PAPERS

The I/ITSEC 2020 Conference Committee invites you to submit previously unpublished work and especially encourages original papers that align with the theme and concepts described in The Call. Prospective authors are encouraged to read through the Subcommittee descriptions and submit abstracts for papers that discuss the core research our industry will put forth to improve the next generation of learning.

Paper Process

The complete three-stage process for submitting papers is detailed in the I/ITSEC Author’s Handbook, available for download from the Authors section of the I/ITSEC website. The initial stage in the process is the submission of an abstract.

ABSTRACTS (Stage P1). As a prospective author, your chances of having an abstract accepted are significantly greater if you send your abstract to the appropriate subcommittee, so please read the descriptions carefully. It is also vital that you submit your abstract on time. Please refer to www.iitsec.org for additional details.

PAPERS (Stage P2). If your abstract is selected for expansion into a paper, you will be assigned a bird dog, who will be your liaison to the subcommittee and the champion for your paper. Your chances of having your paper accepted are significantly greater if you work closely with your bird dog. Papers are accepted for both publication in the conference proceedings and presentation at the conference. The selection process includes Best Paper and Honorable Mentions for each subcommittee. The Subcommittee Best Papers will be considered for overall conference Best Paper. Detailed instructions for completing and submitting your paper will be available on the I/ITSEC website.

PRESENTATIONS (Stage P3). If your paper is selected, you are required to submit a presentation for review prior to the conference. Presentations should be designed for a 20 minute time-slot, plus five minutes for questions and answers. All paper presentations will be offered for Continuing Education Units (CEUs). Details requirements for the presentations will be available on the I/ITSEC website.

TUTORIALS

I/ITSEC presents a comprehensive tutorials program covering a diverse set of topics essential to the simulation, training, and education communities. This program provides learning opportunities in three main focus areas:

1) FOUNDATIONAL topics reflecting important themes from the Paper Subcommittees (Training, Simulation, Education, Human Performance Analysis & Engineering, and Policy, Standards, Management & Acquisition)
2) REFRESHER or ADVANCED topics to prepare for or maintain certification as a Certified Modeling and Simulation Professional (CMSP)
3) EMERGING concepts of particular interest to I/ITSEC attendees

Each tutorial provides an opportunity for Continuing Education Units (CEUs). Tutorials are typically 90 minutes in length, although longer tutorials are possible when warranted.

Tutorials Process

The complete three-stage process for submitting tutorials is detailed in the I/ITSEC Author’s Handbook, available for download from the Author Information page of the I/ITSEC website (under “Get Involved”).

PROPOSAL (Stage T1). As a prospective tutorial presenter, you must submit a complete tutorial proposal including an abstract, detailed outline, intended audience, any prerequisites, and targeted learning objectives. Learning objectives are critical to the Tutorial Board’s selection process. The Board also assesses the degree to which proposal topics will contribute to a comprehensive tutorial curriculum encompassing the three main focus areas described above.

PRESENTATIONS (Stage T2). If your abstract is selected for expansion into a complete tutorial presentation, you will be assigned an I/ITSEC bird dog who will be your liaison to the Tutorial Board and the champion for your presentation. You must submit a complete set of presentation slides to the Tutorial Board for review.

FINAL PRESENTATIONS (Stage T3). If your presentation is selected, you will receive feedback from the Tutorial Board and then have the opportunity to submit a revised and final version of your tutorial presentation.

IMPORTANT DATES

Instructions for each step will be posted at least two weeks before the process opens.

10 January Abstract Submittal Opens
24 February Authors Notified
7 May Paper/Draft Tutorial Presentation Submittal Opens
15 June Paper/Draft Tutorial Presentation Submittal Closes
13 July Clearance Forms Due
28 August Paper Revisions Due
28 August Presentation Submittal Opens
25 September Presentation Submittal Closes
2 November Presentations Revisions Due
30 November Speakers’ Meeting and Reception
THE CONFERENCE

I/ITSEC is an annual forum for representatives from the military, industry and academia to connect and share knowledge. The conference draws 16,000 attendees from industry, government and academia, and features over 450 exhibits. The United States Army will serve as the lead proponent service for I/ITSEC 2020 in partnership with all military services. I/ITSEC is sponsored by the National Training and Simulation Association (NTSA), an affiliate of the National Defense Industrial Association (NDIA).

