

# ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems - Call for Papers

## Part A: Civil Engineering, and Part B. Mechanical Engineering

The Editorial Board of the ASCE-ASME Journal invites contributions presenting state-of-the-art research and best practices for addressing risk, disaster and failure-related challenges arising from uncertainty. We particularly welcome emerging research relating to availability and processing of big data, including data driven decision support, machine learning and further computational intelligence tools relating to risk and uncertainty.

How to submit

Part A: <https://ascelibrary.org/journal/ajrua6>

Part B: <http://risk.asmedigitalcollection.asme.org/journal.aspx>

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## Editorial Message



Our journal has just recruited the new team of Early Career Editorial Board (ECEB) members. The ECEB was introduced as a mechanism to bring onboard young members serving as “ambassadors” for the journal to increase its visibility and responsiveness to the next generation researchers. The journal received an overwhelming number of high-quality applications out of which eight ECEB members were selected, four of which with dedication to each part of the journal, respectively. We congratulate and welcome our new ECEB members and look forward to inspiring developments. The success of the implementation of the ECEB in its first round in 2018 has exceeded our expectations by far. This junior team has made exceptional contributions to the journal, such as editing highly-regarded Special Issues / Collections and publishing review papers on emerging topics, which have significantly increased the impact of the journal. Based on their exceptional performance we promoted all previous ECEB members to full Editorial Board members and two of them even to roles of Associate Editor and Associate Managing Editor. I would like to take this opportunity to express my sincerest thanks to the team of previous ECEB members and to encourage the new ECEB members to work with their mentors

towards

respective

goals.

The editorial team wishes to congratulate Prof. Sankaran Mahadevan, Managing Editor for Part B, for receiving the IASSAR Senior Research Award (now known as Distinguished Research Award) honoring his life-time achievements in the area of structural reliability. We further wish to congratulate our Editor in Chief, Prof. Michael Beer, for being elected as Chairman of European Safety and Reliability Association and a member of the IASSAR Executive Board.

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Please contact the Editor or the Managing Editors by email if you have an interest to guest edit a special collection (Part A) or a special issue (Part B).

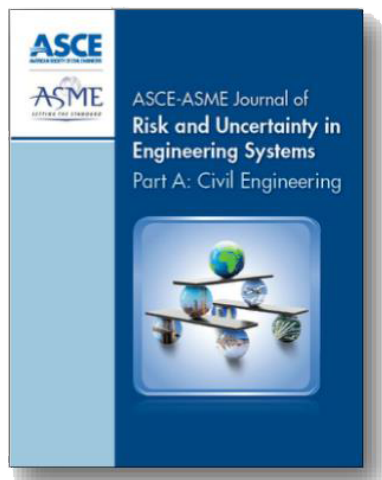
Both Part A and Part B are listed in the [Emerging Sources Citation Index](#) by [Clarivate Analytics](#), formerly Thomson Reuters, with Part A being indexed since 2019. From 2016 onward, all articles are included in [Web of Science](#) and [Scopus](#).

#### **Statement on Open Access**

The editorial team motivates authors to share their pre-prints and/or accepted versions of their paper via institutional or other repositories, scientific social networks or personal websites in the spirit of Open Science. Please make sure to abide by embargos and other Journal Policies, which can be found [here for part A](#) and [here for part B](#).

[skip to Part B](#)

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ASCE-ASME Journal of  
**Risk and Uncertainty in  
Engineering Systems**  
Part A: Civil Engineering

### Part A Civil Engineering - News

Update your library with the latest reading from the ASCE-ASME JRUES journals:

#### **LATEST ISSUES**

- ❖ [V8-4: December 2022 \(in progress\)](#)
- ❖ [V8-3: June 2022 \(in progress\)](#)
- ❖ [V8-2: June 2022](#)
- ❖ [V8-1: March 2022](#)
- ❖ [V7-4: December 2021](#)
- ❖ [V7-3: September 2021](#)
- ❖ [V7-2: June 2021](#)
- ❖ [V7-1: March 2021](#)

#### **CALL FOR PAPERS**

- Special Collection on [Extreme Damage Mechanics for Lifecycle Fatigue Resilience of Infrastructure Systems](#). Paper submission deadline: October 31, 2022.
- Special Collection on [Advances in Efficient Methods in Random Fields Modeling and Analysis](#). Paper submission deadline: March 31, 2023.

