with structural mechanics problems, has since undergone continuous development. Using partial differential equation models, it is now present in such fields of application as mechanics, physics, chemistry, economics, finance and biology. It is also used in most scientific computing software, and many engineers become adept at using it in their modeling and numerical simulation activities.

ISBN: 9781394229741

Mixed Flow Pumps

Mixed-flow Pumps introduces engineers and researchers to this subject and its important applications. Incorporating all major varieties of mixed-flow pumps used in industrial applications, it employs methods from advanced computational fluid dynamics and high-precision flow field experimentation to characterize and analyze these crucial technologies. Moving from the fundamentals of the technology to its most advanced applications, it’s an essential resource for engineers and industry practitioners looking to develop their understanding of fluid transport.

ISBN: 9781119910787

Smart Users for Energy and Societal Transition

Climate change and the loss of biodiversity are now realities. Their causes and origins stem from the energy, goods and resources relied upon by the lifestyle of a growing part of humanity. Smart Users for Energy and Societal Transition presents this much needed transition, as well as the scenarios and paths essential to mitigating the impacts of climate change.

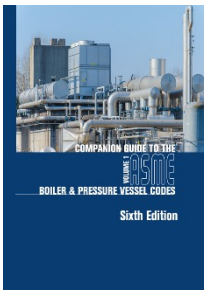
ISBN: 9781786307354

2023

Case Studies in Transient Heat Transfer With Sensitivities to Governing Variables

Every heat transfer problem has to satisfy the first law of thermodynamics, namely the law of conservation of energy. Before steady-state conditions are reached, every heat transfer problem is in an unsteady state and energies in a control volume and energies coming in and out of a control volume can change with time. These time dependent energy conservation in a control volume refers to a fascinating and challenging part of heat transfer called the unsteady state or transient heat transfer. This book deals with twenty-four transient heat transfer problems in our everyday lives.

ISBN: 9780791886786



FEATURED TITLE

Companion Guide to the ASME Boiler & Pressure Vessel Codes, Volume 1, Sixth Edition

This updated and revised Vol. 1 sixth edition of this classic reference work is current to the latest ASME BPV Code release. It is available in a convenient two-volume format that focuses on all twelve sections of the ASME Code, as well as relevant piping codes. Several chapters have new authors and are entirely new, while others have been extensively re-written for this edition.

ISBN: 9780791886519

Companion Guide to the ASME Boiler & Pressure Vessel Codes, Volume 2, Sixth Edition

This updated and revised Vol. 2 sixth edition of this classic reference work is current to the latest ASME BPV Code release. It is available in a convenient two-volume format that focuses on all twelve sections of the ASME Code, as well as relevant piping codes. Several chapters have new authors and are entirely new, while others have been extensively re-written for this edition.

ISBN: 9780791886526

2022

Analysis of ASME Boiler, Pressure Vessel, and Nuclear Components in the Creep Range

Many structures in chemical plants, refineries, and power generation plants operate at elevated temperatures where creep and rupture are a design consideration. At such elevated temperatures, the material tends to undergo gradual strain with time, which could eventually lead to failure. Thus, the design of such components must take into consideration the creep and rupture of the material. *Analysis of ASME Boiler, Pressure Vessel, and Nuclear Components in the Creep Range* introduces the general principles of design at elevated temperatures with extensive references cited for further in-depth understanding of the subject.

ISBN: 9781119679462

Consensus on Operating Practices for the Control of Feedwater and Boiler Water Chemistry in Industrial and Institutional Boilers

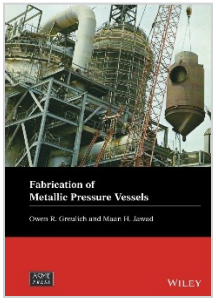
The Water Technology Subcommittee of the ASME Research and Technology Committee on Water and Steam in Thermal Systems has revised the *Consensus on Operating Practices for the Control of Feedwater Boiler Water Chemistry in Modern Industrial Boilers.* This current document is an expansion and revision of the original, with reordered and modified texts.

