

# 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



Over the past year our journal has featured Special Collections and Special Issues on emerging technologies and cross-cutting topics of current interest, which attracted significant attention not only through their scientific excellence and accompanying review papers, but also through fast editorial processes for timely publication.

Providing a structured and bundled presentation of selected key developments on dedicated topics, Special Collections and Special Issues amplify the exposure of contributions to our communities to significant extent. This mechanism works towards citation rates of papers, which is reflected in the impact factor of our journal. Part A is already well set with an Impact Factor of 3.084, and Part B is due to receive its Impact Factor in the coming year. In this regard we would like to draw your kind attention to the upcoming opportunities of Special Collections and Special Issues and encourage you to submit exciting developments for most effective featuring in the journal. Part B has currently two Special Issues open for submissions, on the topics of “Digital Twins: A New Frontier in Critical Infrastructure Protection and Resilience” and “Community resilience to disruptive events: models and analyses, lessons learned and case studies”. Subsequently, Special Issues are scheduled on “Uncertainty Quantification & Management in Nonlinear Dynamical Systems in Aerospace and

Mechanical Engineering”, “Modeling and Analysis of Inspection Uncertainties in Structural Health Monitoring” and “Probabilistic Digital Twins in Additive Manufacturing”. The current open call in Part A is for the Special Collection on Advances in efficient methods in random fields modeling and analysis”, which will be followed by calls on “New Technologies in Risk Assessment of Maritime Transport” and “Resilience of Power Infrastructure Systems”.

We thank you very much for your strong and sustained support of our journal driving its success further up. On behalf of the ASCE-ASME Journal family, we wish you a Happy and Prosperous New Year.

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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).

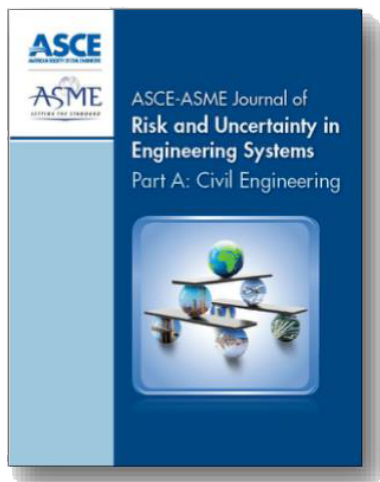
Both Part A and Part B are listed in the [Emerging Sources Citation Index](#) by [Clarivate Analytics](#), formerly Thomson Reuters, with Part A being indexed since 2019. From 2016 onward, all articles are included in [Web of Science](#) and [Scopus](#).

### **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**

- ❖ [V9-1: March 2023](#) (in progress)
- ❖ [V8-4: December 2022](#)
- ❖ [V8-3: June 2022](#)
- ❖ [V8-2: June 2022](#)
- ❖ [V8-1: March 2022](#)

**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 Structural Time-Dependent Reliability Assessment: Advanced Approaches for Engineered Structures](#), Cao Wang, Hao Zhang, Michael Beer
- [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)*



### **Call for Papers - Part A**

- Special Collection on [Advances in Efficient Methods in Random Fields Modeling and Analysis](#). Paper submission deadline: March 31, 2023.



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

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

[Risk-Informed Bridge Optimal Maintenance Strategy Considering Target Service Life and User Cost at Project and Network Levels](#), by Xu Han and Dan M. Frangopol

#### **Most Read Paper**

[Structural System Reliability: Overview of Theories and Applications to Optimization](#), by Junho Song, Won-Hee Kang; Young-Joo Lee, and Junho Chun

#### **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

On October 21<sup>st</sup>, Dr. Ali Khodam presented the main findings of the winning paper at a virtual event organized by the ASME Safety Engineering and Risk Analysis Division (SERAD).

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**

- ❖ [V9-2: June 2023](#) (*in progress*)
- ❖ [V9-1: March 2023](#) (*in progress*)
- ❖ [V8-4: December 2022](#) (*in progress*)
- ❖ [V8-3: September 2022](#)
- ❖ [V8-2: June 2022](#)
- ❖ [V8-1: March 2022](#)

## **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 Ekworo-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 Giocchino Alotta

## **LATEST SPECIAL ISSUES**

- [Special Section on Decommissioning and Life Extension of Complex Industrial Assets](#), by Raphael Moura, Michael Beer, Gilberto Francisco Martha de Souza, and Edoardo Patelli
- [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).*



## **Call for Papers - Part B**

- Special Issue on [Digital Twins: A New Frontier in Critical Infrastructure Protection and Resilience](#) (SI053B). Paper submission deadline: January 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**

[Estimating Concrete Strength From Nondestructive Testing With Few Core Tests Considering Uncertainties](#), by Saha Dauji, Soubhagya Karmakar

### **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

On October 21<sup>st</sup>, Dr. Panagiotis Alevras presented the main findings of the winning paper at a virtual event organized by the ASME Safety Engineering and Risk Analysis Division (SERAD).

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.



## 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. We welcome eight new ECEB members, who have been appointed for the next two years.

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

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