#### **LATEST REVIEWS**

- [Resilience-Based Design of Infrastructure: Review of Models, Methodologies, and Computational Tools](#)  
Mahdi Shadabfar, Mojtaba Mahsuli, Yi Zhang, Yadong Xue, Bilal M. Ayyub, Hongwei Huang and Ricardo A. Medina
- [Time-Dependent Reliability of Aging Structures: Overview of Assessment Methods](#)  
Cao Wang, Michael Beer and Bilal M. Ayyub

- [Structural System Reliability: Overview of Theories and Applications to Optimization](#)  
Junho Song, Won-Hee Kang, Young-Joo Lee and Junho Chun
- [Emerging Technologies for Resilient Infrastructure: Conspectus and Roadmap](#)  
Mahmoud Reda Taha, Bilal M. Ayyub, Kenichi Soga, Sherif Daghash, Daniel Heras Murcia, Fernando Moreu and Eslam Soliman

### **LATEST SPECIAL COLLECTIONS**

- [Special Collection on Bayesian Learning Methods for Geotechnical Data](#),  
Ka-Veng Yuen, Jianye Ching, Kok Kwang Phoon
- [Special Collection on Resilience Quantification and Modeling for Decision Making](#),  
Gian Paolo Cimellaro and Nii O. Attoh-Okine

*Please contact the Editor or Managing Editors by email if you are interested in guest editing a Special Collection (Part A)*

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### **Part A - Awards & Recognitions**

#### **Editor's Choice Paper**

[Time-Dependent Resilience of Repairable Structures Subjected to Nonstationary Load and Deterioration for Analysis and Design](#), by Cao Wang and Bilal M. Ayyub

#### **Most Read Paper**

[Climate Impact Risks and Climate Adaptation Engineering for Built Infrastructure](#), by Mark G. Stewart and Xiaoli Deng

#### **Most Cited Paper**

[Scale of Fluctuation for Spatially Varying Soils: Estimation Methods and Values](#), by Brigid Cami, Sina Javankhoshdel, Kok-Kwang Phoon, and Jianye Ching

#### **Editor's Choice Collection**

For each issue of the journal, the Chief Editor may select a paper to be featured on the journal homepage in the ASCE Library. The paper is available for free to registered users for 1 to 4 months, depending on how frequently the journal is

published. A list of Editor's Choice selections is available [here](#).

### 2021 Outstanding Reviewers

André T. Beck ■ Nicholas Chileshe ■ You Dong Ketson ■ Roberto Maximiano dos Santos ■ Ao Du ■ Cheng-Wei Fei ■ Wenping Gong ■ Cao Wang ■ Jie Zhang ■ Wengang Zhang

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### PART A Best Paper Award

Awarded annually to one paper in Part A appearing in the preceding volume year.

### 2021 Best Paper Award

[Global Decoupling for Structural Reliability-Based Optimal Design Using Improved Differential Evolution and Chaos Control](#), by Ali Khodam, Pooria Mesbahi, Mohsenali Shayanfar, Bilal M. Ayyub

The awarded papers are made freely available from the ASCE Library for one year to anyone interested once registered and logged in to download.



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### [Part B Mechanical Engineering - News](#)

Update your library with the latest reading from the ASCE-ASME JRUES journals:

### **LATEST ISSUES**

❖ [V9-1: March 2023](#) (*in progress*)

❖ [V8-1: March 2022](#)

❖ [V8-4: December 2022](#) (*in progress*)

❖ [V7-4: December 2021](#)

❖ [V8-3: September 2022](#)

❖ [V7-3: September 2021](#)

❖ [V8-2: June 2022](#)

❖ [V7-2: June 2021](#)

