

Call for papers

for the Special Issue of the Journal of Integrated Design and Process Science on:

Design, Process, and System Science Triggered Innovations in Engineering Education

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Focus and objectives:

Due to their epistemological and methodological convergence and divergence, design, process, and system sciences offer not only unidisciplinary insights, resources, and approaches to support innovations in engineering education, but also their latest transdisciplinary achievements. Obviously, neither the knowing-doing-learning cycles of the industry and society nor the what-why-how questions of academic research and education can be reliably prognosticated due to the concurrent internal and external dynamics. Being permeated by enablers brought into existence by artificial narrow intelligence, epistemological and methodological convergence can be expected to create new transdisciplinary foundations, frameworks, scenarios, and contents for practically all conventional and emerging branches of engineering education. The primary objective of this special issue is to shed light on the recent progression in fields such as engineering design, process organization, systems science, data/knowledge science, sociology, economics, sustainability, engineering ethics, and artificial intelligence and help road mapping into next-generation engineering education for the coming decade. Studies in both theoretical research and educational practice concerning the contents, approaches, and visions of next-generation engineering education on undergraduate, graduate, and postgraduate levels are welcome. Methodologies of transdisciplinary teaching and learning hardware, software, cyberware, and brainware knowledge and competencies, as well as the responsible use and ethical practices of the deployment of AI in various forms and stages of education, will receive distinguished attention.

List of preferred topics:

The main topics considered for this special issue (acronym: DPSS-IEE) include, but are not limited to, the following:

- Critical analysis of the state-of-the-art and dominating trends
- Paradigmatic changes and evolution towards next-generation engineering education
- Novel enablers offered by convergence of design, process, and system sciences

- Transdisciplinary foundations, top-down frameworks, self-managed scenarios, and dynamically composed contents
- Novel institutional and deinstitutionalized educational strategies and approaches
- Data/knowledge science, artificial intelligence, sociology, economics, sustainability, and ethics in engineering education
- Paradox of industry-based and practice-driven time-framed education versus continuing autonomous and lifelong individual self-learning
- Development strategies, implementation approaches, and accreditation/assessment policies for multi-stage education programs
- Frameworks, roadmaps, and blueprints of integral teaching and learning of hardware, software, cyberware, and brainware.

Manuscript submission information:

- Journal of Integrated Design and Process Science is an international peer-reviewed dual model (subscription and open access based) quarterly journal published by SAGE (formerly, by IOS Press).
- All submissions are supposed to address significant research, development, and application topics, and to provide rigorously scrutinized and scientifically novel contributions.
- Survey, research, application, and vision articles, as well as short communications that deliver sufficient theoretical and/or practical novelty and high quality, are equally welcome.
- Abstracts should be sent to the technical manager of the journal using jiamei.yang@mail.concordia.ca for approval, and the full manuscripts should be submitted online using the journal's submission management system, preferably before the deadlines given below.
- Submitted manuscripts should not have been published previously, nor be under consideration for publication elsewhere (except conference proceedings papers).
- A guide for authors and other relevant information for the submission of manuscripts are available on the Instructions for Authors page. Submitted papers should be well structured and formatted and should use proper English.
- For planned and in-process papers, a title and short abstract (about 100 words) are to be sent to the Editorial Office, referring to the title of this Special Issue, for announcement on the journal's website.
- All submissions will be anonymously peer-reviewed by at least three reviewers. The selection for publication will be made based on the reviewers' recommendations and the importance of the contribution.
- Authors of all papers are requested to make a statement if they used any constructive and generative artificial intelligence means and support in the entire content development process of the paper, and if they respected all related regulations of the publisher.
- The papers submitted to the journal will be published continuously (as soon as accepted) and will be listed together on the special issue website. JIDPS pledges to process the submitted papers in the shortest possible review and publication cycle.
- Queries and information about submissions for this Special Issue should be addressed to the co-guest editors, and not to the editor-in-chief.
- The Article Processing Charge (APC) for open-access publication will be according to the various open-access schemes offered by the Publisher of the Journal (SAGE).

Milestones of content development and editing:

Indication of interest and submission of title and abstract	10 January 2025
Submission of the full-length draft manuscript for peer review	30 April 2025
The first review cycle is completed	30 June 2025
Submission of the revised draft manuscript for peer review	31 July 2025
The second review cycle is completed	15 September 2025
Submission of the final manuscript for publication	15 October 2025
Special Issue is published	30 November 2025

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