2018 CATALOG

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ASME SETTING THE STANDARD

The American Society of Mechanical Engineers® (ASME®)

2018 CATALOG

ASME DIGITAL COLLECTION

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The ASME eBook collection offers over 200 recent and classic ASME books, with selected titles going back to the 1990s. Check out our bestsellers!

ADVANCING THE FLOW OF ENGINEERING KNOWLEDGE

Dear Colleague,

We are pleased to present the **2018 American Society of Mechanical Engineers (ASME)** Digital Collection catalog, representing one of the largest technical publishing operations in the world. Our portfolio supports the core mission of the society itself: to serve as an **essential resource for professionals seeking engineering solutions to global challenges.** As a mission-driven, not-for-profit scholarly publisher, we are devoted to the **widest dissemination of our content.**

ASME's publications are designed to support our membership, as well as the broader engineering community, throughout the entire **innovation lifecycle** and to promote **interdisciplinary collaboration.** We offer many of the profession's most prestigious journals, conference proceedings, and eBooks hosted on The ASME Digital Collection platform (asmedigitalcollection.asme.org). ASME's international reputation as a provider of high quality, highly technical information is founded on a robust review process that flows through all aspects of our publishing program.

Serving Our Engineering Community

Presently, ASME publishes 28 journals including THREE new titles launched since 2015: *Journal of Nuclear Engineering and Radiation Science; Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering* (in collaboration with the American Society of Civil Engineers' sister journal); and the *Journal of Verification, Validation and Uncertainty Quantification.*

In 2017, ASME is instituting an author-choice open access program. As you know, this publishing option makes journal contributors' work immediately accessible to all readers upon publication and supports compliance with research funder mandates.

NEW! In 2018, we will launch the ***Journal of Nondestructive Evaluation, Diagnostics, and Prognostics in Engineering Systems.*** Our research has shown that there is a need for coverage of many interdisciplinary aspects of nondestructive evaluation and structural health monitoring that fall within the purview of mechanical engineering and related disciplines like materials science, electrical engineering, physics, mathematics, software engineering, and computer science (refer to page 9 for more information).

We continue to actively seek out and integrate new technologies and intelligent tools to enhance the user experience and information discovery on The ASME Digital Collection platform. Our close connection with the engineering community has enabled us to **identify key technologies that will guide our future content expansion strategies:** Bioengineering; Clean Energy; Manufacturing; Pressure Technology; and Robotics. As such, new journal launches are anticipated for 2018 and beyond. We will keep you fully informed as new publications become available.

Supporting Our Library Community

We pride ourselves on being information providers, not profiteers. As a not-for-profit publisher mandated to serve the needs of our community, **we are strategically positioned to serve one of your primary needs as well, controlling prices.** Year-on-year subscription rate increases are held to a minimum to help you maximize your library's resources.

Moving Towards Engineering Solutions

At ASME, we are proud of our partnership with the engineering research community. Together we deliver the validated, high quality information that mechanical and other engineers need every day to find solutions that benefit humankind.

Kind regards,

Philip DiVietro

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

MECHANICAL ENGINEERING CONTENT AND BEYOND...

The ASME Digital Collection is ASME's authoritative, online reference for the mechanical engineering and related research communities. It provides unparalleled depth, breadth, and quality of peer-reviewed content:

- ASME's Journals from 1960 – present
- ASME's Conference Proceedings from 2000 – present
- ASME eBooks selected from 1993 – present

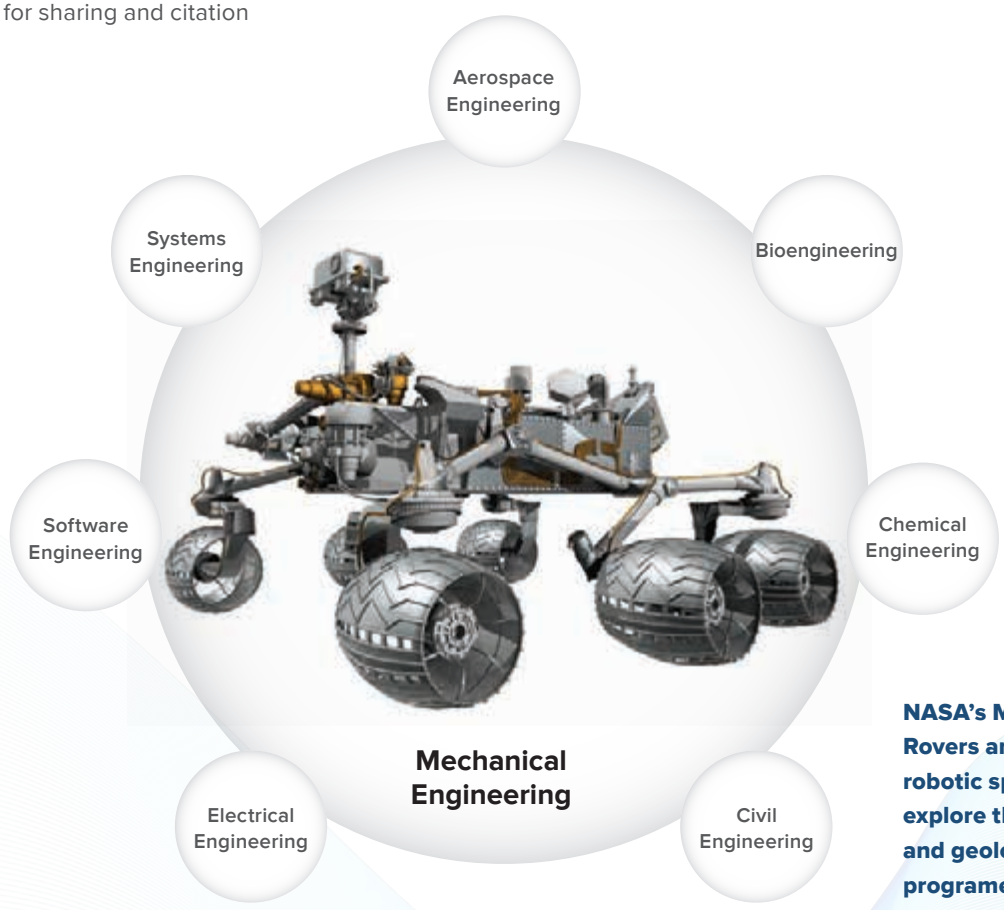
Users of The ASME Digital Collection benefit from:

- Powerful search tools that retrieve content simultaneously from journals, conference proceedings, and eBooks
- A robust and customized taxonomy delivering highly accurate results and related content from the entire collection
- Topic Collections for specific subject areas
- Tools for sharing and citation
- Personalization capabilities that enable customized page display, saved figures and tables, subscription summaries, and TOC alerts
- Shibboleth institutional login
- COUNTER/SUSHI compliance
- Indexed in top A&I services

ASME publishes some of the most prestigious engineering journals in the world as one way to fulfill its ongoing mission of being an essential resource for professionals seeking engineering solutions to **global** – and even **extraterrestrial** – challenges.

Beyond mechanical engineering, ASME's expanding publishing program covers a wide range of engineering disciplines as well, promoting interdisciplinary problem solving, collaboration, and the advancement of knowledge – attributes embodied by the Mars Exploration Rovers.

Readers can find many of the concepts exemplified by the Mars Rover within the pages of ASME publications.



NASA's Mars Exploration Rovers are part of an ongoing robotic space mission to explore the Martian surface and geology. They are programed to "Follow the Water."

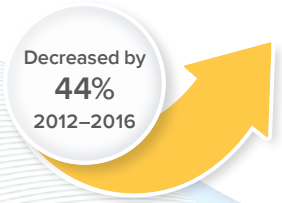
ADVANCING THE FLOW OF ENGINEERING KNOWLEDGE

Global Access

In 2016, engineers at some **2,000 institutions** in over **70 countries** viewed more than **9.1 million abstracts** and almost **4.5 million full-text articles and chapters** and downloaded more than **6 million PDFs from ASME journals, conference proceedings, and eBooks.**

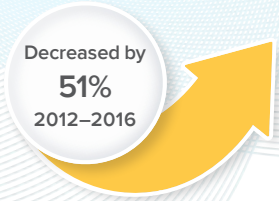
Speed to Publication

ASME is continuously improving our time to publication while maintaining the integrity, thoroughness, and quality of the peer reviews that define the program.



