



IOWA STATE
UNIVERSITY

CI & CRC Joint Conference 2024

Des Moines, Iowa | March 20-23

#CICRC24

JOIN US!

Poster Sessions in the Exhibit Hall

Poster Authors are to stand next to their hanged poster during poster sessions, held during the following Networking Breaks:

- Thursday morning (11:00am – 11:30am)
- Thursday afternoon (3:30pm-4:00pm)
- Friday morning (10:30am – 11:00am)
- Friday afternoon (2:30pm-3:00pm)
- Saturday (8:30am-8:45am) and (11:00am-11:15am)

Hanging your poster:

Thursday, March 21:

- Poster Session #1 – posters can be put up on poster boards between 7:30 am and 8:00am. Posters must be taken down by 1:00pm (or will be removed by staff).
- Stand-up Session #2 – posters can be put up between 1:00pm and 1:30pm, when the session begins. Posters must be taken down by 5:00pm (or will be removed by staff).

Friday, March 22:

- Poster Session #3 – posters can be put up on poster boards between 7:30 am and 8:00am. Posters must be taken down by 1:00pm (or will be removed by staff).
- Poster Session #4 – posters can be put up between 1:00pm and 1:30pm, when the session begins. Posters must be taken down by 5:00pm (or will be removed by staff).

Saturday, March 23:

- Poster Session #5 – posters can be put up on poster boards between 6:30 am and 7:00am. Posters must be taken down by 12:00pm (or will be removed by staff).

Boards with thumbtacks will be provided. Please see the following details on each poster session to know what numbered space to use in hanging your poster.

CI-CRC Joint Conference 2024 Poster Sessions

Session #1
Thursday, March 21
8:00am-1:00pm

Topic Track	Space	Author(s)	Title
Track 1: Advanced Technologies and Data Analytics	1	Malek Alazzam, Katherine Madson, <i>Iowa State University</i> ; Amelia Celozza, <i>University of Colorado, Boulder</i> ; Kovács Tibor, <i>Corvinus Univeristy of Budapest</i>	Integrating Business Intelligence and Life Cycle Analysis to Enhance the Architecture, Engineering, and Construction Industry
Track 1: Advanced Technologies and Data Analytics	2	Yeon Chae, Youngjib Ham, <i>Texas A&M University</i>	Enhancing Human-Machine Interface for Construction Teleoperation: Integrating Visual and Tactile Sensory Feedback
Track 1: Advanced Technologies and Data Analytics	3	Amin Khoshkenar, Hala Nassereddine, <i>University of Kentucky</i>	Enhancing Asset Management in Construction Projects: Integrating Real-Time Dashboards with Digital Twin in O&M Phase
Track 1: Advanced Technologies and Data Analytics	4	Yoojun Kim, Youngjib Ham, <i>Texas A&M University</i>	Working in Heat: Personalized Heat Risk Monitoring to Enhance Workplace Safety
Track 1: Advanced Technologies and Data Analytics	5	Seyedali Mirmotalebi, <i>North Carolina A&T State University</i>	Subsurface Characteristics of Buried RCP Pipes Using Ground Penetrating Radar
Track 1: Advanced Technologies and Data Analytics	6	Miran Seo, Youngjib Ham, <i>Texas A&M University</i>	Space Construction: Exploring Latency and Low-quality Visualization Impact on Teleoperation Task Performance and Mental Workload
Track 1: Advanced Technologies and Data Analytics	7	Muhammad Umer, <i>Auburn University</i>	Empirical Assessment of Heavy Equipment Theft in the U.S.
Track 10: Project and Organizational Management and Planning	8	Amrit Shahi, Jin Ouk Choi, <i>University of Nevada, Las Vegas</i>	Qualitative Comparative Assessment of Modularization Decision Drivers in Heavy Industrial Projects
Track 10: Project and Organizational Management and Planning	9	Jonah Vicker, Katherine Madson, Jennifer Shane, <i>Iowa State University</i>	The Importance of Cost Optimization in Fleet Management for Public Institutions

