

Call for Chapters

Knowledge Engineering and Software Engineering (KESE). Methods, tools, and case studies. (tentative title)

Deadlines (tentative)

Chapter proposals:	2016-06-17
Notification:	2016-07-08
Chapters full text:	2016-09-16
Reviews due:	2016-11-04
Fixed versions due:	2016-12-16
2nd round revs:	2017-01-27
Camera ready:	2017-02-10



Introduction

Knowledge Based Systems (KBS) have been successfully developed in various domains based on techniques and tools from Knowledge Engineering (KE). The classic KE approach to system modeling uses mostly logic-based symbolic knowledge representation methods, which are more specific from Artificial Intelligence (AI) in a broad sense, that has recently included Computational Intelligence (CI) techniques. Most of the implementations of today KBS are software-based and thus Software Engineering (SE) methods and tools play an important role in their development. Moreover, recent developments in SE emphasize the importance of the use of formalized symbolic representations in the software development process. This stimulates the synergy between KE methods and SE methods and tools.

Recently, declarative software engineering techniques have been established in many areas, such as knowledge systems, logic programming, programming for the Semantic Web and Linked data, business rules as well as business processes.

Results in these topics were presented for over 10 years in the KESE workshop series <http://kese.ia.agh.edu.pl> During the years 2005-2014 ten very successful and fruitful editions of KESE were organized. Originally, the workshop was created by Dietmar Seipel and Joachim Baumeister (Uni. Wuerzburg) and then co-chaired and developed by Grzegorz J. Nalepa (AGH UST) and Joachim Baumeister. The workshop was originally hosted on the KI - the German AI conference, and later on traveled to CAEPIA - the Spanish AI conference, and finally the ECAI conference. Together we built a vibrant international community.

Objective

The primary objective of this edited book is to gather and present research results of researchers and practitioners from fields of KE and SE. This includes, but is by no means restricted to the topics presented in the original KESE workshop series. Moreover the books endeavors to promote the use of KE techniques in SE problems, where significant benefits can be derived from their use. The general goal is to show how the KE techniques can provide practical solutions in SE issues. Further interest is on the influence of SE methods and tools on the practical design of KBS within KE. The intention is to give ample space for presenting important achievements and research results as well as share knowledge about practical experiences and systems. The mission of this book is promoting the cross-fertilization of KE methods in SE and vice versa.

Topics of Interest

Topics to be covered by the book stem from the original workshop topics. They are generally related to the applications of symbolic KE techniques in SE as well as the use of KE in the SE practice. Specific topic the areas include, but are not limited to, the ones listed below:

- * Knowledge and software engineering for the Semantic Web
- * Knowledge and software engineering for Linked Data
- * Ontologies in practical knowledge and software engineering
- * Business systems modeling, design and analysis using KE and SE
- * Practical knowledge representation and discovery techniques in software engineering
- * Context and explanation in intelligent systems
- * Knowledge base management in KE systems
- * Evaluation and verification of KBS
- * Practical tools for KBS engineering
- * Process models in KE applications
- * Software requirements and design for KBS applications
- * Software quality assessment through formal KE models
- * Declarative, logic-based, including constraint programming approaches in SE

Target Audience

Scientifically this book intends to disseminate new knowledge useful to promote the use of KE methods in SE and SE methods in KE. It is expected that this book can induce an impact on both communities bringing a set of new and innovative solutions. The target audience of this book will be composed of professionals and researchers working in the fields of KE using SE tools but also software engineers building knowledge-based applications and systems.

Submission

We expect submissions from researchers and practitioners from the areas of KE and SE. Researchers and practitioners are invited to submit a chapter proposal of 1,000 to 2,000 words clearly explaining the mission and contents of the proposed chapter. The proposal are to be submitted in PDF through EasyChair

<https://easychair.org/conferences/?conf=kesem17>

We are strongly interested in methodological chapters, including surveys of important areas of state of the art. Moreover, so we encourage the submission of chapters containing practical results and system descriptions that clearly show the interaction between knowledge engineering and software engineering research. The methodological or practical character of the chapter should be emphasized in the proposal. Authors will be notified about the status of their proposals and sent chapter guidelines. Full chapters are expected to be submitted then. All submitted chapters will be reviewed. Contributors may also be requested to serve as reviewers for this project. We expect chapters of roughly 20-30 pages in the Springer format

<https://www.springer.com/gp/authors-editors/book-authors-editors/manuscript-preparation/5636>

Note: There are no submission or acceptance fees for manuscripts submitted to this book publication. All manuscripts are accepted based on a peer review editorial process.

Publisher

The book will be published by Springer. The final Springer series will be established based on the chapter proposals. It will be a well-visible series indexed in the ISI Book Citation Index. The authors will be notified about the decision together with the acceptance of the proposal.

Editors

Grzegorz J. Nalepa, AGH University of Science and Technology, Poland
Joachim Baumeister, denkbares GmbH, University of Wuerzburg, Germany