Between 2012-2016 the time in review across the entire ASME Journal Program decreased by 44%, with the average time of 83 days in review for the program in 2016.

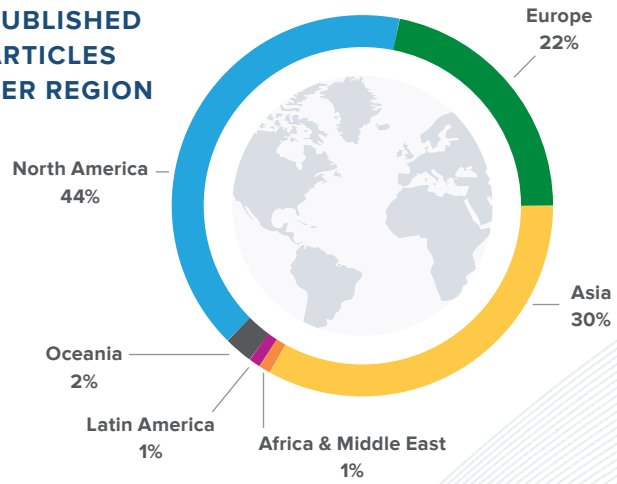
Journal of Applied Mechanics **decreased the time in review by 51% (2012-2016), which means that authors received a final decision in an average of 38 days in 2016!**



International Content

In 2016, more than **2,000 articles were published through the ASME Journal Program** with a global footprint of authors that contributes to and supports the ASME Journal Program.

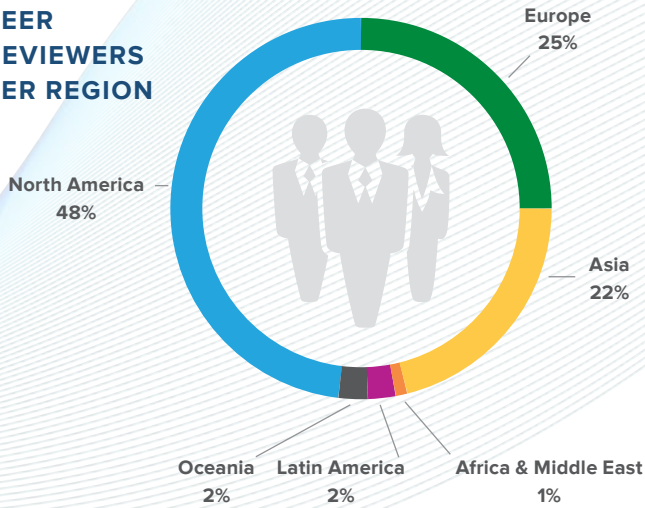
PUBLISHED ARTICLES PER REGION



Expert and Fair Peer Review

At the heart of the program, **7,770 individuals served as peer reviewers for the ASME Journal Program in 2016.** 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 knowledge forward.

PEER REVIEWERS PER REGION



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Online only – Available via subscription or one-time purchase

ASME JOURNALS ONLINE AVAILABILITY

● Journal Archives (1960–1999) ● Journal Frontfiles (2000–2018)

JOURNAL	YEAR	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
Applied Mechanics Reviews																
ASCE-ASME Journal of Risk and Uncertainty In Engineering Systems, Part B: Mechanical Engineering																
ASME Journal of Engineering and Science in Medical Diagnostics and Therapy - **NEW**																
Journal of Applied Mechanics		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Journal of Biomechanical Engineering																
Journal of Computational and Nonlinear Dynamics																
Journal of Computing and Information Science in Engineering																
Journal of Dynamic Systems, Measurement, and Control													●	●	●	●
Journal of Electrochemical Energy Conversion and Storage (formerly Journal of Fuel Cell Science and Technology)																
Journal of Electronic Packaging																
Journal of Energy Resources Technology																
Journal of Engineering for Gas Turbines and Power		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Journal of Engineering Materials and Technology															●	●
Journal of Fluids Engineering		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Journal of Heat Transfer		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Journal of Manufacturing Science and Engineering		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Journal of Mechanical Design																
Journal of Mechanisms and Robotics																
Journal of Medical Devices																
Journal of Micro- and Nano-Manufacturing																
Journal of Nanotechnology in Engineering and Medicine - **SUSPENDED PUBLICATION**																
Journal of Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems- **NEW**																
Journal of Nuclear Engineering and Radiation Science																
Journal of Offshore Mechanics and Arctic Engineering																
Journal of Pressure Vessel Technology																●
Journal of Solar Energy Engineering																
Journal of Thermal Science and Engineering Applications																
Journal of Tribology									●	●	●	●	●	●	●	●
Journal of Turbomachinery																
Journal of Verification, Validation and Uncertainty Quantification																
Journal of Vibration and Acoustics																

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Note: All online publications are also available in print and may be purchased separately or combined with online access (at a discount).

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Available online or in print

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Online only

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The Complete Current Digital Collection Plus Archives
Online only – Available via subscription only

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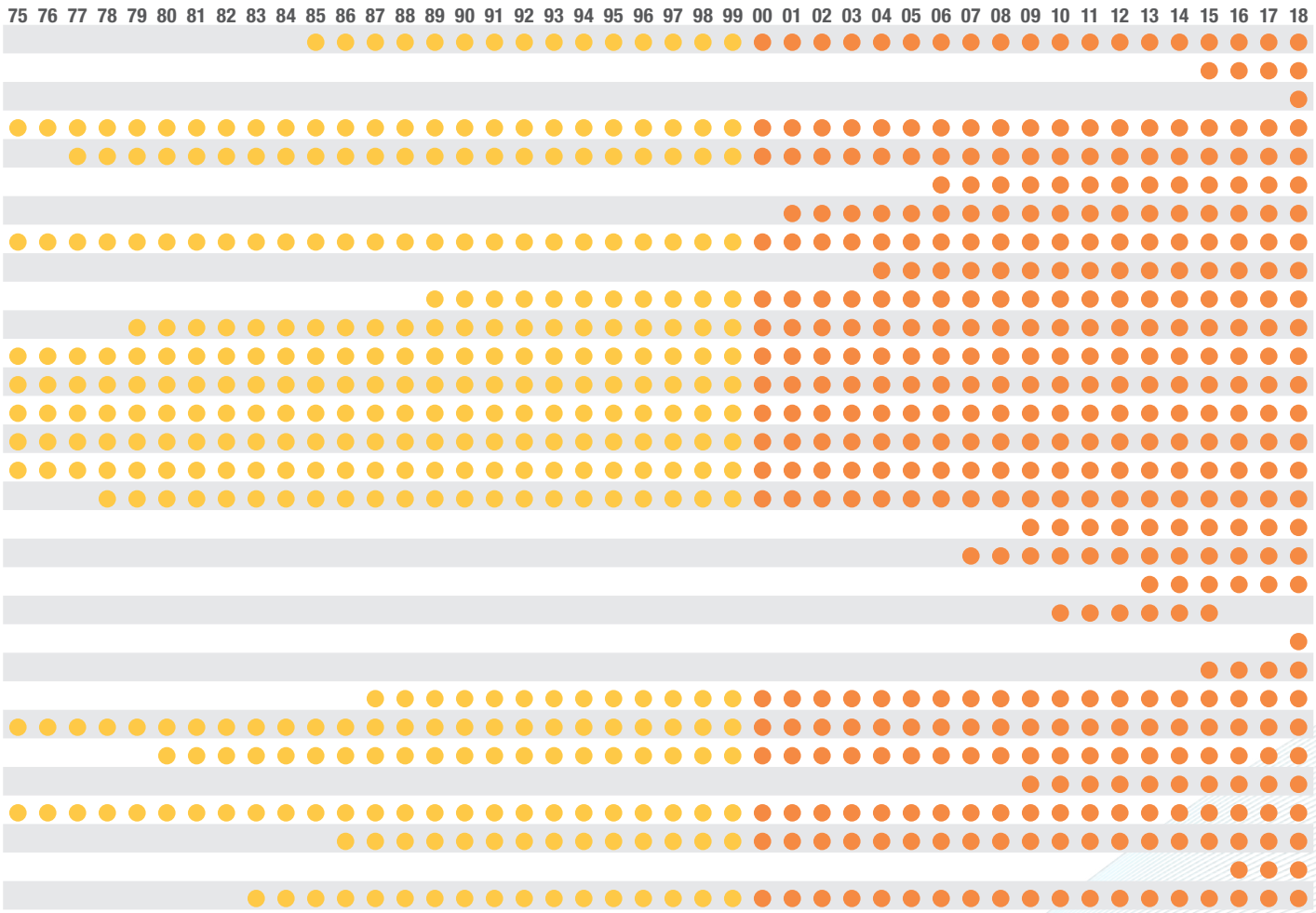
This new flexible purchase option enables **small corporate customers with a maximum of 50 researchers at a single site and from a single corporate domain** to obtain access to individual journal articles, conference proceedings, and eBook chapters of interest from The ASME Digital Collection. Packages are available in 100, 200, and 500 increments.