CI-CRC Joint Conference 2024 Poster Sessions

Session #2

Thursday, March 21

1:30pm-5:00pm

Topic Track	Space	Author(s)	Title
Track 2: Automation in Construction	1	Woei-Chyi Chang, Sogand Hasanzadeh, <i>Purdue University</i>	Worker-robot Interactions in the Future Construction Industry: Trust and Situational Awareness
Track 2: Automation in Construction	2	Mohsen Foroughi-Sabzevar, <i>University of Southern Mississippi</i> ; Masoud Gheisari, <i>University of Florida</i> ; James Lo, <i>Drexel University</i>	Enhancing Crews' Access to Design and Construction Information on Construction Sites
Track 2: Automation in Construction	3	Doyun Lee, Kevin Han, <i>North Carolina State University</i>	Vision-based Real-time Autonomous Construction Welding Robot
Track 2: Automation in Construction	4	Ikechukwu Sylvester Onuchukwu, Behzad Esmaeili, Sébastien Hélie, <i>Purdue University</i>	Machine Learning Analysis of Construction Workers' Automatic Behavior and Visual Attention
Track 3: Computer Applications, Information Modeling, and Simulation	5	Caroline Silva Araújo, Caio Vinícios Borges de Sousa, Edvane Salomao Santos de Souza, Dayana Bastos Costa, <i>Federal University of Bahia, Brazil</i> ; Fabiano Rogerio Corrêa, <i>University of São Paulo, Brazil</i> ; Emerson de Andrade Marques Ferreira, <i>Federal University of Bahia, Brazil</i>	Smart Twins 5.0 for the Concrete Wall Constructive System and Advances in Agent-based Modeling Integration
Track 3: Computer Applications, Information Modeling, and Simulation	6	Ching-Yu Cheng, <i>Purdue University</i> ; Liuchuan Yu, Lap-Fai Yu, <i>George Mason University</i> ; Behzad Esmaeili, <i>Purdue University</i>	Measuring Situation Awareness in the Construction Industry
Track 3: Computer Applications, Information Modeling, and Simulation	7	Mirsalar Kamari, <i>University of Southern Mississippi</i>	3D Detection and Segmentation of Everything in Construction Jobsites through an Open Vocabulary Paradigm
Track 3: Computer Applications, Information Modeling, and Simulation	8	Ruying Liu, Burçin Becerik-Gerber, Gale M. Lucas, Kelly Busta, <i>University of Southern California</i>	Active Shooter Preparedness in Healthcare Built Environments: A Simulation-based Approach

CI-CRC Joint Conference 2024 Poster Sessions

Session #3
Friday, March 22
8:00am-1:00pm

Topic Track	Space	Author(s)	Title
Track 4: Contracting, Project Delivery, and Legal Issues	1	Salman Alanazy, Ahmed Al-Bayati, <i>Lawrence Technological University</i>	Review the Factors and Measures of Corruption in the Construction Industry
Track 4: Contracting, Project Delivery, and Legal Issues	2	Maria Calahorra-Jimenez, <i>California State University, Fresno</i> ; Gustavo Garcia-Melero, <i>University of Colorado, Denver</i>	Is Best-Value Procurement Leading to a Low-Bid Selection? The Case of Design-Build Transportation Projects in the US
Track 4: Contracting, Project Delivery, and Legal Issues	3	Yomna Emad; Mohamed S. Eid; Hesham A. Bassioni, <i>Arab Academy for Science, Technology, and Maritime Transport, Cairo, Egypt</i>	Division of Cost Deviations in Integrated Project Delivery Systems Using Cooperative Game Theory
Track 5: Construction Scheduling, Estimating, Economics, Quality and Value	4	Nhien Dinh Le, Daniel Tran, <i>University of Kansas</i>	Quality Assurance Acceptance Methods for Different Project Profiles and Product Categories in Construction Projects
Track 6: Construction Education, Workforce, Diversity, and Inclusion	5	Jiun-Yao Cheng, Ajit Devkota, Masoud Gheisari, Idris Jeelani, <i>University of Florida</i>	Enhancing AI Literacy of Undergraduate Students using Construction Safety Context
Track 6: Construction Education, Workforce, Diversity, and Inclusion	6	Sibgat Mehedi Hasan, Jin Ouk Choi, Blanca Rincon, <i>University of Nevada, Las Vegas</i>	Introducing Culturally Relevant and Responsive Teaching Fellows Program
Track 6: Construction Education, Workforce, Diversity, and Inclusion	7	Minguk Kim, Youngjib Ham, <i>Texas A&M University</i> ; Kevin Han, Jason Patrick, Tamecia Jones, <i>North Carolina State University</i>	Integrating Real-World Problems with Student-centric Cyber-Physical Systems in Undergrad Civil and Building Engineering Education
Track 6: Construction Education, Workforce, Diversity, and Inclusion	8	Kelvin A. Kozakevitch, <i>Brigham Young University</i>	Development of Teaching Tools for Graduate Level Infrastructure Management Classes
Track 6: Construction Education, Workforce, Diversity, and Inclusion	9	Yuan Sun, <i>University of Florida</i> ; Masoud Gheisari, <i>University of Florida</i> ; Ricardo Eiris, <i>Arizona State University</i>	Studying Students' Collaborative Problem-Solving Behaviors in Online Site Visits
Track 6: Construction Education, Workforce, Diversity, and Inclusion	10	Anthony Yusuf, Abiola Akanmu, Adedeji Afolabi, Homero Murzi, Sheryl Ball, <i>Virginia Tech</i> ; Andrea Ofori-Boadu, <i>North Carolina A&T State University</i> ; Andres Nieto-Leal, <i>Virginia Tech</i>	Connecting Professional and Educational Communities to Prepare Construction Engineering Students for the Workplace