ISBN: 9780791885093

Engineering Practice with Oilfield and Drilling Applications

This book explains how to apply time-tested engineering design methods when developing equipment and systems for oil industry and drilling applications. Although specific requirements and considerations must be incorporated into an engineering design for petroleum drilling and production, the approach for developing a successful solution is the same across many engineering disciplines. *Engineering Practice with Oilfield and Drilling Applications* helps readers understand the engineering design process while demonstrating how basic engineering tools can be applied to meet the needs of the oil and petroleum industry.

ISBN: 9781119799498



FEATURED TITLE

Fabrication of Metallic Pressure Vessels

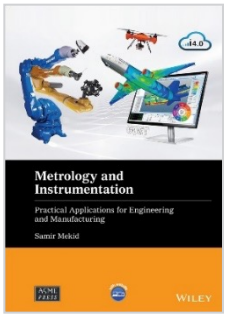
Fabrication of Metallic Pressure Vessels delivers comprehensive coverage of the various processes used in the fabrication of process equipment. The authors, both accomplished engineers, offer readers a broad understanding of the steps and processes required to fabricate pressure vessels, including cutting, forming, welding, machining, and testing, as well as suggestions for controlling costs.

ISBN: 978111967486543

Flow-Induced Vibration Handbook for Nuclear and Process Equipment

Excessive flow-induced vibration causing failures by fatigue or fretting wear must be avoided in process and nuclear components. That is the purpose of this handbook. It helps engineers design, operate, and diagnose heat transfer equipment. The emphasis is on two-phase flow-induced vibration.

ISBN: 9781119810964



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Metrology and Instrumentation: Practical Applications for Engineering and Manufacturing

This book provides students and professionals with an accessible foundation in the metrology techniques, instruments, and governing standards used in mechanical engineering and manufacturing. The book opens with an overview of metrology units and scale, then moves on to explain topics such as sources of error, calibration systems, uncertainty, and dimensional, mechanical, and thermodynamic measurement systems.

ISBN: 9781119721734

Robust Control: Youla Parameterization Approach

Discover efficient methods for designing robust control systems. This title demonstrates that feedback control can be elegantly designed in the frequency domain using the Youla parameterization approach. It offers deep insights into the many practical applications from utilizing this technique in both Single Input Single Output (SISO) and Multiple Input Multiple Output (MIMO) design. Finally, the book provides an estimation technique using Youla parameterization and controller output observer for the first time. Perfect for industrial researchers and engineers working with control systems, *Robust Control: Youla Parameterization Approach* is also an indispensable resource for graduate students in mechanical, aerospace, electrical, and chemical engineering.

ISBN: 9781119500360

2021

Advanced Multifunctional Lightweight Aerostructures

This review of the newest methodologies for the characterization and modelling of lightweight materials and structures offers in-depth analyses of the thermal, electrical, and mechanical responses of multi-functional lightweight structures.

ISBN: 9781119756712

Advances in Computers and Information in Engineering Research, Volume 2

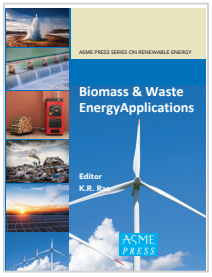
This is the second volume in this book series that aims to capture advances in computers and information in engineering research, especially by researchers and members of ASME's Computers & Information in Engineering (CIE) Division. The series focuses on advances in computational methods, algorithms, tools, and processes on the cutting edge of research and development as they have evolved and/or have been reported during the last three to five annual CIE conferences.

ISBN: 9780791862025

Bearing Dynamic Coefficients in Rotordynamics

The revised and updated 2021 edition, *Bearing Dynamic Coefficients in Rotordynamics*, delivers an authoritative guide to the fundamentals of bearing and bearing dynamic coefficients containing various computation methods. Three of the most popular and state-of-the-art methods of determining coefficients are discussed in detail. The computation methods covered include an experimental linear method created by the author and numerical linear and nonlinear methods using the finite element method.