ASME STANDARDS COLLECTION

asmestandardscollection.org

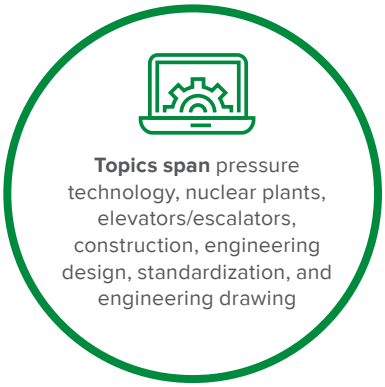
ASME CODES & STANDARDS FOR ACADEMIA

DELIVER THE STANDARD TO YOUR ENGINEERING COMMUNITY

Did you know that almost 50 percent of early career engineers lack standards knowledge?*

The ASME Standards Collection is now available to all academic libraries through a new flexible subscription option. This enables access to the most up-to-date collection of Codes and Standards produced by ASME, one of the oldest and most highly regarded international standards developing organizations. Codes and Standards are associated with the art, science, and practice of mechanical engineering, starting in 1914 with the first edition of its legendary Boiler and Pressure Vessel Code.

ASME **Standards** Collection



More than 500 of the most up-to-date codes and standards in the current collection, covering many technical areas. 3 packages are available:

1. **BPVC Boiler and Pressure Valve Code Complete Set**
   Pioneering modern standards development, these codes enhance public safety and technological advancement to meet the needs of a changing world
2. **Non-Boiler and Pressure Valve Code Standards Complete Set**
   Including Elevators and Escalators (A17 Series), Piping and Pipelines (B31 Series), Bioprocessing Equipment (BPE), Valves, Flanges, Fittings and Gaskets (B16), Nuclear Components and Processes Performance Test Codes
3. **Complete ASME Standards Collection**
   BPVC Boiler and Pressure Vessel Code Complete Set and other Codes and Standards

Give your engineering community, particularly students, the tools needed to succeed in today's increasingly competitive employment environment. Equip your users with an **understanding of the use of Codes and Standards in different contexts,** which will give them a greater and more authentic sense of the world of practice.

"The greatest weaknesses noted by employers of current mechanical engineering graduates, as well as by the early career engineers themselves, were a lack of practical experience in how devices are made or work, **lack of familiarity with Codes and Standards,** and a lack of a systems perspective."*

**ASME Vision 2030 Survey Feedback*

For more information, visit asme.org/about-asme/standards
Contact your regional sales representative regarding pricing and availability.

FOCUS ON...NEW JOURNAL LAUNCHES IN 2018

Journal of Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems

Editor: Tribikram Kundu, The University of Arizona, Tucson, USA

"A need was identified by the NDE/SHM community for a new journal providing coverage of many interdisciplinary aspects of Nondestructive Evaluation (NDE) and Structural Health Monitoring (SMH) that fall within the purview of mechanical engineering, and related disciplines like materials science, electrical engineering, physics, mathematics, software engineering, and computer science. We are excited to launch this journal to satisfy this need."
– Tribikram Kundu, PhD, Editor

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, SHM, and prognosis. This journal will address the need for *an archival international journal* that will cover many aspects of interdisciplinary work in the fields of NDE and SHM and report 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 will bring under one umbrella engineering and science disciplines contributing to NDE, SHM, and prognosis and feature practical applications of NDE and SHM in many technical fields.

Contributions are welcomed in all areas of design, development, and applications of NDE and SHM in engineering systems, including:

- Sensors, electronic hardware, testing methodologies, diagnostic feature extraction, damage classification, diagnostic decision support, prognosis, service life prediction.
- Theoretical developments, numerical analysis and hardware-in-the-loop simulations supporting NDE and SHM methodologies.
- Continuous and periodic condition assessment using ultrasonics, acoustic emission, vibrations, radiography, electromagnetics, optics, imaging, and other traditional and emerging technologies. On-line and off-line diagnostic approaches.
- Applications of NDE and SHM in mechanical, structural, aerospace, naval, and automotive engineering; electronics, systems, nuclear, and off-shore engineering; harsh or extreme environments; power systems, materials testing, manufacturing processes, product quality control, fault and failure analysis in engineering systems.

FIRST ISSUE SCHEDULED FOR PUBLICATION IN 2018
2018: Volume 1, 4 Issues
ISSN: 2572-3901
eISSN: 2572-3898

Article Submission: journaltool.asme.org (select Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems).

MORE INFO FORTHCOMING!

ASME Journal of Engineering and Science in Medical Diagnostics and Therapy

Editor: Ahmed Al-Jumaily, Auckland University of Technology, New Zealand

The ***ASME Journal of Engineering and Science in Medical Diagnostics and Therapy*** will publish original research focused on implementation of engineering and science principles in medical diagnostics, imaging, characterization, and therapy. It will span four primary areas where engineering impacts applied biomedicine: biotechnology in pharmaceutics; clinical applications of biomaterials; biotechnology in clinical systems; and imaging, diagnostics, and therapeutics.

FIRST ISSUE SCHEDULED FOR PUBLICATION IN 2018
2018: Volume 1, 4 Issues

Article Submission: journaltool.asme.org (select ASME Journal of Engineering and Science in Medical Diagnostics and Therapy).

ASME JOURNAL PROGRAM

Founded in 1880, ASME continues the tradition of curating one of most respected archival databases of engineering and related sciences knowledge.

Through **rigorous, peer-reviewed vetting,** the ASME Journal Program publishes the highest quality research and then makes it available to engineering professionals looking to change the world.

With the addition of **more than 2,000 published papers each year** and growing, this continually expanding resource serves as one of the ways that ASME fulfills its mission to improve the quality of life across the globe by empowering engineers to solve the challenges facing humanity.

The titles that make up the **ASME Journal Program cover all areas of specialization across mechanical engineering and related fields** – and is an essential resource for engineers looking to keep abreast of current theory, practice, and application. Publishing in ASME journals is a direct contributor to **career advancement and recognition**.

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

Applied Mechanics Reviews

Editor: Harry Dankowicz, University of Illinois at Urbana-Champaign, USA

Applied Mechanics Reviews (AMR) is an international review journal that serves as a premier venue for dissemination of material across all subdisciplines of applied mechanics and engineering science, including fluid and solid mechanics, heat transfer, dynamics and vibration, and applications. AMR provides an archival repository for state-of-the-art and retrospective survey articles and reviews of research areas and curricular developments. The journal invites commentary on research and education policy in different countries. The journal also invites 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.

2018: Volume 70, 6 issues
ISSN: 0003-6900
eISSN: 2379-0407
appliedmechanicsreviews.asmedigitalcollection.asme.org

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

Editor: Bilal M. Ayyub, University of Maryland, USA

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, uncertainty analysis and modeling, and other related areas.

Scope: Specific topic areas including, but not limited to: Risk analysis methods; Uncertainty analysis and quantification; Management, financial, and insurance issues; Computational methods; Mechanical assets and infrastructure; Materials and electromechanical; Energy; Manufacturing; Water resources, coastal and ocean systems; Bioengineering; Nuclear engineering; Information storage and processing; Project management and construction engineering.

