

## Guest Editorial: Special Issue from ISCA Fall--2018 SEDE Conference

This Special Issue of IJCA is a collection of four refereed papers selected from the SEDE 2018: 28th International Conference on Software Engineering on Data Engineering, held during October 8-10, 2018, in New Orleans, LA, USA,

Each paper submitted to the conference was reviewed by at least two members of the International Program Committee, as well as by additional reviewers, judging the originality, technical contribution, significance and quality of presentation. After the conferences, five best papers were recommended by the Program Committee members to be considered for publication in this Special Issue of IJCA. The authors were invited to submit a revised version of their papers. After extensive revisions and a second round of review, these four papers were accepted for publication in this issue of the journal.

The papers in this special issue cover a broad range of research interests in the community of computers and their applications. The topics and main contributions of the papers are briefly summarized below.

JAMES STIGALL, SRI TEJA BODEMPUDI, and SHARAD SHARMA of BOWIE State University, Bowie, MD USA and DAVID SCRIBNER and JOCK GRYNOVICKI of the Army Research Laboratory, Aberdeen Proving Ground, MD USA presented their paper “Use of Microsoft HoloLens in Indoor Evacuation,” where they demonstrate how augmented reality (AR) technology can provide spatial context 3D visualization that promotes spatial knowledge acquisition and support cognitive mapping. This paper presents the research and development of prototype AR application for the communication of indoor evacuation information in real-world spaces by the use of evacuation maps.

PATTAPHOL JIRASSESSAKUL, ZACHARY WALLER, PAUL MARQUIS, CONNOR SCULLY-ALLISON, VINH LE, SCOTTY STRACHAN, FREDERICK C. HARRIS, JR., and SERGIU M DASCALU of the University of Nevada, Reno, USA presented their paper “Simplifying Data Visualization Pipelines with the NRDC-CHORDS Interface,” which proposes an alternative approach for the Nevada Research Data Center (NRDC) to visualize environmental data in near-real time and confirm its viability for usage with other research projects of similar size. They evaluated the success of their implementation by comparing metrics of use, determining that both iterations of our software were much faster and easier to use than CHORDS built-in configuration interfaces.

AAKANKSHA RASTOGI and KENDALL E. NYGARD of the Department of Computer Science, North Dakota State University, Fargo, ND, USA presented their paper “Trust and Security in Intelligent Autonomous Systems,” which surveys and explores concepts of trust in terms of relationships between humans and systems. An ontology that characterizes this relationship is also provided. Trust issues as they pertain to the areas of cybersecurity and autonomy are characterized and the concept of anti-autonomy and counter measures that apply to autonomous weapon systems is also included.

ALEX REDEI of Central Michigan University, Mt. Pleasant, MI, USA and SERGIU DASCALU and FREDERICK C HARRIS, JR of the University of Nevada, Reno USA presented their paper “A Framework for Virtualizing Joystick Controls in a Flight Simulator Training Environment,” in which they explored software arbitration of two joysticks controlled by two pilots, where each joystick is independent of the other and each pilot is potentially equally valid. In this paper, they detail their hardware and software framework for arbitrating conflicts in a multi-axis joystick system, thereby increasing the responsiveness of control input in a potentially conflicted state.

As guest editors we would like to express our deepest appreciation to the authors and the program committee members of the conference these papers were selected from.

We hope you will enjoy this special issue of the IJCA and we look forward to seeing you at a future ISCA conference. More information about ISCA society can be found at <http://www.isca-hq.org>.

Guest Editors:

*Frederick C. Harris, Jr*, University of Nevada, Reno, USA, SEDE 2018 Conference Chair  
*Sergiu M. Dascalu*, University of Nevada, Reno, USA, SEDE 2018 Program Chair  
*Sharad Sharma*, Bowie State University, USA, SEDE 2018 Program Chair

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