ISBN: 9781119759263



Biomass & Waste Energy Applications

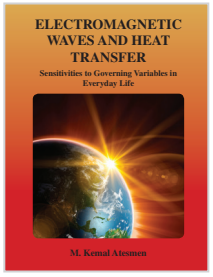
This second volume of the ASME Press Book Series on Renewable Energy is based on updated chapters from the classic 2011 *Handbook of Energy and Power Generation* plus new chapters. Nine experts from academia and practicing professionals from the U.S. and India cover varied aspects of biomass and waste energy in use around the globe. They highlight current usage and the potential of untapped resources. A comprehensive Index helps users easily navigate through the text and graphics.

ISBN: 9780791883679

Chronicles of Mechanical Engineering in the United States

Issued in commemoration of the 50th anniversary of ASME's history and heritage committee, this new book collects, in a single place, historical contributions published over the past 50 years in ASME's flagship magazine *Mechanical Engineering*.

ISBN: 9780791884843



Electromagnetic Waves and Heat Transfer: Sensitivities to Governing Variables in Everyday Life

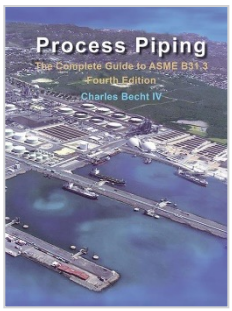
Electromagnetic waves are studied in almost every scientific field from astronomy, agriculture, chemistry, medicine to physics. This book focuses on heat transfer aspects of electromagnetic waves. Twenty-four chapters provide solutions to heat transfer problems from electromagnetic waves' radiation energy, with different uses and cases related to our lives. Each problem solution also investigates the sensitivity of critical independent variables to governing dependent variables.

ISBN: 9780791883648

Fundamentals of CANDU Reactor Physics

With more than 75 years of combined working experience in the area of reactor physics and safety, the intention of the authors of this monograph is to provide a practical book on reactor physics, particularly for the safe operation of aged CANDU reactors, with minimal mathematics or equations. This book is ideal as a reference for physicists, operators, regulatory staff, and for those who need to interact with reactor physicists at CANDU sites, nuclear laboratories, institutes, universities, or engineering companies.

ISBN: 9780791884836



FEATURED TITLE

Process Piping: The Complete Guide to the ASME B31.3, Fourth Edition

Fully updated for the 2020 Edition of the ASME B31.3 Code, this fourth edition provides background information, historical perspective, and expert commentary on the ASME B31.3 Code requirements for process piping design and construction. It provides the most complete coverage of the Code that is available today and is packed with additional information useful to those responsible for the design and mechanical integrity of process piping.

ISBN: 9780791884829

Steam Jet Ejectors for the Process Industries

This, the first comprehensive review of steam jet ejector technology, presents a wide range of methods for achieving maximum performance. The book fully explains how different ejectors are installed, how they operate, and how they are tested and maintained. The basic theories and practical information presented using a minimum of engineering jargon, will give chemical and mechanical engineers as well as technicians the answers to their questions about how to achieve maximum performance in utilizing steam jet refrigeration, gas jet compressors, and the various utility ejectors that use water, air, steam, or other fluids for pumping, conveying and mixing tasks.

ISBN: 97807918884614

Technical Writing A-Z: A Commonsense Guide to Engineering Reports and Theses, Second Edition (British English Edition)

This second edition has been revised and updated. Not intended to be read from cover to cover, this book was designed instead to be a quick and useful reference for students, early career engineers, and experienced professionals alike. It provides guidelines, advice, and technical information for preparing formal documents--covering a range of report formats (e.g., assessment, laboratory, and progress reports). This concise, no-nonsense guide provides alphabetically ordered and cross-referenced topics, which make it easy to find answers to questions related to writing a technical report or thesis.