2018: Volume 4, 4 issues
ISSN: 2332-9017
eISSN: 2332-9025
risk.asmedigitalcollection.asme.org

Journal of Applied Mechanics

Editor: Yonggang Huang, Northwestern University, 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.

2018: Volume 85, 12 issues
ISSN: 0021-8936
eISSN: 1528-9036
appliedmechanics.asmedigitalcollection.asme.org

Journal of Biomechanical Engineering

Co-Editors: Beth Winkelstein, University of Pennsylvania, USA

Victor Barocas, University of Minnesota, 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: Artificial organs and prostheses; Biofluid mechanics, measurements; Bioheat transfer; Biomaterials; Cardiovascular biomechanics; Cell and tissue engineering; Gait and kinesiology, Injury biomechanics, orthopedic biomechanics, physiological systems.

2018: Volume 140, 12 issues
ISSN: 0148-0731
eISSN: 1528-8951
biomechanical.asmedigitalcollection.asme.org

Journal of Computational and Nonlinear Dynamics

Editor: Bala Balachandran, University of Maryland, USA

The ***Journal of Computational and Nonlinear Dynamics*** provides a medium for rapid dissemination of original research results in theoretical as well as applied computational and nonlinear dynamics. The journal serves as a forum for the exchange of new ideas and applications in computational, rigid, and flexible 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 and nonlinear problems occurring in aeronautical, biological, electrical, mechanical, physical, and structural systems.

Scope: In the computational and multi-body system dynamics area, topics include: Novel formulations and algorithms for computation in 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, etc. Topics in the nonlinear dynamics area cover: New theories and principles in dynamical systems; Symbolic, perturbation and computational techniques; 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, etc.

INCREASED FREQUENCY IN 2018

2018: Volume 13, 12 issues
ISSN: 1555-1415
eISSN: 1555-1423
computationalnonlinear.asmedigitalcollection.asme.org

Journal of Computing and Information Science in Engineering

Editor: Bahram Ravani, University of California, Davis, USA (through June 2017)

Satyandra K. Gupta, University of Southern California, USA (starting July 2017)

The ***Journal of Computing and Information Science in Engineering*** publishes archival research results and advanced technical applications.

Scope: Solid and geometric modeling; Computational geometry; Reverse engineering; Virtual environments and haptics; Tolerance modeling and computational metrology; Rapid prototyping; Internet-aided design, Manufacturing and commerce; Information models and ontologies for engineering applications; PDM/enterprise information management; AI/knowledge intensive CAD/CAM; Engineering simulation and visualization, including FEA and meshing; CreativeIT; Computational algorithms/ software development for mechanical product development.

2018: Volume 18, 4 issues
ISSN: 1530-9827
eISSN: 1944-7078
computingengineering.asmedigitalcollection.asme.org

Journal of Dynamic Systems, Measurement, and Control

Editor: Joseph Beaman, University of Texas at Austin, USA

The ***Journal of Dynamic Systems, Measurement, and Control*** publishes theoretical and applied original papers in the traditional areas implied by its name, as well as papers in interdisciplinary areas. Theoretical papers should present new theoretical developments and knowledge for controls 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 modeling, simulation of realistic systems, and corroboration of theory with emphasis on demonstrated practicality.

Scope: Adaptive and optimal control; Aerospace systems; Computer control; Distributed parameter systems and control; Energy systems and control; Expert systems and artificial intelligence; Fluid control systems; Instrumentation and components; Manufacturing technology; Mechatronics; Modeling and identification; Nonlinear systems and control; Power systems; Production systems; Real time control; Robotics; Servomechanics; Signal processing; Systems theory; Automotive and transportation systems; Uncertain systems; Robust control and biosystems.

2018: Volume 140, 12 issues
ISSN: 0022-0434
eISSN: 1528-9028
dynamicsystems.asmedigitalcollection.asme.org

Journal of Electrochemical Energy Conversion and Storage

Editor: Wilson K. S. Chiu, University of Connecticut, USA

The ***Journal of Electrochemical Energy Conversion and Storage*** focuses on processes, components, devices, and systems that store and convert electrical and chemical energy. This Journal publishes peer-reviewed, archival scholarly articles, research papers, technical briefs, review articles, perspective articles, and special volumes.

Scope: Specific areas of interest include: Electrochemical engineering; Electrocatalysis; 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.

2018: Volume 15, 4 issues
ISSN: 2381-6872
eISSN: 2381-6910
electrochemical.asmedigitalcollection.asme.org

Journal of Electronic Packaging

Editor: Y. C. Lee, University of Colorado, Boulder, USA

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.

Scope: Microsystems packaging; Systems integration; Flexible electronics; Materials with nano structures and in general small scale systems.

2018: Volume 140, 4 issues
ISSN: 1043-7398
eISSN: 1528-9044
electronicpackaging.asmedigitalcollection.asme.org

Journal of Energy Resources Technology

Editor: Hameed Metghalchi, Northeastern University, USA

The ***Journal of Energy Resources Technology*** disseminates technical information – peer-reviewed scholarly work, research papers, technical briefs, and feature articles – of permanent interest to the Journal's readership. Emphasis is given to extraction and conversion of chemical and thermal to electrical or mechanical forms of energy, including transportation energy requirements, petroleum engineering, natural/unconventional gas extraction technology, advanced power cycles, and the relationship between energy source and environment. A small number of published papers describe case histories, review of recent R&D advancements, or description of a methodology/industrial process. Discussion papers addressing energy policy or regulatory issues that affect energy resources and energy demand and supply chain are also published. Papers that do not include original work, but nonetheless present quality analysis or incremental improvement to past work may be published as technical briefs.

Scope: Specific areas of importance including, but not limited to: Fundamentals of thermodynamics such as energy, entropy and exergy, laws of thermodynamics; Thermoeconomics; Alternative and renewable energy sources; Internal combustion engines; (Geo) thermal energy storage and conversion systems; Fundamental combustion of fuels; Energy resource recovery from biomass and solid wastes; Carbon capture; Land and offshore wells drilling; Production and reservoir engineering; Economics of energy resource exploitation.

INCREASED FREQUENCY IN 2018
2018: Volume 140, 12 issues
ISSN: 0195-0738
eISSN: 1528-8994
energyresources.asmedigitalcollection.asme.org

Journal of Engineering for Gas Turbines and Power

Editor: David Wisler, GE Aviation, retired

The ***Journal of Engineering for Gas Turbines and Power*** publishes archival-quality papers in the areas of gas and steam turbine technology, nuclear engineering, internal combustion engines, and fossil power generation. It covers a broad spectrum of practical topics of interest to industry.

Scope: Subject areas covered include: Thermodynamics; Fluid mechanics; Heat transfer and modeling; Propulsion and power generation components and systems; Combustion, fuels, and emissions; Nuclear reactor systems and components; Thermal hydraulics; Heat exchangers; Nuclear fuel technology and waste management; I. C. engines for marine, rail, and power generation; Steam and hydro power generation; Advanced cycles for fossil energy generation; Pollution control and environmental effects

Specific topic areas include: Gas and steam turbines; Nuclear reactor engineering; I. C. engines; Fossil energy; High-temperature materials and metallurgy; Coal, biomass, and alternative fuels; Cogeneration and combined cycles; Micro-turbines; Oil and gas applications; Rotor balancing and vibration; Bearings; Lubrication; Friction and wear; Fuel injection and sprays; Combustion and emissions technologies; HCCI engine combustion; Hybrid vehicle control; High-temperature nuclear reactors; Advanced steam cycles; Thermal hydraulics CFD; Heat exchangers and cooling systems; Nuclear reactor structural integrity and life cycle; Controls, diagnostics, and instrumentation; Steam generators and condensers; Component life management.

2018: Volume 140, 12 issues
ISSN: 0742-4795
eISSN: 1528-8919
gasturbinespower.asmedigitalcollection.asme.org

Journal of Engineering Materials and Technology

Editor: Mohammed Zikry, North Carolina State University, USA

The ***Journal of Engineering Materials and Technology*** covers a broad spectrum of issues regarding experimental, computational, and theoretical studies of mechanical properties of materials, as well as mechanics of materials issues in metals, polymers, ceramics, composites, biomaterials, and nanostructured materials.

