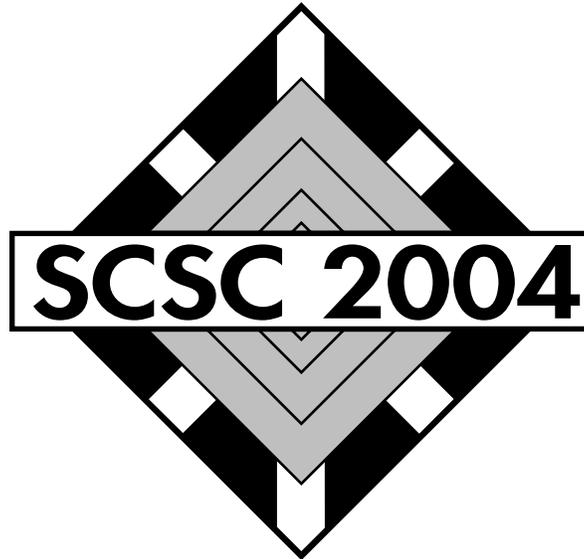


PROCEEDINGS OF THE 2004

SUMMER COMPUTER SIMULATION CONFERENCE



EDITED BY

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AND EDWARD WILLIAMS

JULY 24-29, 2004 • SAN JOSE, CALIFORNIA, USA



Sponsored by The Society for Modeling and Simulation International

ISBN: 1-56555-283-0

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The Society for Modeling and Simulation International
P. O. Box 17900
San Diego, CA 92177 USA

ISBN: 1-56555-283-0

PRINTED IN THE UNITED STATES

SCSC GENERAL CHAIR'S MESSAGE



Welcome to the 2004 Summer Computer Simulation Conference. This year, the SCSC is focusing on Innovative Simulation Technologies.

Modeling and Simulation are dynamically evolving in the area of Research and Development and, thanks to the introduction of new technologies, such methodologies can be used extensively to improve competitiveness worldwide.

The Summer Simulation Conference is itself a very effective stage for presenting the latest innovations of these new technologies and methodologies regarding the use of M&S in addition to improvements in terms of their impact on specific application areas.

The state of the art in the International Simulation Community in terms of theory and methodologies as well as applications and industry is being presented at this International Forum.

Indeed, Simulation is a very specific science that was originally envisaged as support for problem solving in very challenging cases for which the most advanced analytical techniques had failed. Therefore, Simulation science was, from the very beginning, the perfect blend of theory and technical expertise in advanced sectors. After many years of experience today the Simulation can be considered a competitive approach, with respect to traditional techniques, thanks to extensive know-how and innovative technologies that reduce costs and improve computational power.

This year's Summer Simulation Computer Conference is being held in the heart of Silicon Valley, a very good potential for a set of different applications where the simulation could support a "right the first time" solution, providing expert users with strategic competitive advantages.

This conference is back to its successful classic format and we expect a good result in this promising land. So, after the big success of last year's SCSC2003 in Montreal in terms of audience and paper quality, we expect similar achievements as well in San Jose.

Today, a conference's success is based on the possibility of giving top experts and young researchers the opportunity to meet and discuss the latest, up-to-date evolutions in simulation techniques. In this sense SCSC2004 is in fact a truly fantastic opportunity and particularly when combined with other SummerSim events being held in San Jose at the same time along with the networking organization pre-conference meetings involving major Simulation Institutions such as MS_Net, McLeod Institute of Simulation Science and Liophant Simulation.

Just like last year's edition in Montreal, the 2004 SCSC also puts the concept of quality in the spotlight. In fact, the authors went through an extensive review process to select

the best papers but also to improve the manuscripts based on reviewer feedback. About 75% of the full papers and extended abstracts submitted for publication were approved by the three reviewers, and each author was provided with a report that includes feedback in addition to detailed suggestions and notes.

This significantly high selection percentage is the result of the improvement process developed thanks to the extensive efforts of the IPC (International Program Committee).

The 2004 SCSC includes tracks involving different methodologies and application areas. This year, we also added new workshops in order to promote discussion and cooperative activities, confirming the ongoing events from 2003: Meeting of the Technical Council in SIMulation applications in Management, PLanning & forEcaSTing and Standards Workshop. At the same time the Transportation Workshop, based on the success of last year's track, obtained very good results in terms of audience and quality of the papers.

Last, but not least, the Student Workshop, established one year ago, is now considered a major event for SCS International to inject new blood into the simulation field.

This year, special emphasis has been placed on tutorials, considering the extent to which they promote simulation and based on the success of last year's edition during which 40 people from companies and academia attended such sessions.

Because the SCSC2004's success is mainly the result of many individual contributions, I would like to extend my most sincere gratitude to all authors, technical program committee members and their reviewers, as well as track and session chairs. My special thanks as well to the Program Chair Edward Williams, to Track Chairs and the IPC: V. Amico, F. Barros, L. Birta, M. Brandolini, C. Briano, P. Broas, J. M. Couretas, C. L. N. dos Santos, P. Elfrey, A. Elkamel, C. Frydman, N. Giambiasi, P. Gravitz, A. Guasch, J.A. Hamilton, D. V. Hlupic, R. Huntsinger, M. Itmi, A. Javor, P. Kropf, R. Lutz, R. McGraw, M. Mollaghasemi, R. Mosca, T. Ören, M. A. Piera, H. Pranevicius, E. Radwan, R. Revetria, C. Roberts, L. Rothrock, S. Saetta, H. Sarjoughian, R. Signorile, R. A. Strini, H. Szczerbicka, H. Unger, J. Uzdinski, G. Wainer, J. W. Wallace, F. Wieland, E. Williams, L. Yilmaz, S. Youngblood, M. Zarrillo and A. Zini.

I would also like to acknowledge the efforts of M. Massei and M. Chinni in 2004 SCSC web and overall management and the SCS International Office for their valuable contributions, and namely: Steve Branch, Sharon Odegaard, Amy Shapiro, and MarkYen.

The Silicon Valley milieu will hopefully be a fantastic "platform" for running the 2004 Summer Computer Simulation Conference.

Agostino Bruzzone
General Chair, SCSC 2004

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