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ISBN: 9780791884621

Turbo/Supercharger Compressors and Turbines for Aircraft Propulsion in WWII

This book is a unique blend of history, technology review, theoretical fundamentals, and design guide. The subject matter is primarily piston aeroengine superchargers - developed in Germany during the Second World War (WWII) - which are centrifugal compressors driven either by the main engine crankshaft or by an exhaust gas turbine. The core of the book is an unpublished manuscript by Karl Kollmann, who was a prominent engineer at Daimler-Benz before and during the war.
ISBN: 9780791884676

Two-Phase Heat Transfer

This book is primarily intended for design and development engineers. The emphasis of this book is therefore on information which is of practical use. For this reason, theories and methods that do not provide usable solutions are covered briefly, although sufficient references are provided for more information. Effort is made to provide the best available information for the design of heat exchangers in a clear and concise manner. This information includes experimental data, theoretical solutions, and empirical correlations.
ISBN: 9781119618614

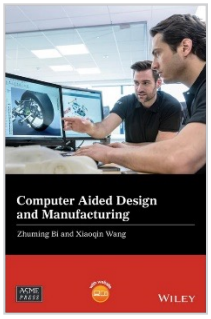
Vibration Assisted Machining: Theory, Modelling and Applications

The first book to comprehensively address the theory, kinematic modelling, numerical simulation, and applications of vibration assisted machining. This book covers all key aspects of vibration assisted machining, including cutting kinematics and dynamics, the effect of workpiece materials, and wear of cutting tools. It also addresses practical applications for these techniques. Case studies provide detailed guidance on the design, modeling, and testing of VAM systems. Experimental machining methods are also included, alongside considerations of state-of-the-art research developments on cutting force modeling and surface texture generation.
ISBN: 97801119506355

Vibrations of Linear Piezostructures

Vibrations of Linear Piezostructures is an introductory text that offers a concise examination of the general theory of vibrations of linear piezostructures. This important book brings together in one comprehensive volume the most current information on the theory for modeling and analysis of piezostructures. The authors explore the fundamental principles of piezostructures, review the relevant mathematics, continuum mechanics and elasticity, and continuum electrodynamics as they are applied to electromechanical piezostructures, and include the work that pertains to linear constitutive laws of piezoelectricity.
ISBN: 9781119393405

2020



FEATURED TITLE

Computer Aided Design and Manufacturing

This book addresses the need to provide up-to-date coverage of current CAD/CAM usage and implementation. It covers, in one source, the entire design-to-manufacture process, reflecting the industry trend to further integrate CAD and CAM into a single, unified process. It also updates the computer aided design theory and methods in modern manufacturing systems and examines the most advanced computer aided tools used in digital manufacturing.
ISBN: 9781119534211

Computer Vision for Structural Dynamics and Health Monitoring

This book provides comprehensive coverage of theory and hands-on implementation of computer vision-based sensors for structural health monitoring (SHM) and is the first to fill the gap between scientific research and its practical applications. It provides a complete, state-of-the-art review of the collective experience that the SHM community has gained in recent years. It also extensively explores the potentials of the vision sensor as a fast and cost-effective tool for solving SHM problems.
ISBN: 9781119566588

Design and Analysis of Centrifugal Compressors

This comprehensive overview of the theoretical fluid dynamic models describes the flow in centrifugal compressors and the modern techniques for the design of more efficient centrifugal compressors. The author, a noted expert in the field with over 40 years of experience, evaluates relevant numerical and analytical prediction models for centrifugal compressors with special attention to their accuracy and limitations. Relevant knowledge from the last century is linked with new insights.
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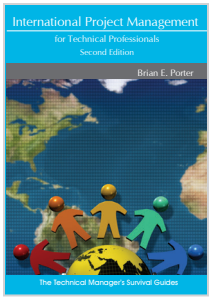
Fundamentals of Heat Engines: Reciprocating and Gas Turbine Internal Combustion Engines