Scope: Multiscale characterization, modeling, and experiments; High-temperature creep, fatigue, and fracture; Elastic-plastic behavior; Environmental effects on material response, constitutive relations, materials processing, and microstructure mechanical property relationships.

2018: Volume 140, 4 issues
ISSN: 0094-4289
eISSN: 1528-8889
materialstechnology.asmedigitalcollection.asme.org

Journal of Fluids Engineering

Editor: Malcolm J. Andrews, Los Alamos National Laboratory, 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. Other papers are devoted to the review of recent contributions to a topic, or the description of the methodology, and/or the physical significance of an area that has recently matured. In addition, contributions to the Journal emphasize investigative techniques, analytical methods, computational fluid mechanics, and experimental methods such as Laser-Doppler-Velocimetry, hot film and hot wire anemometry, Particle-Imager-Velocimetry, and other innovative advances as they appear.

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

2018: Volume 140, 12 issues
ISSN: 0098-2202
eISSN: 1528-901X
fluidsengineering.asmedigitalcollection.asme.org

Journal of Heat Transfer

Editor: Portonovo S. Ayyaswamy, University of Pennsylvania, USA

The ***Journal of Heat 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 that focuses on the evaluation of thermophysical properties associated with heat and mass transfer, as well as on the theory of heat and mass transfer, are published. The *Journal of Heat Transfer* is complementary to the *Journal of Thermal Science and Engineering Applications*, which focuses on applications.

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 manufacturing; Jets, wakes, and impingement cooling; Melting and solidification; Microscale and nanoscale heat and mass transfer; Natural and mixed convection; Porous media; Radiative heat transfer; Thermal systems; Two-phase flow and heat transfer. Such topical areas may be seen in: Aerospace; The environment; Gas turbines; Biotechnology; Electronic and photonic processes and equipment; Energy systems, Fire and combustion, heat pipes, manufacturing and materials processing, low temperature and arctic region heat transfer; Refrigeration and air conditioning; Homeland security systems; Multi-phase processes; Microscale and nanoscale devices and processes.

2018: Volume 140, 12 issues
ISSN: 0022-1481
eISSN: 1528-8943
heattransfer.asmedigitalcollection.asme.org

Journal of Manufacturing Science and Engineering

Editor: Y. Lawrence Yao, Columbia University, 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.

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; Electrical and electrochemical machining; Grinding and abrasive processes; Injection molding and other polymer fabrication processes; Inspection and quality control; Laser processes; Machine tool dynamics; Machining processes; Materials handling; Metrology; Micro- and nano-machining and processing; Modeling and simulation; Nontraditional manufacturing processes; Plant engineering and maintenance; Powder processing; Precision and ultra-precision machining; Process engineering; Process planning; Production systems optimization; Rapid prototyping and solid freeform fabrication; Robotics and flexible tooling; Sensing, monitoring, and diagnostics; Sheet and tube metal forming; Sustainable manufacturing; Tribology in manufacturing; Welding and joining.

2018: Volume 140, 12 issues
ISSN: 1087-1357
eISSN: 1528-8935
manufacturingscience.asmedigitalcollection.asme.org

Journal of Mechanical Design

Editor: Shapour Azarm, University of Maryland, USA

The ***Journal of Mechanical Design*** (JMD) serves the broad design community as the venue for scholarly, archival research in all aspects of the design activity with emphasis on design synthesis. JMD has traditionally served the ASME Design Engineering Division and its technical committees, but it welcomes contributions from all areas of design with emphasis on synthesis. JMD communicates original contributions, primarily in the form of research articles of considerable depth, but also technical briefs, design innovation papers, book reviews, and editorials.

Scope: Design automation, including design representation, virtual reality, geometric design, design evaluation, design optimization, risk and reliability-based optimization, design sensitivity analysis, system design integration, ergonomic and aesthetic considerations, and design for market systems; Design of direct contact systems, including cams, gears and power transmission systems; Design education; Design of energy, fluid, and power handing systems; Design innovation and devices, including design of smart products and materials; Design for manufacturing and the life cycle, 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 component, and machine system design; Design theory and methodology, including creativity in design, decision analysis, design cognition, and design synthesis.

2018: Volume 140, 12 issues
ISSN: 1050-0472
eISSN: 1528-9001
mechanicaldesign.asmedigitalcollection.asme.org

Journal of Mechanisms and Robotics

Editor: Vijay Kumar, University of Pennsylvania, USA

The ***Journal of Mechanisms and Robotics*** publishes research contributions to the fundamental theory, algorithms, and applications for robotic and machine systems.

Scope: Fundamental theory, algorithms, design, manufacture, and experimental validation for mechanisms and robots; Theoretical and applied kinematics; Mechanism synthesis and design; Analysis and design of robot manipulators, hands and legs, soft robotics, compliant mechanisms, origami and folded robots, printed robots, 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.

2018: Volume 10, 6 issues
ISSN: 1942-4302
eISSN: 1942-4310
mechanismsrobotics.asmedigitalcollection.asme.org

Journal of Medical Devices

Co-Editors: Rupak K. Banerjee, University of Cincinnati, USA

William K. Durfee, University of Minnesota, USA

The ***Journal of Medical Devices*** presents papers on medical devices that improve diagnostic, interventional and therapeutic treatments focusing on applied research and the development of new medical devices or instrumentation. It provides special coverage of novel devices that allow new surgical strategies, new methods of drug delivery, or possible reductions in the complexity, cost, or adverse results of health care. The Design Innovation category features papers focusing on novel devices, including papers with limited clinical or engineering results. The Medical Device News section provides coverage of advances, trends, and events.

Scope: Orthopedic, cardiovascular, rehabilitation, neurological, urologic and other medical devices; Bio heat transfer devices; Medical sensors and actuators; Medical instrumentation; Image guided interventions and treatments; Endoscopic, laparoscopic, and catheter devices; Minimally invasive devices; Diagnostic devices; Tissue engineered devices; Drug delivery systems; Medical robotics; Medical device design processes; Medical device manufacturing processes; Human factors as related to medical devices; Computational methods for analyzing the performance of medical devices; Virtual prototyping of medical devices.

2018: Volume 12, 4 issues
ISSN: 1932-6181
eISSN: 1932-619X
medicaldevices.asmedigitalcollection.asme.org

Journal of Micro- and Nano-Manufacturing

Editor: Jian Cao, Northwestern University, USA

The ***Journal of Micro- and Nano-Manufacturing*** provides a forum for the rapid dissemination of original theoretical and applied research in the areas of micro- and nano-manufacturing that are related to process innovation, accuracy, and precision, throughput enhancement, material utilization, compact equipment development, environmental and life-cycle analysis, and predictive modeling of manufacturing processes with feature sizes less than one hundred micrometers. Papers addressing special needs in emerging areas, such as biomedical devices, drug manufacturing, water and energy, are also encouraged.

Scope: Areas of interest including, but not limited to: Unit micro- and nano-manufacturing processes; Hybrid manufacturing processes combining bottom-up and top-down processes; Hybrid manufacturing processes utilizing various energy sources (optical, mechanical, electrical, solar, etc.) to achieve multi-scale features and resolution; High-throughput micro- and nano-manufacturing processes; Equipment development; Predictive modeling 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; Sensors and sensor integration; Design algorithms for multi-scale manufacturing; Life cycle analysis; Logistics and material handling related to micro- and nano-manufacturing.

2018: Volume 6, 4 issues
ISSN: 2166-0468
eISSN: 2166-0476
micronanomanufacturing.asmedigitalcollection.asme.org

Journal of Nanotechnology in Engineering and Medicine

As of January 1, 2016, the *Journal of Nanotechnology in Engineering and Medicine* has suspended publication.