## **LATEST REVIEWS**

- [A Recent Review of Risk-Based Inspection Development to Support Service Excellence in the Oil and Gas Industry: An Artificial Intelligence Perspective](#), by Taufik Adityawarman, Agus Paul Setiawan Kaban, Johny Wahyuadi Soedarsono
- [Prognostics and Health Management of Wind Energy Infrastructure Systems](#), by Celalettin Yüce, Ozhan Gecgel, Oğuz Doğan, Shweta Dabetwar, Yasar Yanik, Onur Can Kalay, Esin Karpat, Fatih Karpat, Stephen Ekwaro-Osire
- [Uncertainty Quantification for Additive Manufacturing Process Improvement: Recent Advances](#), by Sankaran Mahadevan, Paromita Nath, Zhen Hu
- [Optimizing Predictive Maintenance With Machine Learning for Reliability Improvement](#), by Yali Ren
- [Path Integral Methods for the Probabilistic Analysis of Nonlinear Systems Under a White-Noise Process](#), by Mario Di Paola and Gioacchino Alotta

## **LATEST SPECIAL ISSUES**

- [Special Section on Risk, Resilience, and Reliability for Autonomous Vehicle Technologies: Trend, Techniques, and Challenges](#), by Mohammad Pourgol-Mohammad, Arun Veeramany, Bilal Ayyub
- [Special Section on Probabilistic Approaches for Robust Structural Health Monitoring of Wind Energy Infrastructure](#), by Imad Abdallah and Eleni Chatzi
- [Special Issue on Uncertainty Quantification and Management in Additive Manufacturing](#), by Zhen Hu, Saideep Nannapaneni, Sankaran Mahadevan
- [Special Section on Risk and Uncertainties in Offshore Wind and Wave Energy Systems](#), by Vikram Pakrashi, Jimmy Murphy, Budhaditya Hazra
- [Special Section: Nonprobabilistic and Hybrid Approaches for Uncertainty Quantification and Reliability Analysis Matthias](#), by Matthias G.R. Faes, David Moens, Michael Beer, Hao Zhang, Kok-Kwang Phoon
- [Special Section on Response Analysis and Optimization of Dynamic Energy Harvesting Systems in Presence of Uncertainties](#), by Agathoklis Giaralis, Ioannis A. Kougioumtzoglou, Pol D. Spanos

Please contact the Editor or Managing Editors by email if you are interested in guest editing a Special Section/Issue (Part B).

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### Call for Papers - Part B

- Special Issue on [Digital Twins: A New Frontier in Critical Infrastructure Protection and Resilience](#) (SI053B). Paper submission deadline: December 31, 2022.
- Special Issue on [Community Resilience to Disruptive Events: Models and Analyses, Lessons Learned, and Case Studies](#) (SI055B). Paper submission deadline: February 28, 2023.
- Special Issue on [Uncertainty Quantification & Management in Nonlinear Dynamical Systems in Aerospace and Mechanical](#) (SI058B). Paper submission deadline: March 31, 2023.



### Part B - Awards & Recognitions

#### Most Read Paper

[Digital Twins: State-of-the-Art and Future Directions for Modeling and Simulation in Engineering Dynamics Applications](#), by D. J. Wagg, K. Worden, R. J. Barthorpe, P. Gardner

#### Most Cited Paper

[Digital Twins: State-of-the-Art and Future Directions for Modeling and Simulation in Engineering Dynamics Applications](#), by D. J. Wagg, K. Worden, R. J. Barthorpe, P. Gardner

#### Featured Article

[Resilience Decision-Making for Complex Systems](#), by Julian Salomon, Matteo Broggi, Sebastian Kruse, Stefan Weber, Michael Beer

#### Reviewers of the Year 2021

Chen Jiang ■ Imad Abdallah

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#### Part B Best Paper Award

Awarded annually to one paper in Part B appearing in the preceding volume year.

## 2021 Best paper Award

[On the Effect of the Electrical Load on Vibration Energy Harvesting Under Stochastic Resonance](#), by Panagiotis Alevras

The awarded papers are made freely available from the ASME Digital Collection for one year to anyone interested, once registered and logged in to download. Moreover, ASME offers the authors a one-year free subscription to Part B.