CI-CRC Joint Conference 2024 Poster Sessions

Session #4
Friday, March 22
1:30pm-5:00pm

Topic Track	Space	Author(s)	Title
Track 7: Health and Safety	1	Minghao Dong, <i>Purdue University</i>	Determining the Effectiveness of Construction Safety Signs: An Eye-tracking and EEG Study
Track 7: Health and Safety	2	Kyeongsuk Lee, Sogand Hasanzadeh, <i>Purdue University</i>	Developing Personalized Safety Training Using Multi-Modal Psychophysiological Immersive Platform
Track 7: Health and Safety	3	Yanfang Luo, JoonOh Seo, <i>Hong Kong Polytechnic University</i> ; Sogand Hasanzadeh, <i>Purdue University</i>	Neurophysiological Measurement Underlying Different Levels of Situation Experienced and Novice Participants Awareness between Experienced and Novice Participants
Track 7: Health and Safety	4	Shiva Pooladvand, Sogand Hasanzadeh, <i>Purdue University</i>	How Can External Stressors Affect Workers' Situational Awareness and Safety Performance?
Track 7: Health and Safety	5	Oluwaseun Olabode, J. Alfredo Ocegueda, Ramses V. Martinez, Behzad Esmaeili, <i>Purdue University</i>	Application of Paper-Based Wearable Electronics (PBWE) for Objective Assessment of Fatigue in Lower Back of Construction Workers
Track 7: Health and Safety	6	Hyewon Seo, Behzad Esmaeili, <i>Purdue University</i>	Assessing the Potential of Exoskeletons in Alleviating Work-Related Musculoskeletal Disorders and Their Impact on Neuroscience in the Construction Industry
Track 7: Health and Safety	7	Zixian Zhu, Idris Jeelani, Masoud Gheisari, <i>University of Florida</i>	Enhancing Worker Safety During Interactions with Drones on Construction Sites Through Bi-Directional Communication
Track 9: Infrastructure Systems and Engineering and Materials Design	8	Elijah Evers, Cristina Torres-Machi, Kyri Baker, <i>University of Colorado, Boulder</i>	Data Driven Analysis of Power Failure Impacts on Transportation Patterns
Track 9: Infrastructure Systems and Engineering and Materials Design	9	KwangHyuk Im, <i>Eastern Illinois University</i> ; David T. Iseley, Hubo Cai, Theodore J. Weidner, <i>Purdue University</i>	IM (Interindustry-Macro) Model on Water Infrastructure Systems

CI-CRC Joint Conference 2024 Poster Sessions

Session #5

Saturday, March 23

7:00am-12:00pm

Topic Track	Space	Author(s)	Title
Track 8: Sustainability and Resilience	1	Payam Bakhshi, Afshin Pourmokhtarian, John Cribbs, <i>Wentworth Institute of Technology</i>	Navigating Challenges in Constructing Energy-Efficient New Buildings
Track 8: Sustainability and Resilience	2	Dilli Ram Bhattarai, Cristina Poleacovschi, <i>Iowa State University</i>	Climate Change Adaptation in Rural Alaska: Local Perspectives on Resilient Water Systems
Track 8: Sustainability and Resilience	3	Francisco Contreras, Cristina Torres-Machi, <i>University of Colorado, Boulder</i>	Quantifying Traffic Resilience of Communities to Flooding Using Crowdsourced Data
Track 8: Sustainability and Resilience	4	Radwa Eissa, Islam H. El-adaway, <i>Missouri University of Science and Technology</i>	Circular Economy Strategies for the Construction Value Chain: A Comprehensive Portfolio and Implementation Analysis
Track 8: Sustainability and Resilience	5	Joshua Mensah-Larkai, Cristina Poleacovschi, Kaoru Ikuma, Carl F Weems, <i>Iowa State University</i>	Co-Producing and Implementing a Water Justice Index to Achieve Community-Led Water and Health Security
Track 8: Sustainability and Resilience	6	Farah Mneimneh, Cristina Poleacovschi, <i>Iowa State University</i> ; Kristen Cetin, <i>Michigan State University</i>	Household Energy Insecurity Scale for the United States
Track 8: Sustainability and Resilience	7	Toby N. T. Nelson, Cristina Poleacovschi, Carl F. Weems, Kaoru Ikuma, <i>Iowa State University</i> ; Ivis Garcia, <i>Texas A&M University</i> ; Chris R. Rehmann, <i>Iowa State University</i>	Development and Validation of the Water Quality Perception Scale
Track 8: Sustainability and Resilience	8	Marcus Nartey, Cristina Poleacovschi, Kaoru Ikuma, Carl Weems, Christina Hill, Scott Feinstein, <i>Iowa State University</i> ; Lina Sela, <i>University of Texas at Austin</i>	Health Disparities in Drinking Water Quality: An Analysis of American Indian/Alaska Native Populations in the United States
Track 8: Sustainability and Resilience	9	Amanda Quarshie, Cristina Poleacovschi, <i>Iowa State University</i> ; Kristen Cetin, <i>Michigan State University</i> ; Farah Mneimneh, <i>Iowa State University</i>	Indoor Environmental Quality and Wellbeing in Alaska Native Communities
Track 8: Sustainability and Resilience	10	Tolulope O. Sanni, <i>University of Alabama</i> ; Ziming Liu, Yangming Shi, <i>Colorado School of Mines</i>	A Neurophysiological Approach towards Natural Disaster Risk Communication Methods to assess Individual's Risk Perception Behavior: A Virtual Reality Experiment