The ***Journal of Nanotechnology in Engineering and Medicine*** covers advancements in nanoscience and applications of nanostructures and nanomaterials to the creative conception, design, development, analysis, control, and operation of devices and technologies in engineering, medical, and life science systems. High quality contributions of three types were published: original research reports addressing nanoscale phenomena, synthesis and analysis of nanomaterials and devices, and applications of these; reviews of emerging nanotechnology topics and research needs to impact engineering and medicine; and opinions/views on the developments and potential applications of nanoscience, engineering, and technology.

ISSN: 1949-2944
eISSN: 1949-2952
nanoengineeringmedical.asmedigitalcollection.asme.org

Journal of Nuclear Engineering and Radiation Science

Editor: Igor Pioro, University of Ontario Institute of Technology, Canada

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: Plant operations, maintenance, engineering, modifications, and life cycle; Nuclear fuel and materials; Plant systems, construction, structures and components; radiation protection and nuclear technology applications; Next generation reactors and advanced reactors; Nuclear safety and security; Codes, standards, licensing and regulatory issues; Fuel cycle, radioactive waste management and decommissioning; Thermal hydraulics; Computational fluid dynamics (CFD) and coupled codes; Reactor physics and transport theory; Nuclear education, public acceptance and related issues; Instrumentation & controls (I&C); Fusion engineering; Beyond design basis events; Panel discussion.

2018: Volume 4, 4 issues
ISSN: 2332-8983
eISSN: 2332-8975
nuclearengineering.asmedigitalcollection.asme.org

Journal of Offshore Mechanics and Arctic Engineering

Editor: Solomon C. Yim, Oregon State University, USA

The ***Journal of Offshore Mechanics and Arctic Engineering*** is an international resource for leading-edge, original peer-reviewed research that advances all aspects of analysis, design, and technology development in ocean, offshore, arctic, and related fields. Its main goal is to provide a forum to promote the evolution of technological progress and international cooperation, and provide timely and in-depth exchange of scientific and technical information among researchers and engineers. It emphasizes the fundamental and discussion mechanics of topics, rather than the applications and case histories. The Journal also documents significant developments in a related field or major accomplishments of a renowned scientist by programming themed issues to record these events.

Scope: Offshore mechanics, drilling technology, fixed and floating production systems; Ocean engineering, hydrodynamics, ship motions, ocean waves and associated statistics; Structural mechanics, safety, reliability, and risk analysis; Riser mechanics, cable and mooring dynamics, pipeline and subsea technology; Materials engineering, fatigue, and fracture, welding technology, non-destructive testing and inspection technology, corrosion protection and control; Fluid-structure interaction, computational fluid dynamics, flow and vortex-induced vibrations; Marine and offshore geotechniques, soil mechanics, soil-pipeline interaction; Ocean renewable energy development and technology; Ocean space utilization; Petroleum technology; Polar and arctic science and technology, ice mechanics, arctic drilling and exploration, arctic structures, ice-structure and ship interaction, permafrost engineering, arctic and thermal design.

2018: Volume 140, 6 issues
ISSN: 0892-7219
eISSN: 1528-896X
offshoremechanics.asmedigitalcollection.asme.org

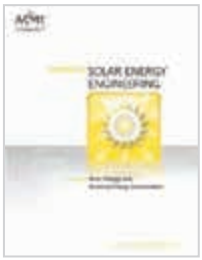
Journal of Pressure Vessel Technology

Editor: Young W. Kwon, Naval Postgraduate School, USA

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. 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; Operation of vessels and piping; Fatigue and fracture prediction; Finite and boundary element methods; 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.

2018: Volume 140, 6 issues
ISSN: 0094-9930
eISSN: 1528-8978
pressurevesseltech.asmedigitalcollection.asme.org



Journal of Solar Energy Engineering

Editor: Robert F. Boehm, University of Nevada Las Vegas, 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 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; 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.

2018: Volume 140, 6 issues
ISSN: 0199-6231
eISSN: 1528-8986
solarenergyengineering.asmedigitalcollection.asme.org

Journal of Thermal Science and Engineering Applications

Editor: S.A. Sherif, University of Florida, 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. It complements the *Journal of Heat Transfer*, which focuses on fundamental research. 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.

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.

INCREASED FREQUENCY IN 2018
2018: Volume 10, 6 issues
ISSN: 1948-5085
eISSN: 1948-5093
thermalscienceapplication.asmedigitalcollection.asme.org

Journal of Tribology

Editor: Michael M. Khonsari, Louisiana State University, USA

The ***Journal of Tribology*** publishes over 100 outstanding technical articles of permanent interest to the tribology community annually and 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.

2018: Volume 140, 6 issues
ISSN: 0742-4787
eISSN: 1528-8897
tribology.asmedigitalcollection.asme.org

Journal of Turbomachinery

Editor: Kenneth Hall, Duke University, USA

The ***Journal of Turbomachinery*** publishes archival-quality, peer-reviewed technical papers that advance the state-of-the-art of turbomachinery technology related to gas turbine engines. The broad scope of the subject matter includes the fluid dynamics, heat transfer, and aeromechanics technology associated with the design, analysis, modeling, testing, and performance of turbomachinery. Emphasis is placed on gas-path technologies associated with axial compressors, centrifugal compressors, and turbines.

Scope: Aerodynamic design, analysis, and test of compressor and turbine blading; Compressor stall, surge, and operability issues; Heat transfer phenomena and film cooling design, analysis, and testing in turbines; Aeromechanical instabilities; Computational fluid dynamics (CFD) applied to turbomachinery, boundary layer development, measurement techniques, and cavity and leaking flows.

2018: Volume 140, 12 issues
ISSN: 0889-504X
eISSN: 1528-8900
turbomachinery.asmedigitalcollection.asme.org

Journal of Verification, Validation and Uncertainty Quantification

Editor: Ashley F. Emery, University of Washington, USA

The ***Journal of Verification, Validation and Uncertainty Quantification*** (JVVUQ) disseminates original and applied research, illustrative examples, and high quality validation experimental data from leaders in the field of VVUQ as applied to: Design of experiments; Computational models; and Analysis of experimental results. The JVVUQ is cross cutting and serves an audience of engineers and scientists. It provides special issues featuring challenge problems and discipline-specific applications.

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.

2018: Volume 3, 4 issues
ISSN: 2377-2158
eISSN: 2377-2166
verification.asmedigitalcollection.asme.org

Journal of Vibration and Acoustics

Editor: I. Y. (Steve) Shen, University of Washington, USA

The ***Journal of Vibration and Acoustics*** is 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. Our 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; Acoustic emission; Noise control; Machinery noise; Structural acoustics; Fluid-structure interaction; Aeroelasticity; Flow-induced vibration and noise.

2018: Volume 140, 6 issues
ISSN: 1048-9002
eISSN: 1528-8927
vibrationacoustics.asmedigitalcollection.asme.org

ASME CONFERENCE PROCEEDINGS

ASME sponsors between 20-30 conferences per year and publishes approximately 100 peer-reviewed proceedings volumes annually. Conference topics encompass the entire spectrum of subject areas of interest to mechanical engineers and associated disciplines.

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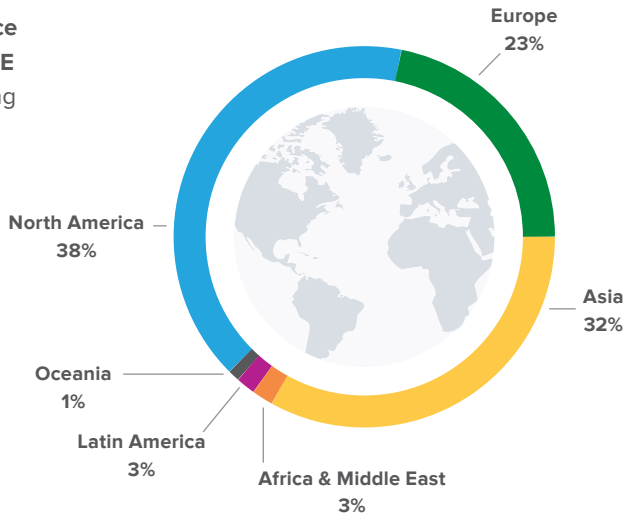
CONFERENCE PROCEEDINGS AUTHORS PER REGION

In 2016, **close to 18,000 conference authors presented papers at ASME conferences** reflecting the following geographic distribution:



