Introduction

The 11th International Conference on Intelligent Systems Design and Applications (ISDA'11) was held in Cordoba, Spain, November 22–24, 2011. It was organized by the Machine Intelligence Research Labs (MIR Labs) and sponsored by the IEEE Computational Intelligence Society's Spanish Chapter and the IEEE Systems, Man and Cybernetics Society Technical Committees on Soft Computing and Granular Computing. ISDA'11 brought together researchers, engineers, developers and practitioners from academia and industry working in the areas of intelligent systems and systems engineering to share their experiences and exchange ideas.

There were 394 papers submitted for ISDA'11 out of which 237 papers from 51 countries were accepted for presentation at the conference and inclusion in the proceedings (published on a CD). Authors of the 21 most innovative papers were invited to submit substantially improved and updated versions of the papers for possible publication in this special issue with the following stipulations set by the journal Editor-in-Chief: "*To be considered for publication in the special issue the manuscript a) should present new computational* research materials, b) should not have been published previously in archival form, and c) should be extended with additional unpublished original computational contributions and be updated in a substantive way. The overlap of the enhanced/updated paper with the published conference proceedings paper should not be more than 50%. Addition of literature review, introductory materials, and examples will not satisfy the condition of a substantially enhanced/different paper." Each substantially extended paper subsequently went through two full cycles of reviews by 3 to 7 reviewers using the journal's standard review form. The seven papers that passed through the journal's rigorous review process successfully are included in this issue.

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Krzysztof J. Cios
General Co-Chair

Cristobal Romero
José Manuel Benitez
Francesco Marcelloni
Program Co-Chairs