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

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

The <u>Editorial Board of the ASCE-ASME Journal invites contributions</u> 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

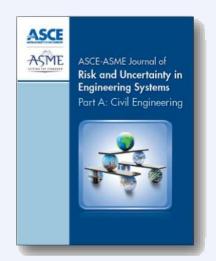
Please contact the Editor or the Managing Editors by email if you have an interest to guest edit a special collection (Part A) or a special issue (Part B).

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

#### **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 TOC



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

Part A: Civil Engineering

#### **Special Collection Announcements**

Special Collection on Benchmarking Data-driven Site Characterization Methods

Kok-Kwang Phoon, Takayuki Shuku, Jianye Ching, Ikumasa Yoshida

<u>Special Collection on Extreme Damage Mechanics for Lifecycle Fatique Resilience of Infrastructure Systems</u>

Xudong Zhou, Yongtao Bai, Frédéric Ragueneau, Julio Florez-Lopez

Special Collection Advances in Efficient Methods in Random Fields Modeling and Analysis

Zhenhao Zhang, De-Cheng Feng, You Dong, Emilio Bastidas-Arteaga

Special Collection on Resilience of Power Infrastructure System

Wei Zhang, Ge Ou, Youngjib Ham, Zingjie Wang

Special Collection on New Technologies in Risk Assessment of Maritime Transpor

Qing Yu, Jakub Montewka, Floris Goertlandt, Chengpeng Wan, Zhisen Yang, Zaili Yang

<u>Special Collection on Non-Deterministic Model Updating and Structural Health Monitoring</u> for Existing Structures

Masaru Kitahara, Sifeng Bi, Matteo Broggi, Takayuki Shuku

#### In this issue of Part A Civil Engineering

June 2023 - Volume 9, Issue 2

State-of-the-Art Reviews

What Geotechnical Engineers Want to Know about Reliability

Kok-Kwang Phoon

**Technical Papers** 

### Optimized Approach toward Identification of Influential Cost Overrun Causes in Construction Industry

Iman Youssefi and Tolga Celik

### Optimal Matching between Vehicle Speed and Lighting at Intersection Based on Traffic Risk Analysis

Hongtao Li, Linhong Wang, Hongyu Hu and Yiming Bie

#### <u>Shear Performance of Large-Thickness Precast Shear Walls with Cast-in-Place Belts and</u> Grouting Sleeves

Linzi Fan, Jialong Wei, Yao Chen, Jian Feng and Pooya Sareh

### Comparison of Data-Driven Site Characterization Methods through Benchmarking: Methodological and Application Aspects

Takayuki Shuku and Kok Kwang Phoon

### <u>Driving Parameter Trends and a Safety Evaluation Method Based on the Composite Ratio</u> for Shield Tunneling in Complex Strata

Ning Yang, Xin Jin, Qingke Nie, Xiaoming Guan, Wenjun Zhang and Huifeng Liu

#### Bayesian Analysis of Benchmark Examples for Data-Driven Site Characterization

Antonis Mavritsakis, Timo Schweckendiek, Ana Teixeira, Eleni Smyrniou and Jonathan Nuttall

### <u>Evolutionary Game Analysis for the Behaviors of Risk Allocation Participants in Public-Private Partnerships</u>

Yan Li

## Data-Driven Development of Three-Dimensional Subsurface Models from Sparse Measurements Using Bayesian Compressive Sampling: A Benchmarking Study Borui Lyu, Yue Hu and Yu Wang

#### <u>Probabilistic Prediction of Trip Travel Time and Its Variability Using Hierarchical Bayesian</u> Learning

Sevin Mohammadi, Audrey Olivier and Andrew Smyth

#### <u>Inverse Unit Load Method for Full-Field Reconstruction of Bending Stiffness in Girder</u> Bridges

Run-Zhou You, Ting-Hua Yi, Liang Ren and Hong-Nan Li

### The Typhoon Wind Hazard Assessment Considering the Correlation among the Key Random Variables Using the Copula Method

Xu Hong, Yupeng Song, Fan Kong and Michael Beer

### <u>Identifying Critical Stations Affecting Vulnerability of a Metro Network Considering</u> Passenger Flow and Cascading Failure: Case of Xi'an Metro in China

Zhuanglin Ma, Jie Liu, Steven I-Jy Chien, Xuefei Hu and Yiheng Shao

### Efficient System Reliability Analysis for Layered Soil Slopes with Multiple Failure Modes Using Sequential Compounding Method

Kang Liao, Yiping Wu, Fasheng Miao, Longfei Zhang and Michael Beer

#### <u>Earthquake-Induced Failure Analysis of High-Rise Steel Buildings under Sequential Long-</u> Duration Ground Motions

Yongtao Bai, Shuyan Zheng, Liusheng He, Yuhang Wang and Tao Wang

### An Integrated Uncertainty Quantification Framework for Probabilistic Seismic Hazard Analysis

Geetopriyo Roy, Subhrajit Dutta and Satyabrata Choudhury

#### **Case Studies**

### Employee Survey Identifying Threats and Motivating Factors in the Implementation of ISO 9001 in the Kuwait Oil and Gas Sector

Ayedh Almutairi, Timothy L. Eddy, Vipin Wilson and James H. Lambert

#### Preview of the next issue of Part A Civil Engineering

September 2023 - Volume 9, Issue 3 (in progress)

#### **Technical Papers**

#### Key Contributory Factors Influencing Cycling Safety: Comprehensive Review Based on Accident Data and Literature Survey