For more information about ASME Conference Proceedings on The Digital Collection, visit proceedings.asmedigitalcollection.asme.org

INTERDISCIPLINARY

International Mechanical Engineering Congress and Exposition (IMECE)

Proceedings of IMECE cover cutting edge engineering research and applications in all mechanical engineering disciplines from advanced energy systems to water quality.
(Content from 2002 to current year as becomes available)

AEROSPACE

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)

BIOTECHNOLOGY

Frontiers in Biomedical Devices (BIOMED)

Proceedings of the BIOMED Conference cover the latest developments in biomedical devices and clinical practices in the areas of cardiovascular, orthopedics, and advanced technology.
(Content from 2006-2011, and 2013)

Summer Bioengineering Conference (SBC)

Focused on cutting edge research in the field 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

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)

International Design Engineering Technical Conferences and 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)

DYNAMIC SYSTEMS AND CONTROL

Dynamic Systems and Control Conference (DSCC)

Conference Proceedings of 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)

FLEXIBLE AUTOMATION

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, renewable energy systems, etc.
(Content for 2012)

FLUID POWER SYSTEMS AND TECHNOLOGY

Fluid Power and Motion Control (FPMC)

Proceedings from this 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)

Fluid Power Net International Symposium (FPNI)

This 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)

CONFERENCE PROCEEDINGS

FLUIDS ENGINEERING

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, instruments and tools used for analysis of fluid behavior.
(Content for 2011 and 2015)

Fluids Engineering Division Summer Meeting (FEDSM)

Proceedings of the FEDSM Conference 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

Heat Transfer Summer Conference (HT)

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, and 2016-2017)

INFORMATION STORAGE AND PROCESSING SYSTEMS

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, 2016-2017)

INTERNAL COMBUSTION ENGINE

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 to current year as becomes available)

Internal Combustion Engine Division Spring Technical Conference (ICES)

Proceedings of the ICES 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)

MANUFACTURING

International Manufacturing Science and Engineering Conference (MSEC)

Proceedings of the MSEC Conference 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)

MATERIALS SYSTEMS AND ADAPTIVE STRUCTURES

Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS)

Proceedings of the SMASIS Conference 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

Energy Nanotechnology International Conference (ENIC)

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

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)

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 Conference focus on state-of-the-art R&D in micro- and nano-scale phenomena, devices, systems, manufacturing, as well as on the commercialization of micro- and nano-technologies.
(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, and 2016)

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

Technical papers presented at this conference 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)

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)

NOISE CONTROL AND ACOUSTICS

Noise Control and Acoustics Division Conference (NCAD)

Devoted solely to noise control and acoustics, proceedings of the NCAD Conference highlight the latest research in this emerging field.
(Content for 2008, 2012, and 2015)

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, 2016-2017)

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

Papers from the ICEM Conference focus on technologies, operations, management approaches, economics, and public policies in the areas of environmental remediation and radioactive waste management.
(Content from 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 from 2015 to current year as becomes available)

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)

OCEAN, OFFSHORE, AND ARCTIC ENGINEERING

International Conference on Ocean, Offshore, and Arctic Engineering (OMAE)

Proceedings of the OMAE Conference 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)

PIPELINE ENGINEERING

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)

International Pipeline Conference (IPC)

Papers from the IPC Conference 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)

CONFERENCE PROCEEDINGS

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, and 2017/biennial)

POWER AND ENERGY

Energy Sustainability (ES)

Proceedings of the Energy Sustainability Conference cover cutting edge research in solar and other renewable energy, energy efficiency, fuel cells, and advanced energy technologies.
(Content from 2007 to current year as becomes available)

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 Conference cover topics in solar and other renewable energy, fuel cells, and advanced energy technologies.
(Content from 2003 to current year as becomes available)

International Solar Energy Conference (ISEC)

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

North American Waste-to-Energy Conference (NAWTEC)

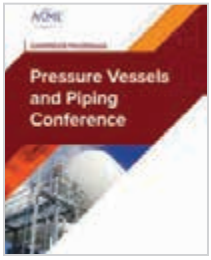
Papers from the NAWTEC Conference cover topics related to municipal waste-to-energy, combustion engineering science, and emerging waste conversion and processing technologies.
(Content from 2002-2013)

Power Conference (POWER)

Focused on 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)

PRESSURE VESSELS AND PIPING

Pressure Vessels and Piping Conference (PVP)



Proceedings of the PVP Conference 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)

RAIL TRANSPORTATION

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 2002 to current year as becomes available)

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)

TRIBOLOGY

International Joint Tribology Conference (IJTC)

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

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)

TURBOMACHINERY

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 and biennial thereafter)

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: Turbomachinery Technical Conference and Exposition (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 2000 to current year as becomes available)

VIRTUAL REALITY

World Conference on Innovative Virtual Reality (WINVR)

Proceedings of the WINVR Conference 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)

WATER

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

Proceedings from this 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)

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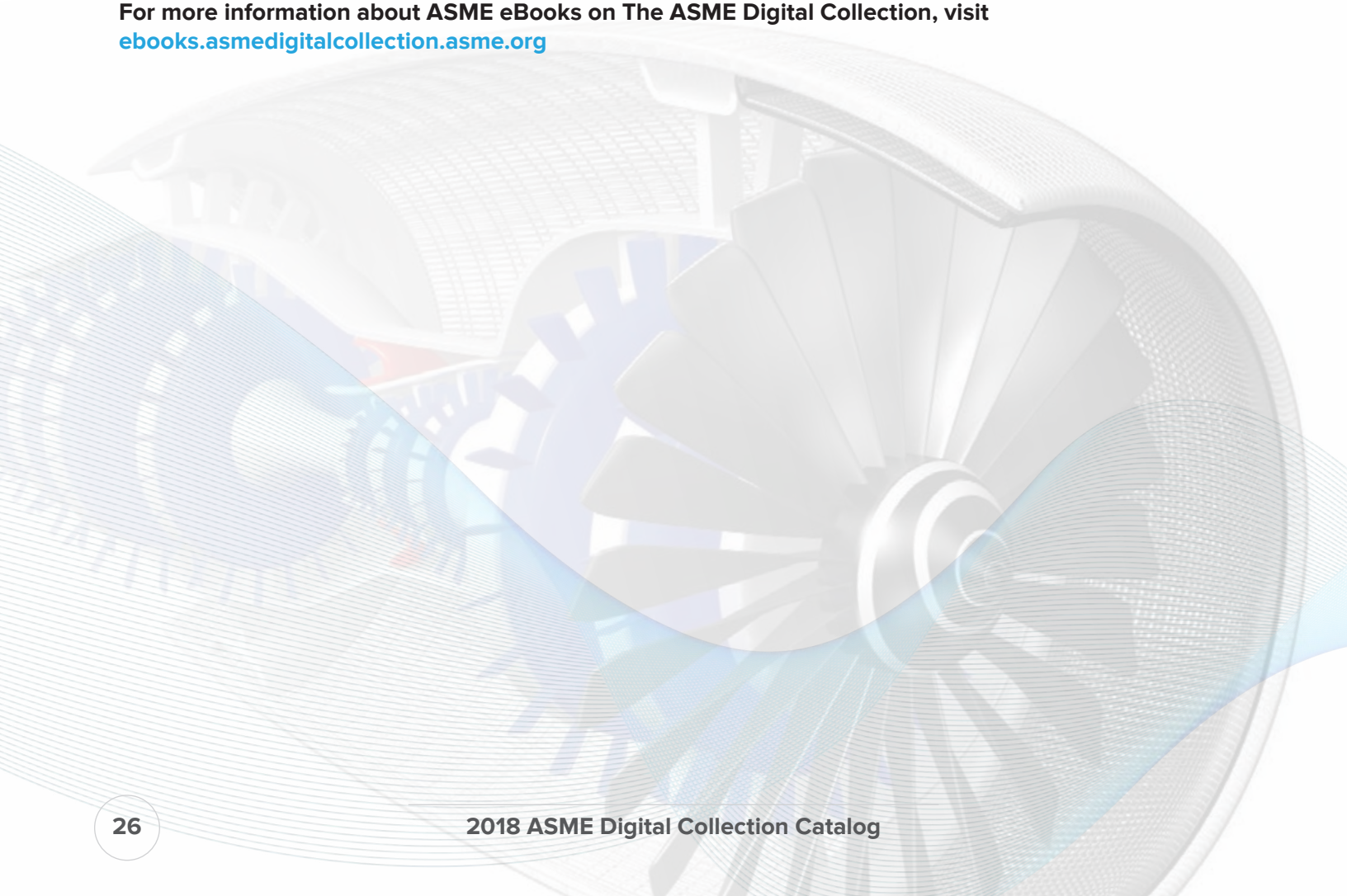

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2017

Applications of Mathematical Heat Transfer and Fluid Flow Models in Engineering and Medicine

This book presents innovative efficient methods in fluid flow and heat transfer developed and widely used over the last fifty years. The analysis is focused on mathematical models, which are an essential part of any research effort as they demonstrate the validity of the results obtained.

