Advances in Intelligent Systems and Computing

Volume 603

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Janusz Kacprzyk, Polish Academy of Sciences, Warsaw, Poland
e-mail: kacprzyk@ibspan.waw.pl

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Advances in Human Factors in Sports, Injury Prevention and Outdoor Recreation

Proceedings of the AHFE 2017 International Conference on Human Factors in Sports, Injury Prevention and Outdoor Recreation, July 17–21, 2017, The Westin Bonaventure Hotel, Los Angeles, California, USA

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Editor
Tareq Ahram
Institute for Advanced Systems Engineering
University of Central Florida
Orlando, FL
USA

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Advances in Human Factors and Ergonomics 2017

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8th International Conference on Applied Human Factors and Ergonomics and the Affiliated Conferences

Proceedings of the AHFE 2017 International Conference on Human Factors in Sports, Injury Prevention and Outdoor Recreation, July 17–21, 2017, The Westin Bonaventure Hotel, Los Angeles, California, USA

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Preface

Human Factors in Sports, Injury Prevention and Outdoor Recreation aims to address the critical cognitive and physical tasks which are performed within a dynamic, complex, collaborative system comprising multiple humans and artifacts, under pressurized, complex, and rapidly changing conditions that take place during the course of any sporting event. Highly skilled, well-trained individuals walk a fine line between task success and failure, with only marginally inadequate task execution leading to loss of the sport event or competition. This conference promotes cross-disciplinary interaction between the human factors in sport and outdoor recreation disciplines and provides practical guidance on a range of methods for describing, representing, and evaluating human, team, and system performance in sports domains. Traditionally, the application of human factors and ergonomics in sports has focused on the biomechanical, physiological, environmental, and equipment-related aspects of sports performance. However, various human factors methods, applied historically in the complex safety critical domains, are suited to describing and understanding sports performance. The conference track welcomes research on cognitive and social human factors in addition to the application of physiological ergonomics approaches sets it apart from other research areas. This book will be of special value to a large variety of professionals, researchers, and students in the broad field of Sports and Outdoor Recreation. Three sections presented in this book are as follows:

I. Injury Prevention and Analysis of Individual and Team Sports
II. Physical Fitness and Exercise
III. Assessment and Effectiveness in Sports and Outdoor Recreation

Each section contains research that has been reviewed by members of the International Editorial Board. Our sincere thanks and appreciation to the Board members as listed below:

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This book will be of special value to a large variety of professionals, researchers, and students in the field of performance who are interested in Injury and Accidents prevention, and design for special populations, particularly athletes. We hope this book is informative, but even more that it is thought provoking. We hope it inspires, leading the reader to contemplate other questions, applications, and potential solutions in creating good designs for all.

July 2017 Tareq Ahram

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