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Simulation Gaming Through Times and Disciplines

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Revised Selected Papers

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Preface: ISAGA - The First 50 Years of Research and Teaching Excellence

"The need for conveying holistic thought, or gestalt, is urgent, and the coming decade will increase this urgency considerably as new information is generated exponentially and the problems of the world grow more complex."

Dick Duke [1], p. 29

The simulation and gaming community is a welcoming and open community of researchers, game designers, and facilitators of games and gamification. For over 50 years, the ISAGA community has been a beacon of knowledge and best practices to people interested in simulation and gaming regardless of which field of knowledge they come from. The sheer amount of knowledge and impact of the community and its applications on so many different scientific areas is beyond comprehension. The feeling of this moment is truly to stand on the shoulders of giants.

Since the first conference in Bad Godesberg in Germany, ISAGA has served as a reference for researchers and educators. Through time it has contributed many hundreds of papers, simulation games, learning programs, and ideas on how to make a better future. Simulation and gaming is a field of action learning, and simulation games created and presented by ISAGA members influence the lives of many thousands of people every year. The grand challenges in society are of such systemic nature that the roots of ISAGA are more relevant than ever to contribute to finding pathways to the future. We are obliged and proud to continue and uphold this legacy and tradition for generations to come.

The ISAGA 50th Anniversary Conference in 2019 gathered more than 102 submissions of papers, workshops, posters, and games. Out of 76 accepted paper submissions, we selected the 38 best to present in this LNCS volume. The papers included are very diverse in their methodology and have backgrounds in many areas, yet they come together in the field of simulation and gaming.

The papers have been grouped into five chapters. The first chapter starts with two excellent papers on the journey of understanding the multifaceted role of the facilitator in simulation gaming delivery. They touch on the interesting topics of the historical view on how the role has changed in the last 50 years [2] followed by a view of the different types of facilitator approach to the debriefing process [3]. Following papers touch upon different important aspects of simulation gaming such as using a game to encourage civil servants towards implementing open data [4] and increasing logistical skills training in managing a pediatric emergency department [5]. Using simulation games for crisis simulation [6] is the topic of the next paper, and we peek into problems of game-based learning in IT Security [7]. The next paper tackles the issues of validity, evaluation, and debriefing, which are the cornerstones of simulation gaming

effectiveness [8]. The chapter is closed by a paper analyzing the potential of escape rooms in an educational setting [9].

Chapter two is composed of papers on different aspects in design, implementation, and new directions for researchers to pursue. Four articles in this chapter discuss a variety of aspects of the theory of game design [12, 17, 18, 22]. Another interesting group of papers present a specific game with their implementation analysis [13–16, 19–23]. The third group of articles delivers papers on different analytical aspects of simulation gaming theory and practice [10, 11, 24].

The third chapter focuses on current issues. The first two papers are on the simulation gaming contribution to climate change education and perception [25, 26]. The other three papers focus on learning effectiveness with simulation gaming with an excellent paper from Mieko Nakamura [27], which won the Best Paper Award at the 50th Anniversary ISAGA Conference, followed by a paper on learning entrepreneurship skills [28] and an analysis of business simulation game courses [29].

The fourth chapter delivers a view with gamification in focus. All four papers deliver a unique view on different aspects of gamification and its connections to the field of simulation and gaming [30–33].

The final fifth chapter is a collection of papers that are connected to simulation gaming but offer a much broader perspective, from the point of view of video gaming [34], learning with location-based gaming [35], using AI and ML for content generation for games [36], using simulation to solve supply chain and logistic problems [37], and using VR to simulate real-world problems [38, 39].

All submissions went through a double-blind review process. We would like to thank our many reviewers for their hard work and dedication to the notion of increasing the quality of proposed papers. Their work is priceless and much underappreciated.

I want to thank the co-organizers JASAG, NASAGA, SAGANET, SAGSAGA, PTBG, and ThaiSIM for the continued support, promotion, and work put into delivering this conference and post-proceedings.

The success of this LNCS volume would not have been achieved without the hard work and cooperation of the editorial committee. I would like to thank them warmly. I'm grateful for their support. I hope that this collection of selected papers will serve as a reminder of the good times we had at the ISAGA conference in Warsaw in these difficult times we face right now.

On behalf of the Editorial Team

Marcin Wardaszko

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