

## INSTRUCTIONS FOR AUTHORS

### AIMS AND SCOPE

**AIEDAM:** *Artificial Intelligence for Engineering Design, Analysis and Manufacturing* is a journal intended to reach two audiences: *engineers and designers* who see AI technologies as powerful means for solving difficult engineering problems and *researchers in AI and computer science* who are interested in engineering applications of AI and in the theoretical issues that arise from such applications. The journal publishes significant, original articles about AI theory and applications based on the most up to date research in all branches and phases of engineering. Suitable topics include analysis and evaluation, selection, configuration and design, manufacturing and assembly, and concurrent engineering. Specific subareas include cognitive modeling; creativity; learning; qualitative reasoning; spatial reasoning; graphics and modeling; constraints and preferences; style and brands; human-computer interaction; multimodal interaction; computational linguistics; design and process planning; scheduling; simulation; optimization; distributed teams and systems; multiagent applications; design rationale and histories; functional, behavioral, and structural reasoning; knowledge management; and ontologies. **AIEDAM** is also interested in comprehensive review papers, as well as in practicum papers that describe original, major applications of state-of-the-art AI techniques to important engineering problems, with enough details to help others build similar systems. In addition to the rapid publication and dissemination of unsolicited research papers, **AIEDAM** is committed to producing special issues on important, timely topics. **AIEDAM** is indexed in Compendex Plus, SciSearch, Research Alert, and CompuMath Citation Index.

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After a submission is approved, a peer review process will be initiated. Generally a manuscript is sent to at least three reviewers to assess its strengths and weaknesses. Reviewers make recommendations on the suitability of the manuscript for the Journal based on several criteria including originality, significance and impact, and style and organization.

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Both the initial submission and final article should be double-spaced and have 1 in. (2.5 cm) margins throughout, including

footnotes, references, tables, and figure captions. The position of tables and figures should be clearly indicated and in sequence in the text. Footnotes, tables, and figure captions, as well as figures, should be provided separately at the end of the article. Accepted articles must be in MS Word. LaTeX will only be permitted when there are numerous complex mathematical equations.

### MANUSCRIPT ELEMENTS AND ORDER

Manuscripts should be organized as follows:

**Title page.** This is page 1. The title should be concise, informative, and free of abbreviations, chemical formulae, technical jargon, and esoteric terms. This page should include (a) the article's full title; (b) the names and affiliations of all authors; (c) the name, mailing address, telephone number, and E-mail address of the corresponding author; (d) a short title of 40 characters or less; and (e) a list of the number of manuscript pages, tables, and figures.

**Abstract and keywords page.** This is page 2 and should include (a) the article's full title, (b) an abstract of no more than 300 words, and (c) up to 5 keywords or phrases that reflect the content and major thrust of the article. The abstract should give a succinct account of the objective, methods, results, and significance of the subject matter.

**Introduction.** This section begins on page 3 and should clearly state the objective of the research in the context of previous work bearing directly on the subject. An extensive review of the literature is usually not appropriate.

**Notations in text.** Customary abbreviations will be accepted and the authors are recommended to employ *Système Internationale* (SI/metric) units. Special and unusual symbols should be clearly presented and in a common font. Spell out acronyms at first use, and use only acronyms thereafter. All equipment supplies and products stated in the article should have the manufacturer name and location identified at first mention.

**Tables.** Tables should be numbered consecutively with Arabic numerals, and each should be double-spaced on separate pages after the references. A short explanatory title and column headings should make the table intelligible and a footnote should define all terms without reference to the text. All tables must be cited sequentially and their approximate positions indicated in the text.

**Figures and captions.** The number of figures should be the minimum necessary to make the essential points of the paper. Figures should be no larger than 6 X 8 in. (approx. 200 X 250 mm) and should be included in a separate file. Figures should be composed to occupy one column (20 picas or 8.3 cm) or two columns (41.5 picas or 17 cm) after reduction. Diagrams and illustrations must have a professional appearance and be created with high-resolution lettering to permit reduction. To assure legibility, letters, numbers, and symbols on figures should all be the same size and have a minimum height of 2 mm (i.e., 6 points on the pica scale) when reduced. Figures should be separate and not incorporated into the text copy. Each figure must be cited sequentially and its approximate position clearly indicated within the text. Figures must be numbered consecutively with Arabic numerals and be accompanied by a descriptive double-spaced caption provided at the end of the article. The captions should concisely describe the figure, identify any symbols and/or calibration bars, and define any terms or acronyms. Acceptable figure file formats are MS Word, EPS, JPEG, TIFF, PS, and PDF.

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**References.** The alphabetical list of references begins a new page after the text. Each in-text citation must have a corresponding reference and vice versa. Only conference papers, theses, and published or in press articles and books should appear in this list.

All authors' names should be included, followed by the year of publication. For journals, the full title of the journal, volume, issue number, and inclusive page numbers should be provided. For books, the full title should be given, followed by the editors, volume number (if any), page numbers, place of publication, and publisher. Citations in the text should read Brown and Goel (2010) or (Brown & Goel, 2010). Where there are more than two authors the citation should read Brown et al. (2010). When more than one paper by the same authors has appeared in the same year, they are distinguished by (Brown & Goel, 2010a, 2010b). Multiple citations in the text should be in chronological order (Dym, 1994; Birmingham, 1999; Brown, 2010).

#### *Journal or Magazine Article*

Brown, D.C. (2010). AI EDAM at the cutting edge. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing* 24(3), 281–282.

Frey, D., Birmingham, W., & Dym, C. (2010). Design pedagogy: representations and processes [Guest editorial]. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing* 24(3), 283–284.

Knight, T., & Sass, L. (2010). Looks count: computing and constructing visually expressive mass customized housing. *Artificial Intelligence for Engineering Design, Analysis and Manufacturing* 24(3), 425–445.

#### *Book*

Dym, C.L. (1994). *Engineering Design: A Synthesis of Views*. New York: Cambridge University Press.

#### *Chapter in Edited Book*

Goodman, J., Clarke, S., Langdon, P., & Clarkson, P.J. (2007). Designers' perceptions of methods of involving and understanding users. In *Universal Access in Human Computer Interaction* (Stephanidis, C., Ed.), LNCS Vol. 4554, pp. 126–136. New York: Springer.

#### *Proceedings With Publisher Identified*

Strickfaden, M., & Heylighen, A. (2007). Exploring the cultural capital of design educators. *Proc. Int. Conf. Engineering Design, ICED'07*. Paris: The Design Society.

#### *Proceedings With No Publisher Identified*

Shu, L., Hansen, H., Gegeckaitė, A., Moon, J., & Chan, C. (2006). Case study in biomimetic design: handling and assembly of microparts. *Proc. ASME 2006 Int. Design Engineering Technical Conf. & Computers and Information in Engineering Conf.*, Paper No. DETC2006/DTM-99398, Philadelphia, PA, September 10–13.

**Author biographies.** Brief author biographies must be provided at the end of each paper; they should not exceed 100 words for each author.

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