DESCRIPTION

For JSS's full CfP including information on Special Issues, Industry, Trends, and Journal First tracks please continue to read for further details.

The Journal of Systems and Software publishes papers covering all aspects of software engineering. All articles should provide evidence to support their claims, e.g. through empirical studies, simulation, formal proofs or other types of validation. Topics of interest include, but are not limited to:

Methods and tools for software requirements, design, architecture, verification and validation, testing, maintenance and evolution

Agile, model-driven, service-oriented, open source and global software development

Approaches for cloud/fog/edge computing and virtualized systems

Human factors and management concerns of software development

Artificial Intelligence, data analytics and big data applied in software engineering

Metrics and evaluation of software development resources

DevOps, continuous integration, build and test automation

Business and economic aspects of software development processes

Software Engineering education

Ethical/societal aspects of Software Engineering

Software Engineering for AI systems

The journal welcomes reports of practical experience for all of these topics, as well as replication studies and studies with negative results. The journal appreciates the submission of systematic literature reviews, mapping studies and meta-analyses. However, these should report interesting and important results, rather than merely providing statistics on publication year, venue etc.

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In addition to regular papers, JSS features two special tracks (In Practice, New Ideas and Trends Papers), as well as special issues.

**In Practice** is exclusively focused on work that increases knowledge transfer from industry to research. It accepts: (1) Applied Research Reports where we invite submissions that report results (positive or negative) concerning the experience of applying/evaluating systems and software technologies (methods, techniques and tools) in real industrial settings. These comprise empirical studies conducted in industry (e.g., action research, case studies) or experience reports that may help understanding situations in which technologies really work and their impact. Submissions should include information on the industrial setting, provide motivation, explain the events leading to the outcomes, including the challenges faced, summarize the outcomes, and conclude with lessons learned, take-away messages, and practical advice based on the described experience. Contributing authors from industry are encouraged but not mandatory. (2) Practitioner Insights where we invite experience reports showing what actually happens in practical settings, illustrating the challenges (and pain) that practitioners face, and presenting lessons learned. Problem descriptions with significant details on the context, underlying causes and symptoms, and technical and organizational impact are also welcome. Practitioner insights papers may also comprise invited opinionated views on the evolution of chosen topic areas in practice. In contrast to applied research reports, practitioner insights are limited to four pages and the first author must be from industry. Finally, submissions to this track should be within scope of the journal's above topics of interest and they will be evaluated through industry-appropriate criteria for their merit in reporting useful industrial experience rather than in terms of academic novelty of research results.

**New Ideas and Trends Papers**

New ideas, especially those related to new research trends, emerge quickly. To accommodate timely dissemination thereof, JSS introduces the New Ideas and Trends Paper (NITP). NITPs should focus on the systems/software engineering aspects of new emerging areas, including: the internet of things, big data, cloud computing, software ecosystems, cyber-physical systems, green/sustainable systems, continuous software engineering, crowdsourcing, and the like. We distinguish two types of NITPs: A short paper that discusses a single contribution to a specific new trend or a new idea. A long paper that provides a survey of a specific trend, as well as a (possibly speculative) outline of a solution. NITPs are not required to be fully validated, but preliminary results that endorse the merit of the proposed ideas are welcomed.

We anticipate revisiting specific new trends periodically, for instance through reflection or progress reports.

**New Ideas and Trend Papers warrant speedy publication.**

**Special Issue proposals**

To submit a proposal for a special issue please submit your proposal here to Special Issues Editors Prof. Raffaela Mirandola and Prof. Laurence Duchien. Please visit the special issue guidelines page first to review the proposal guidelines and to download the proposal template required when submitting a proposal.

**Journal First Initiative**

Authors of JSS accepted papers have the opportunity to present their work in those conferences that offer a Journal First track. Using this track, researchers may take the best from two worlds: ensuring high quality in the JSS publication (thorough, multi-phase review process of a long manuscript), while getting feedback from a community of experts and fostering possible collaborations during a scientific event.

Details may vary from conference to conference, but generally speaking, JSS papers to be presented in a Journal First track must report completely new research results or present novel contributions that significantly extend previous work. The ultimate decision to include a paper in the conference program is up to the conference chairs, not JSS. A JSS paper may be presented only once through a Journal First track.

As of today, the list of conferences with which JSS is collaborating, or has collaborated, through a Journal First track, is: ASE, ICSME, SANER, RE, ESEM, PROFES, and APSEC.
AUDIENCE


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**Reporting sex- and gender-based analyses**

**Reporting guidance**

For research involving or pertaining to humans, animals or eukaryotic cells, investigators should integrate sex and gender-based analyses (SGBA) into their research design according to funder/sponsor requirements and best practices within a field. Authors should address the sex and/or gender dimensions of their research in their article. In cases where they cannot, they should discuss this as a limitation to their research's generalizability. Importantly, authors should explicitly state what definitions of sex and/or gender they are applying to enhance the precision, rigor and reproducibility of their research and to avoid ambiguity or conflation of terms and the constructs to which they refer (see Definitions section below). Authors can refer to the Sex and Gender Equity in Research (SAGER) guidelines and the SAGER guidelines checklist. These offer systematic approaches to the use and editorial review of sex and gender information in study design, data analysis, outcome reporting and research interpretation - however, please note there is no single, universally agreed-upon set of guidelines for defining sex and gender.

**Definitions**

Sex generally refers to a set of biological attributes that are associated with physical and physiological features (e.g., chromosomal genotype, hormonal levels, internal and external anatomy). A binary sex categorization (male/female) is usually designated at birth ("sex assigned at birth"), most often based solely on the visible external anatomy of a newborn. Gender generally refers to socially constructed roles, behaviors, and identities of women, men and gender-diverse people that occur in a historical and cultural context and may vary across societies and over time. Gender influences how people view themselves and each other, how they behave and interact and how power is distributed in society. Sex and gender are often incorrectly portrayed as binary (female/male or woman/man) and unchanging whereas these constructs actually exist along a spectrum and include additional sex categorizations and gender identities such as people who are intersex/have differences of sex development (DSD) or identify as non-binary. Moreover, the terms "sex" and "gender" can be ambiguous—thus it is important for authors to define the manner in which they are used. In addition to this definition guidance and the SAGER guidelines, the resources on this page offer further insight around sex and gender in research studies.

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In addition to regular papers, JSS features two special tracks (In Practice, New Ideas and Trends Papers), as well as special issues.

In Practice
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New Trends and Ideas Papers
New ideas, especially those related to new research trends, emerge quickly. To accommodate timely dissemination thereof, JSS introduces the New Ideas and Trends Paper (NITP). NITPs should focus on the systems/software engineering aspects of new emerging areas, including: the internet of things, big data, cloud computing, software ecosystems, cyber-physical systems, green/sustainable systems, continuous software engineering, crowdsourcing, and the like. We distinguish two types of NITPs: A short paper that discusses a single contribution to a specific new trend or a new idea. A long paper that provides a survey of a specific trend, as well as a (possibly speculative) outline of a solution.

NITPs are not required to be fully validated, but preliminary results that endorse the merit of the proposed ideas are welcome.
We anticipate revisiting specific new trends periodically, for instance through reflection or progress reports.

New Ideas and Trend Papers warrant speedy publication.

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