

## **Knowledge-based Configuration**

### **J.UCS Special Issue**

**Alexander Felfernig**

(Graz University of Technology, Austria  
Alexander.felfernig@ist.tugraz.at)

**Juha Tiihonen**

(University of Helsinki, Finland  
Juha.Tiihonen@cs.helsinki.fi)

Knowledge-based configuration is one of the most successful application areas of Artificial Intelligence [Felfernig et al. 2014]. There are various application areas ranging from the automotive domain and smarthomes to the interactive configuration of financial services. The aim of this special issue on "Configuration" is to present contributions that help to advance the state of the art and provide useful recommendations regarding open issues for future research.

In their article, H el ene Fargier, Pierre-Fran ois Gimenez and J er ome Mengin introduce concepts that help to advance existing practices in the process of personalizing the interaction with configurators. Related concepts help to significantly reduce interaction efforts of users.

Andreas Falkner, Alois Haselb ock, Gerfried Krames, Gottfried Schenner, Herwig Schreiner and Richard Taupe provide an in-depth discussion of major requirements regarding mechanisms that support interactive configuration. They analyze the existing state of practice in terms of decision support functionalities of existing solver environments and point out major functionalities to be included in the future.

Jeppe Bredahl Rasmussen, Lars Hvam, Katrin Kristjansdottir and Niels Henrik Mortensen investigate best practice modelling and implementation techniques for product configuration systems. On the basis of this analysis, the authors propose a method for a modular design of product configuration systems on the basis of design patterns.

Finally, Thi Ngoc Trang Tran, Muesluem Atas, Man Viet Le, Ralph Sammer and Martin Stettinger contribute to an advancement of the state of the art in explanations for intelligent systems. In this context, the authors present results of an empirical study that analyzes different ways of explaining recommendations to groups. This work moves single user interaction paradigms towards scenarios where decisions are taken in groups.

#### **References**

[Felfernig et al. 2014] A. Felfernig, L. Hotz, C. Bagley, and J. Tiihonen, Configuration Systems, Elsevier, 2014.