Artificial Intelligence for Engineering Design, Analysis and Manufacturing (2015), *29*, 523–524.
© Cambridge University Press 2015 0890-0604/15
doi:10.1017/S0890060415000499

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AI EDAM Special Issue, November 2016, Vol. 30, No. 4
Engineering Design Informatics

Guest Editors: Daniel McAdams, Chris McMahon, & Ying Liu

Engineering design informatics is the application, development, and creation of advanced computing, information, and communication technologies for engineering design. It enables the study of specific aspects of design in handling large sets of data and information rich digital objects. Engineering design informatics includes attempts to develop a deeper understanding of the design process using informatics. Different from other fields of informatics, such as bioinformatics, engineering design informatics seeks contributions beyond static understanding of engineering design. It seeks to create theory, method, and science use data, digital objects, information, and knowledge to help engineers better generate, develop, test, and realize designed products, systems, and services.

For example, engineering design informatics may identify information that may help a designer during the design process by using programs to assist in retrieving, storing, manipulating, and sharing data. The information of interest may describe previous designs, design needs and issues, correlations between variables, or may contain sources of inspiration for novel, innovative solutions. Design informatics programs allow users to explore more of the existing knowledge space, which can help stimulate ideas and the creation of new or improved design solutions.

We invite contributions for this Special Issue regarding the development of design informatics systems and tools as well as their application. Examples include but are not limited to the following:

- Data mining to find and generate concepts to solve design problems
- Informatics-based methods to improve engineering decision making
- Informatic analysis of engineering processes and design processes
- New methods to support automatic information intensive activities in engineering design
- Information processing as applied to risk and failure reduction and avoidance
- Information modeling approaches to design evaluation
- Informatics-based approaches to strategic product planning and realization
- Machine learning methods applied to large data sets to inform and guide designers on customer needs
- Methods for the systematic organization and access and long-term storage and interoperability of engineering design data
- New methods for capture of design rationale and for automatic documentation of design processes

All submissions will be anonymously reviewed by at least three reviewers. The selection for publication will be made on the basis of these reviews. High quality papers not selected for this Special Issue may be considered for standard publication in *AI EDAM*.

Information about the format and style required for *AI EDAM* papers can be found at http://aiedam.usc.edu/index.php/Authors/ForAuthors

Note that all inquiries and submissions for Special Issues go to the Guest Editors, **not** to the Editor in Chief.

Important Dates

Intend to submit (Abstract & Title):	As soon as possible
Submission deadline for full papers:	October 1, 2015
Reviews due:	December 15, 2015
Notification and reviews due to authors:	January 15, 2016
Revised papers due from authors:	March 1, 2016
Final version due:	May 1, 2016

https://doi.org/10.1017/S0890060415000499 Published online by Cambridge University Press

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https://doi.org/10.1017/S0890060415000499 Published online by Cambridge University Press