Zhisen Yang and Zaili Yang

#### No-Free-Lunch Theorems for Reliability Analysis

Mohsen Rashki and Matthias G. R. Faes

#### Corrections

Erratum for "Data-Driven Development of Three-Dimensional Subsurface Models from Sparse Measurements Using Bayesian Compressive Sampling: A Benchmarking Study" Borui Lyu, Yue Hu and Yu Wang



#### **Special Collection Announcements**

#### Special Issue on Modeling and Analysis of Inspection Uncertainties in Structural Health Monitoring

Yi Zhang, Chul-Woo Kim, Yan-Gang Zhao, Pei-Pei Li

#### Special Issue on Probabilistic Digital Twins in Additive Manufacturing

Zequn Wang, Zhen Hu, Moon Seung Ki, Hong-Zhong Huang, Qi Zhou

#### In this issue of Part B Mechnical Engineering

June 2023 - Volume 9, Issue 2

#### **Research Papers**

#### Application of Multi Parameter Path Length Method for Resilience (MP-PLMR) to Engineering Systems

Mahendra Prasad, V. Gopika, John Andrews

### <u>Establishment of the Off-Center Embedded Crack Stress Intensity Factor Database for Probabilistic Risk Assessment Based on Universal Weight Function</u>

Tongge Xu, Shuiting Ding, Huimin Zhou, Guo Li

#### Network Uncertainty Quantification for Analysis of Multi-Component Systems

John Tencer, Edward Rojas, Benjamin B. Schroeder

#### Probabilistic Validation: Theoretical Foundation and Methodological Platform

Ha Bui, Tatsuya Sakurahara, Seyed Reihani, Ernie Kee, Zahra Mohaghegh

#### Robust Design Optimization of Expensive Stochastic Simulators Under Lack-of-Knowledge

Conradus van Mierlo, Augustin Persoons, Matthias G. R. Faes, David Moens

#### **Technical Brief**

#### Mathematical Modeling for Carbon Dioxide Level Within Confined Spaces

Lincan Yan, Dave S. Yantek, Cory R. DeGennaro, Rohan D. Fernando

#### Preview of the next issue of Part B Mechanical Engineering

September 2023 - Volume 9, Issue 3 (in progress)

#### **Research Papers**

### A Reduced-Order Wiener Path Integral Formalism for Determining the Stochastic Response of Nonlinear Systems With Fractional Derivative Elements

Ilias G. Mavromatis, Ioannis A. Kougioumtzoglou

#### Sequential Ensemble Monte Carlo Sampler for On-Line Bayesian Inference of Time-Varying Parameter in Engineering Applications

Adolphus Lye, Luca Marino, Alice Cicirello, Edoardo Patelli



Sign up for our JRUES alerts!

Register for our Newsletter, offering info on most recent issues and calls for papers, <u>click here</u>

#### Editor:

Michael Beer, Leibniz University Hanover, beer@irz.uni-hannover.de

#### Managing Editors:

Sankaran Mahadevan, Vanderbilt University, <u>sankaran.mahadevan@vanderbilt.edu</u> Eleni Chatzi, ETH Zurich, <u>chatzi@ibk.baug.ethz.ch</u>

#### Associate Managing Editors:

Matthias Faes, TU Dortmund, <a href="matthias.faes@tu-dortmund.de">matthias.faes@tu-dortmund.de</a>
Ioannis Kougioumtzoglou, Columbia University, <a href="matthias.faes@tu-dortmund.de">jak2115@columbia.edu</a>
Xiaobo Qu, Chalmers University of Technology, <a href="maithias.googlobelequal">xiaobo@chalmers.se</a>
Alba Sofi, University Mediterranea of Reggio Calabria, <a href="maithias.googlobelequal">alba.sofi@unirc.it</a>
Cao Wang, University of Wollongong, <a href="maithias.googlobelequal">wangc@uow.edu.au</a>

Shivang Shekhar, Indian Institute of Technology, shivang@iitmandi.ac.in

#### Early Career Editorial Board Members:

Mandi Yating Zhang, University of Maryland, <a href="mailto:zhangvatingemail@gmail.com">zhangvatingemail@gmail.com</a>
Masaru Kitahara, University of Tokyo, <a href="mailto:kitahara@bridge.t.u-tokyo.ac.jp">kitahara@bridge.t.u-tokyo.ac.jp</a>
Rudraprasad Bhattacharyya, Thornton Tomasetti
Somayajulu, <a href="mailto:RBhattacharyya@ThorntonTomasetti.com">RBhattacharyya@ThorntonTomasetti.com</a>
L. N. Dhulipala, Idaho National Laboratory, <a href="mailto:som.Dhulipala@inl.qov">Som.Dhulipala@inl.qov</a>
Vasileios C. Fragkoulis, Leibniz University Hannover, <a href="mailto:fragkoulis@irz.uni-hannover.de">fragkoulis@irz.uni-hannover.de</a>
Shweta U. Dabetwar, University of Massachusetts, <a href="mailto:dabetwarshweta@gmail.com">dabetwarshweta@gmail.com</a>
Lowell Chen Jiang, Seoul National University, <a href="mailto:chenjiang@hust.edu.cn">chenjiang@hust.edu.cn</a>

#### Contributing Editorial Board Member:

Zhang Dongming, Tongji University, <a href="mailto:09zhang@tongji.edu.cn">09zhang@tongji.edu.cn</a>

#### Founding Editor

Bilal Ayyub, University of Maryland

Editorial Board members: Part A & Part B

#### Follow us on Social Media









WeChat