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This fully updated and revised fifth 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.

ISBN: 9780791861295

Consensus on Pre-Commissioning Stages for Cogeneration and Combined Cycle Power Plants

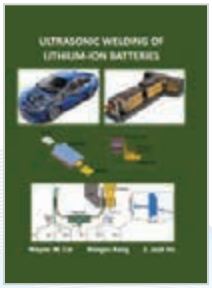
This publication is an important adjunct to several previously published documents prepared to inform, educate, and assist the reader in adequately considering and planning for the many major activities involved in the design, construction, and start-up of cogeneration and combined cycle power plants.

ISBN: 9780791861264

Nuclear Reactor Thermal-Hydraulics: Past, Present and Future

This monograph summarizes the major developments on nuclear reactor thermal-hydraulics over the last fifty years, primarily for water-cooled reactors, and provides a direction for the future thermal-hydraulic developments for water-cooled, including small modular reactors or SMR, and Generation IV reactors.

ISBN: 9780791861288



Ultrasonic Welding of Lithium-Ion Batteries

This book contributes to the knowledge base underpinning ultrasonic metal welding (USMW), particularly for the manufacturing of lithium-ion (li-ion) battery cells, modules, and packs as used in electric vehicles. The contributors represent a team of leading experts in the field.

ISBN: 9780791861257

2016

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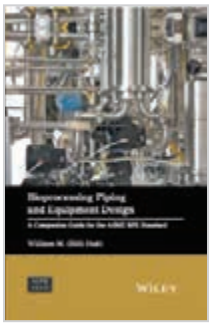
This proceedings publication includes papers and abstracts from a dedicated track focused on Multidisciplinary Engineering at the November 2015 International Mechanical Engineering Conference and Exposition (IMECE 2015).

ISBN: 9780791861080

Basic Principles and Potential Applications of Holographic Microwave Imaging

This monograph offers comprehensive descriptions of the most important principles so far proposed for far-field holographic microwave imaging—including reconstruction procedures and imaging systems and apparatus—enabling the reader to use microwaves for diagnostic purposes in a wide range of applications

ISBN: 9780791860434



Bioprocessing Piping and Equipment Design: A Companion Guide for the ASME BPE Standard

This is a companion guide to the ASME Bioprocessing Piping and Equipment (BPE) Standard and explains what lies behind many of the requirements and recommendations within that industry standard.

ISBN: 9781119284239

Commentary on Article CC-3000 Design

This commentary discusses some of the considerations of the joint ACI-ASME Committee in developing the provisions of ACI Standard 359 and ASME B&PVC Section III, Division 2, Subsection CC, Article CC-3000 on nuclear construction in the 2013 version of the code.

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Human-Powered Vehicles can provide affordable, sustainable, and healthy transportation to people around the globe.

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Design of Mechanical Bearings in Cardiac Assist Devices

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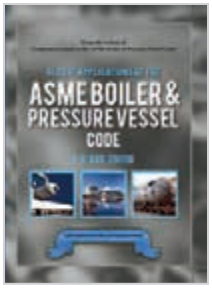

Global Applications of the ASME Boiler & Pressure Vessel Code

This book addresses Global Applications of the ASME B&PV Code. It not only updates information of 16 chapters of the third volume of the third edition of the Companion Guide, but has five additional chapters selected for their unique features of ASME Boiler and Pressure Vessel Codes used internationally. Five sections address Global Applications of ASME B&PV Codes and Standards.

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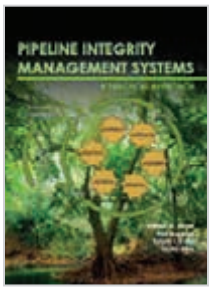

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Pipeline Integrity Management Systems: A Practical Approach

The key for success of Pipeline Integrity Management resides in the dynamic linkage and interaction between a management system (MS) and an Integrity Management Program (IMP), known as a Pipeline Integrity Management System (PIMS), for continuously improving pipeline integrity and sustaining risk reduction.

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2015

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Magnetic Bearings for Mechanical Cardiac Assist Devices

In this book, magnetic bearings and their application in ventricular assist devices (VADs) are introduced. First, the operating principles of magnetic bearings are introduced. Typical structures of passive bearings, which are comprised solely of permanent magnets, and active magnetic bearings (AMB), which make use of electromagnets and position sensors to control the position of the rotor, are described.

ISBN: 9780791860410

Mechanical Blood Trauma in Circulatory-Assist Devices

Mechanical cardiovascular assist devices must be properly designed to avoid damage to the blood they contact. The various pre-clinical designs and testing, surgical considerations, available surveillance techniques, and clinical consequences are discussed using recent and historical case reports to highlight key points.

ISBN: 9780791860397

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Modified Detrended Fluctuation Analysis (mDFA)

The ultimate aim of this study is to make detrended fluctuation analysis (DFA) useful for everyone. It introduces a practical method for making a device that can check cyclic rhythm in nature, such as the heartbeat. This book presents empirical evidence revealed by a modified DFA (mDFA).

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Policy Instruments and Co-Regulation for the Sustainability of Value Chains

This publication describes several examples of policy instruments that improve the sustainability of value chains. The main part of this publication discusses the potential of co-regulation (combination of public policy instruments with private control mechanisms such as sustainability certification) for global value chains such as food, forestry, and bioenergy.

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Supplement to Fluid Mechanics, Water Hammer, Dynamic Stresses, and Piping Design

This Addendum includes recommended additions and corrections to the original text, which was published by ASME Press in 2013. The original text was extensively reviewed and revised and prior to publication the Addendum was used to teach four classes of engineers at SRS.

ISBN: 9780791860496

Thermoactive Foundations for Sustainable Buildings

This monograph documents the current of state-of-the-art in Thermo-Active Foundations (TAFs) suitable for efficiently and sustainably heat and cooling buildings. TAFs, also referred to as thermal or energy piles, offer innovative and sustainable alternatives to ground-source heat pumps as well as other conventional heating, ventilating, and air conditioning (HVAC) systems to heat and cool commercial as well as residential buildings in several regions in the world.

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Toward Consistent Design Evaluation of Nuclear Power Piping by Nonlinear Finite Element Analysis

This monograph addresses several issues essential for achieving a consistent Design-By-Analysis in accordance with the ASME Boiler & Pressure Vessel Code: nonlinear alternative rules, fatigue, thermal ratcheting, dynamic loads, strain-based criteria, nonlinear finite element procedures, supports under combined stresses, and others.

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2014

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Although crystallizing whole tail fibers remains a challenge, other structural data on fiber fragments, related trimeric protein fibers, and other data suggest that some type of repetitive beta secondary structure comprises the rigid rod portions of the tail fibers.

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This publication is an important companion to previously published documents prepared to inform and educate the reader and to develop good chemistry control and operating practices for steam and water usage in thermal systems.

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2013

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Impedimetric Biosensors for Medical Applications: Current Progress and Challenges

The authors discuss the current progress in the medical application of impedimetric biosensors, along with the key challenges in the field.

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International Conference on Computer Research and Development, 5th (ICCRD 2013)

The 5th International Conference on Computer Research and Development (ICCRD 2013) was held in Ho Chi Minh City, Vietnam, February 23-24, 2013.

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