*The award for the Best Paper published in 2021 in Part A and Part B will be presented to the authors in attendance at the ASME Safety Engineering and Risk Analysis Division (SERAD) award ceremony at the International Mechanical Engineering Congress & Exposition (IMECE) which will be held during the period October 30-November 3, 2022, Columbus, OH, <https://event.asme.org/IMECE>. The authors who will not be able to attend the ceremony in person will receive the award's plaque by mail. The ASME Safety Engineering & Risk Analysis Division (SERAD) and the ASCE Infrastructure Resilience Division (IRD) will present the winners for Part A and Part B, respectively, with US\$1000 cash award (to be shared among authors), and subsidize the travel of one author up to US\$500. [✦](#)SERAD is organizing a virtual event during which the winners of the 2021 Best Paper Award for the ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems (Part A and Part B), and of SERAD Student Contest 2022 will deliver a short presentation of their papers. The virtual event is scheduled on October 21st at 9:00 a.m. EST.*



### EARLY CAREER EDITORIAL BOARD

Starting in 2020, the ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems in its two parts has implemented the [Early Career Editorial Board \(ECEB\)](#) program to bring young members onboard its editorial board under the mentorship of the journal leadership.

ECEB members typically have a net academic age of 1-3 years. The term of an ECEB member is 2 years with the possibility for renewal into a second term.

Based on the success of the initial cycle of this pilot program, the [call](#) for applications for a new cycle has been released. The new ECEB members will be announced soon.

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Editor:

Michael Beer, Leibniz University Hanover, [beer@irz.uni-hannover.de](mailto:beer@irz.uni-hannover.de)

Managing Editors:

Sankaran Mahadevan, Vanderbilt University, [sankaran.mahadevan@vanderbilt.edu](mailto:sankaran.mahadevan@vanderbilt.edu)

Eleni Chatzi, ETH Zurich, [chatzi@ibk.baug.ethz.ch](mailto:chatzi@ibk.baug.ethz.ch)

Associate Managing Editors:

Matthias Faes, TU Dortmund, [matthias.faes@tu-dortmund.de](mailto:matthias.faes@tu-dortmund.de)

Ioannis Kougoumtzoglou, Columbia University, [iak2115@columbia.edu](mailto:iak2115@columbia.edu)

Xiaobo Qu, Chalmers University of Technology, [xiaobo@chalmers.se](mailto:xiaobo@chalmers.se)

Alba Sofi, University Mediterranea of Reggio Calabria, [alba.sofi@unirc.it](mailto:alba.sofi@unirc.it)

Cao Wang, University of Wollongong, [wangc@uow.edu.au](mailto:wangc@uow.edu.au)

Early Career Editorial Board Members:

Shivang Shekhar, Indian Institute of Technology, [shivang@iitmandi.ac.in](mailto:shivang@iitmandi.ac.in)

Mandi Yating Zhang, University of Maryland, [zhangyatingemail@gmail.com](mailto:zhangyatingemail@gmail.com)

Masaru Kitahara, University of Tokyo, [kitahara@bridge.t.u-tokyo.ac.jp](mailto:kitahara@bridge.t.u-tokyo.ac.jp)

Rudraprasad Bhattacharyya, Thornton Tomasetti

Somayajulu, [RBhattacharyya@ThorntonTomasetti.com](mailto:RBhattacharyya@ThorntonTomasetti.com)

L. N. Dhulipala, Idaho National Laboratory, [Som.Dhulipala@inl.gov](mailto:Som.Dhulipala@inl.gov)

Vasileios C. Fragkoulis, Leibniz University Hannover, [fragkoulis@irz.uni-hannover.de](mailto:fragkoulis@irz.uni-hannover.de)

Shweta U. Dabetwar, University of Massachusetts, [dabetwarshweta@gmail.com](mailto:dabetwarshweta@gmail.com)

Lowell Chen Jiang, Seoul National University, [chenjiang@hust.edu.cn](mailto:chenjiang@hust.edu.cn)

Contributing Editorial Board Member:

Zhang Dongming, Tongji University, [09zhang@tongji.edu.cn](mailto:09zhang@tongji.edu.cn)

Editorial Board members: [Part A](#) & [Part B](#)

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