European Journal of Operational Research

The International Institute for Applied Systems Analysis (IIASA) announces the release of the *European Journal of Operational Research* (EJOR) Volume 122, Number 2, April 16, 2000, Feature Issue: Advances in Modeling. The Journal includes 25 papers presented at two IIASA-organized workshops held in September 1998 on modeling methodologies and their real-world applications. Guest editors of the Feature Issue were Marek Makowski, IIASA, and Hans-Jurgen Sebastian, Aachen Institute of Technology.

IIASA is known for the design and use of models in analysis of complex environmental problems, and for its network of institutions using innovative modeling methodologies and applications. Building upon these competencies, IIASA and IFIP Working Group 7.6 organized the workshop, “Advances in Modeling: Paradigms, Methods and Applications,” followed by a second workshop, organized jointly by IIASA and the Japan Institute of Systems Research, “Methodologies and Tools for Complex System Modeling and Integrated Policy Assessment.”

Four papers in the EJOR Feature Issue discuss IIASA's modeling activities.

- Y. Ermoliev et al., present in "A system approach to management of catastrophic risks" the two main strategies used to assess rare and dependent catastrophic risks, and discuss methodological challenges in developing the corresponding model-based decision support.
- M. Makowski in, "Modeling paradigms applied to the analysis of European air quality," provides an overview of various modeling paradigms applicable to the analysis of complex decision making problems, and uses IIASA’s RAINS model in examples. The RAINS model, which is a large, non-linear model, has been instrumental in the analysis of various cost-effective policy options related to European air quality.
- M. Ryoke et al., present, “A simplified ozone model based on fuzzy rules generation.” The methodology is applied to represent numerous results of the EMEP model as a response surface describing the source-receptor relationships between ozone precursor emissions and daily tropospheric ozone concentrations.
- Finally, in “Interactive specification and analysis of aspiration-based preferences,” J. Granat and M. Makowski present methodological background for multi-criteria model analysis and a modular software tool for multi-criteria analyses of linear and mixed-integer models.

Reprints of the four IIASA papers can be obtained from IIASA Office of Publications or from the IIASA web site, www.iiasa.ac.at. Complete contents of the EJOR Feature Issue can be found at URL: http://iiasa.ac.at/~marek/pubs/ejor99.html

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