

Editorial

Cite this article: Chakrabarti A (2021). The 35th Year of AI EDAM: Where are We Heading? *Artificial Intelligence for Engineering Design, Analysis and Manufacturing* 35, 1–2. <https://doi.org/10.1017/S0890060421000032>

The 35th Year of AI EDAM: Where are We Heading?

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Happy New Year to all! As we step into the 35th year of AI EDAM, it is time to revisit the vision of the journal in the light of the evolving academic and industrial scenario and take stock of the progress of the journal in the last few years in these directions.

Vision and Areas of Focus

AI EDAM began with a vision to provide a platform for publication of significant research at the intersection of Artificial Intelligence and Engineering Design (both Synthesis and Analysis) and Manufacturing. As described on the journal website, it “...publishes original articles about significant AI theory and applications based on the most up-to-date research in all branches and phases of engineering... AI EDAM is also interested in original, major applications of state-of-the-art knowledge-based techniques to important engineering problems.”

So far, however, AI EDAM has published largely in the area of design and AI, and relatively little in manufacturing. Given the resurgence of manufacturing since the past decade, especially in smart manufacturing which is at the interface of traditional manufacturing and AI/Data Science, the Editorial Board had decided in 2017 that manufacturing should be an area of greater focus for AI EDAM. Further, it was also felt that particular emphasis should be laid to three emerging aspects: sustainability, human-machine interaction, and analysis/analytics.

The above is reflected in the Special Issues and Thematic Collections published in the last few years and planned in the next few years:

- Design and Manufacturing
 - Uncertainty Quantification for Engineering Design (2017)
 - Function Modeling: Benchmark Models, Problems, and Approaches (2017)
 - Advances in Implemented Shape Grammars: Solutions and Applications (2018)
 - Design Computing and Cognition (2018)
 - Design Creativity (2018)
 - Knowledge Engineering and Management Applied to Innovation (2019)
 - Design Computing and Cognition (2020)
 - Fablabs, Makerspaces and Design Spaces (2020)
 - Design Computing and Cognition (2021)
- Sustainability
 - Cognitive and Learning processes for transition to Design for Sustainability (2020)
- Human-Product/Mfg. interaction
 - Intelligent Interaction Design (2019)
 - Industrial Intelligent Technologies for Human-Robot Interaction & Collaboration (2022)
- Analysis/Analytics
 - Smart Designing of Smart Systems (2021)
 - Perspectives on Data-Enabled Design - Design meets Data Science (2022)

Editorial Board

To support the above vision, the Editorial Board, including the Associate Editors, is also being expanded for the journal to have greater presence in the above areas, with the following additions:

Associate Editors:

- Gaetano Cascini, Politecnico di Milano, Italy (TRIZ, Creativity, Biomimetics)
- Ashutosh Tiwari, University of Sheffield, UK (Manufacturing, Informatics)
- Yong Zeng, Concordia University, Canada (Data Driven Design)

Editorial Board:

- Chris McMahon, University of Bristol, UK
- Kristin Wood, SUTD, Singapore

- Kaz Grace, University of Sydney, Australia
- Ashok K Goel, Georgia University of Technology, USA
- Maria Yang, MIT, USA
- Yan Jin, University of Southern California, USA

Special Issues

In the area of design, AI EDAM has championed the concept of 'Special Issues' - issues that would publish a collection of papers in a specific area of interest at the cutting edge of research, typically edited by a group of Guest Editors. This allowed highlighting interesting new developments in the area of design (and sometimes manufacturing) research. Of the four issues published in the journal per year, three have been published as Special Issues.

In order to bring greater flexibility in the process while retaining this character of AI EDAM of continuing to highlight new developments in the areas of its focus, it was decided by the Editorial Board in 2018 to change all Issues of AI EDAM into 'General Issues' - i.e. issues that would have the flexibility to include both general papers and papers in a specific 'Thematic Collection'. Further, with effect from 2022, papers in a Thematic Collection would be published continuously, as soon as each paper is ready for publication, thereby dissociating a thematic collection from a time-specific issue of the journal. Both these changes are intended to allow immediate publication of a paper, general or thematic, as soon as it is ready for production.

Special Thanks

As we begin our journey into the 35th Year of AI EDAM, I wish to take this opportunity to express my gratitude to a number of people who have made and continue to make its journey special.

I am grateful to the earlier Editors in Chief who have worked hard to create and hold the high standard of the journal through three decades. In particular I would like to thank my predecessor Professor Yan Jin, and Professor Dave Brown, his predecessor, who have been mentors and a constant source of support and advice for me as I continue in my current role.

I am grateful to Professors Ashok Goel and Mary Lou Maher, who have stepped down from their position of Associate Editors, for their stellar service to the journal.

I am also grateful to Professor Ian Smith, Professor Per Christiansson and Dr Tim Smithers, who have stepped down from the Editorial Board, for their long and dedicated service to the journal.

I also thank all my colleagues who continue to act as Associate Editors or members of the Editorial Board for the journal. My sincere thanks also to my colleagues at the Cambridge University Press - Dr Samira Ceccarelli and her team - for their continued support for the journal. Finally, I am indebted to Dr N Madhusudanan, Dr Shakuntala Acharya and Mr Apoorv Bhatt for their Editorial Support.