This book offers comprehensive coverage of heat engine cycles. From ideal (theoretical) cycles to practical and real cycles, it gradually increases in degree of complexity so that newcomers can learn and advance at a logical pace, and so instructors can tailor their courses toward each class level. To facilitate the transition from one type of cycle to another, it offers additional material covering fundamental engineering science principles in mechanics, fluid mechanics, thermodynamics, and thermochemistry.
ISBN: 9781119548768

Geometric Dimensioning and Tolerancing: Applications, Analysis, Gauging and Measurement [per ASME Y14.5-2018]

This textbook is for anyone whose work requires them to communicate, interpret, or manufacture products through the use of engineering drawings and/or CAD models that use Geometric Dimensioning and Tolerancing. Readers will learn the new ASME Y14.5-2018 standard on Dimensioning and Tolerancing, as well as the differences between that standard and prior revisions of Y14.5.
ISBN: 9780578470481



International Project Management for Technical Professionals, Second Edition

This book is intended as a practical tool rather than purely theoretical as one might find in many management books released today. Much of the book is based on practical experience, strategies and techniques attempted with various experience levels from interns and students to managing Ph.D. level engineers and scientists.

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ISBN: 9781119536574

Non-Proliferation Nuclear Forensics: Canadian Perspective

The authors provide an overview of Canada's nuclear forensics (NF) capability in addition to general aspects of nuclear forensics that are useful for both nuclear forensic practitioners and countries that are signatories to the Nuclear Non-Proliferation Treaty in establishing their NF capability. After summarizing challenges first responders face at crime scenes involving RN materials, they describe the RN materials from the uranium fuel cycle in Canada that are most relevant to NF.

ISBN: 9780791862032

Offshore Compliant Platforms: Analysis, Design, and Experimental Studies

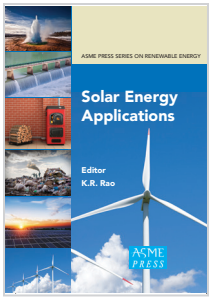
This authoritative guide to the analysis and design of compliant offshore structures focuses on a new generation of platforms such as: triceratops, buoyant leg storage, and regasification platforms. The authors include basic information on the conceptual development of conventional platforms, as well as detailed descriptions of the design and development of new deep-water platforms. The book presents a detailed analysis of environmental loads inherent in offshore locations such as waves, wind, and current.

ISBN: 9781119669777

Pipeline Integrity Management Under Geohazard Conditions

Forty-two peer-refereed papers compile the results of extensive research as well as assemble pipeline operators' experiences in tackling geohazard challenges for both new and vintage pipelines. In addition to the experts' papers, the editors of the book prepared an introduction to each section that includes summary review of the different papers in the section. The papers are presented in 10 sections addressing all aspects of geohazard integrity management.

ISBN: 9780791861998



FEATURED TITLE

Solar Energy Applications

This first volume in the new ASME Press Book Series on Renewable Energy is based on updated chapters from the classic 2011 *Handbook of Energy and Power Generation.* The discussions cover varied aspects of solar energy in use around the globe. Chapters 1 through 6 deal with solar energy in over 200 pages addressed by 15 experts from academia, NASA, and practicing professionals from the U.S., Europe, China, and India.

ISBN: 9780791862001

Theory of Solid-Propellant Nonsteady Combustion

Summarizing theoretical approaches within the framework of the Zeldovich-Novozhilov (ZN-) theory, this book contains equations governing unsteady combustion and applies them systematically to a wide range of problems of practical interest. Theory conclusions are validated, as much as possible, against available experimental data. It provides an accurate up-to-date account and perspectives and is also accompanied by a website that hosts solutions to problems in the book.

ISBN: 9781119525707

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