THE SUBCOMMITTEES

TRAINING

This subcommittee seeks papers that discuss the application of innovative concepts, methods and technologies to create effective training solutions. Papers should present a design framework based on the literature, a current needs and training gaps, and practical application. Topics should be of general interest to the I/ITSEC audience and could include adaptive training, training system integration and interoperability, training applications of AI and machine learning, individual and collective team training, learning science/learning engineering, and competency-based training and assessment. Demonstration of implemented solutions are encouraged to be accompanied by evaluations of training effectiveness and lessons learned, documented with quantified data. Emerging technologies of interest include augmented reality and virtual training environments, semi-automated training and assessment generation, mobile training, and training techniques to deal with uncertain, rapidly changing or denied environments. The subcommittee is interested in all phases of training system development including planning, analysis, design, development, deployment, and evaluation, though we encourage those involved in early-stage efforts to consider submitting later in a project’s lifecycle when there are results to report. Submissions from new industries that demonstrate innovative and effective training methods are also welcomed.

SIMULATION

This subcommittee seeks innovative papers on the applied science of modeling and simulation, simulation architectures or techniques, as well as the exploration of synthetic entities or environments and how they apply to training, mission rehearsals, analysis, experimentation or research. Papers should present and explain concepts, theories and or applications that bring innovation to the modeling and simulation enterprise. Discussions should detail the technical challenges, past lessons, unique and creative developments associated with developing, interacting with, and maintaining simulation systems. Topics of interest include: evolving modeling and simulation technologies; expanding interoperable simulation architectures; realistic and meaningful hybrid and virtual and physical/medical simulation; replication of cyber effects and innovation in representing physical entities and behavioral actions within live, virtual, constructive and gaming environments.

EDUCATION

The Education Subcommittee seeks papers which present theories, strategies, methods, technologies, and best practices that advance the science of learning across all phases of the learning lifecycle (analysis, design, development, delivery, and evaluation). Of particular interest are papers which present empirical data that document the effectiveness of military, corporate, and STEM learning initiatives. The Education Subcommittee also welcomes theoretical papers, case studies, and qualitative research efforts that can help to illuminate or explain the often contradictory findings from empirical studies. Emerging areas of interest include: the application of learning analytics and “big data” sets to improve learning at the enterprise level; learning in hybrid human-machine systems; lifelong learning initiatives; informal learning efforts that occur outside of organizationally-sponsored training and education; initiatives and organizations; and applications of Artificial Intelligence (or Machine Learning) techniques to improve learning effectiveness.

EMERGING CONCEPTS & INNOVATIVE TECHNOLOGIES

This subcommittee seeks papers that discuss emerging and innovative technologies, methodologies, or concepts associated with simulation and data analysis, training, education, and support to operations across the spectrum of government, industry, academia, and international uses. The papers should clearly explain how the topic advances the state of the art, builds on prior related work in the subject area, and demonstrates the use of or application in defense, transportation, homeland security, medical training, law enforcement, cyber security, or other areas. New, emerging topics include the use of modeling and simulation to support current and future workforce development, promote integration across different disciplines, and enable the development of ground-breaking technologies such as artificial intelligence, AR/VR, and data analytics. Candidate papers should thoroughly describe the challenges encountered and associated creative solutions implemented to overcome them. Special consideration will be given to papers that are based on solid research principles and present detailed results of interdisciplinary research efforts.

HUMAN PERFORMANCE ANALYSIS & ENGINEERING

This subcommittee seeks papers that focus on the human dimension, systematically addressing individuals and teams as an integral component within workplace systems. Papers should address the application of Human Performance Analysis & Engineering (HPAE) technologies, such as human performance measurement and effectiveness models, methods, and tools; human-computer interface (HCI) design and evaluation; usability/user experience; decision/performance support systems; and the impact of HPAE on organizational outcomes. Specifically, the subcommittee seeks papers that leverage and extend the capabilities of an individual and/or team or that improve learning transfer and operations, especially those associated with cyber, Live Virtual Constructive (LVC), and medical. Papers supported by human performance data gathered from scientifically valid experiments are especially valued.

POLICY, STANDARDS, MANAGEMENT & ACQUISITION

This subcommittee seeks papers related to policy and standards issues associated with the acquisition, implementation, and maintenance of education, training, and simulation capabilities. This includes policy related topics in content and training systems development, delivery and sustainment. Papers are sought that provide insight into acquisition, implementation of training and education initiatives and organizations; team and organizational learning; and applications of Artificial Intelligence (or Machine Learning) techniques to improve learning effectiveness.