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II Workshop on Modeling and Simulation for Science and Engineering

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II Workshop on Modeling and Simulation for Science and Engineering

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II Workshop on Modeling and Simulation for Science and Engineering (II WMSSE) was a conference conducted at Universidad Tecnológica de Bolívar, in the city of Cartagena de Indias, Colombia, on September 24, 25 and 26, 2019. There, works in several topics of science, technology and engineering were presented. Specially, the participants of conference wanted to bring some solutions to the actual industrial requirements such as improvement and optimization of the heat transfer equipment, electronic devices, system control by mean of computational modeling. Also, dynamic system control was widely used for the prediction of power flow market, diffusion of bacteria in coffee production, stress concentration in industrial machines, analysis of population dynamics, model of hydrological and pluviometric networks, encryption for intercommunication of substation control centers, and others.

The conference was attended by more than 80 participants and received around 35 presentations in the different modalities. This event had the participation of international experts from Argentina, Ecuador and Puerto Rico, and researches from many cities of Colombia. Thus, the aim was to show progress in different fields of research of undergraduate and graduate students and research groups, where it joined mathematical and physical modeling in areas of interest such as dynamic systems model, control system, process control, power flow and the mechatronic systems.

II Workshop on Modeling and Simulation for Science and Engineering (II WMSSE) consolidated a space for the development of skills of the undergraduate and graduate students meanwhile socialization, discussion, evaluation and dissemination of their works by academic and international referees. Also, they had the opportunity to know who is working in similar topic and then to stablish some networks of cooperation and internships among them. Otherwise, the meeting allowed to set the new trends and topic of the future projects.

Finally, the majority of those experiences were compiled in this proceeding through papers, that they will be available for the consulting of the academic-scientific community in general. The Universidad Tecnológica de Bolívar and Foundation of Researchers in Science and Technology of Materials consider that these manuscripts contribute to the generation and transfer of knowledge, as well as to the strengthening of research in Colombia.



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