22nd International Configuration Workshop

Proceedings of the 22nd International Configuration Workshop

Edited by
Cipriano Forza, Lars Hvam, and Alexander Felfernig

September 10 - 11,
2020 Vicenza, Italy

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Cipriano FORZA, Lars HVAM, Alexander FELFERNIG, Editors
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Preface

Configure a product is the task of composing a product variant from an established product architecture using parametrized components. Products may be both physical goods and services. Products may even be very complex systems. Configurable products and software applications to support the configuration task play a crucial role in obtaining the mass customization capability, i.e. in providing customized products with costs, delivery time and quality close to those of mass produced ones.

Configuration problems are among the most fruitful domains for applying and developing advanced artificial intelligence (AI) techniques. Powerful knowledge-representation formalisms are required to capture the great variety and complexity of configuration problems. Efficient reasoning is required to provide intelligent interactive behavior in contexts such as solution search, satisfaction of user preferences, personalization, optimization, and diagnosis.

The main goal of the workshop is to promote high-quality research in all technical areas related to configuration. The workshop brings together industry representatives and researchers from various areas of AI and management. It provides a forum to identify important configuration scenarios found in practice, exchange ideas and experiences and present original methods developed to solve configuration problems. It promotes discussion on new technologies that can support the automatized solution of configuration problems as well as the investigation on the relationship between configuration technology and the business problems behind configuration and mass customization.

The 2020 Workshop on Configuration continues the series of successful workshops organized within IJCAI, AAAI, and ECAI since 1999. Starting from 2013, the workshop was held independently from major conferences. Even in this 22nd edition, beside researchers from a variety of different fields, it attracted a significant number of industrial participants from major configurator vendors as well as from end-users. The 2020 Workshop on Configuration is a standalone two-day event. It was planned to takes place in Vicenza, Italy at the Department of Management and Engineering of Padova University. Due to COVID19 pandemic, it has been moved online.

A total of 18 papers were selected for presentation on the Configuration Workshop. All papers underwent to full paper blind review with a minimum of two independent reviewers per paper. All papers have been substantially changed to comply with the reviewers' observations.

The themes of the technical sessions are knowledge representation & reasoning, peculiar technologies for configuration (machine learning, conversational agents (chatboats and voiceboats), social software, Microsoft excel), configuration of products in use (reconfiguration, adaptation, renovation, maintenance, repair), business applications with a special focus on the provision of empirical data to depict the state of the art on configuration practices.

Cipriano Forza, Lars Hvam, and Alexander Felfernig August 2020

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