From the Editor

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Under the Covers of IEEE Software

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ECOSYSTEMS THAT THRIVE are those whose members contribute more than they take away. Judging by the growth of its offerings and volunteers, IEEE Software is clearly such a case: over the past year, more than 1,500 people have contributed to it as authors, reviewers, editors, podcast hosts and guests, advisors, curators, and more. What makes Software tick, and how can you participate in its community of volunteers?

IEEE Software’s Offerings...

Established in 1984, IEEE Software recently commemorated its 200th issue. Its mission is to be the best source of reliable, useful, peer-reviewed information for leading software practitioners—the developers and managers who want to keep up with rapid technology change.

Over the years, Software has grown to encompass many more things than the magazine you’re reading now. Software Engineering Radio, or SE-Radio (www.se-radio.net), is a podcast targeting software professionals. An episode is published almost every week; each involves one of the SE-Radio hosts talking with an expert on a topic that interests developers. The IEEE Software Blog (blog.ieeesoftware.org) regularly publishes short pieces on software engineering research and practice. With a team of dedicated editors and a fast turnaround cycle, it’s the ideal vehicle to quickly disseminate new results, methods, and ideas. Finally, the online curated IEEE Software archive contains the magazine’s cover images, lists of past issues, collections of articles from specific departments, a searchable index of articles and authors, and memorable quotes from articles. You can navigate to it by clicking History on the magazine’s homepage (www.computer.org/software-magazine).

You can read Software articles in all major ebook formats on myCS, the IEEE Computer Society digital-publications platform (www.computer.org/web/publications/mycs). The articles are also archived in the Computer Society Digital Library (www.computer.org/csdl) and on IEEE Xplore (ieeexplore.ieee.org). In addition, Software articles often appear with content from other Computer Society publications in Computing Edge, a magazine distributed for free in its print version to Computer Society members in the US and in its electronic version elsewhere.

All Software articles must be relevant and accessible to software practitioners. So, you’ll never find in them multipart formulas and five-page proofs. We look for articles containing actionable advice based on empirical evidence that developers can readily apply.

Software publishes mainly three types of articles: focus (theme issue) articles, feature articles, and department articles. The theme issues are a defining aspect of IEEE Software. They cover topics of rising relevance and importance to our field. The themes are selected in two ways. In the pull model, our editorial and advisory boards brainstorm for topics, vote for themes they believe are important, and volunteer to be theme issue champions. The champions find and invite other volunteers to...
form a guest editor team and submit a theme issue proposal.

Over the past few years, our theme issue associate editor has complemented that model with a push model, where anyone can submit a theme issue proposal. We post the call for these proposals on the SEWORLD mailing list (www.sigsoft.org/resources/seworld.html) twice a year.

For both models, the proposals are submitted to an online platform on which the magazine’s boards review them. Following the reviews, the theme issue associate editor advises acceptance, rejection, minor changes, or resubmission in the next proposal round. Once a theme is accepted, its guest editors manage the peer review process.

Feature articles are general submissions (unrelated to a theme issue) that detail original scientific research or industrial-experience reports. The magazine’s associate editors manage these articles’ peer review.

Authors of published articles that didn’t stem from a conference paper may also present them at a conference, through the journal-first, conference-second (J1C2) model. In the J1C2 model, selected authors can, within the article’s publication year, submit the article for presentation at one of the conferences cooperating with IEEE Software. The article won’t be published in the conference proceedings, but its authors will benefit from the additional opportunity to disseminate their research and interact with the conference participants. Through this initiative, in 2017, two Software articles were presented at the 33rd International Conference on Software Maintenance and Evolution (ICSME).

Department articles aren’t formally peer reviewed but still must satisfy the expectations of rigor and relevance you associate with Software. Each department is managed by one or more department editors and contains material written by them or by others. Department editors can set their own standards for the type of material they publish, which means they can easily accept opinion pieces, short tutorials, and mini-surveys of existing work. They often develop contributed articles in close collaboration with the authors, vetting ideas, providing feedback, and working together through several revisions. This process has obvious advantages and shortcomings compared to standard anonymous peer review, so it’s fortunate that Software can publish both types of material.

To keep Software’s content easily accessible, all articles have stringent limits on length (a handful of pages at most) and the number of references. Material that exceeds these limits, such as an annotated bibliography or a lengthy methodology section, can be published online as a Web Extra. Web Extras are properly archived and are available through our digital libraries together with the main article.

… and its Peopleware
You can find the names of the people who regularly contribute to Software on the magazine’s masthead and the Editorial Staff box (see pp. 1 and 7). They comprise the editorial board; the advisory board; the initiatives, SE-Radio, and blog teams; and the staff.

The associate and department editors, who make up the editorial board, are directly responsible for the magazine’s content. The associate editors are selected so that their collective expertise covers all areas of the Software Engineering Body of Knowledge. In addition, one associate editor runs the submissions...
and reviews for the theme issues, one manages the departments, and one oversees the J1C2 process. Department editors can also set up their own editorial teams. For example, the department editor of Practitioners’ Digest has assembled a team of volunteers who contribute the conference presentation summaries appearing in the column. Associate editors are typically recruited through an open process, whereas department editors are recommended by the editorial board. Nominations for the editorial board are sent to the Computer Society’s Publications Board, which has the final word regarding their suitability.

The advisory board comprises individuals from industry and also academics with experience with the magazine’s functioning. The board’s chair manages its composition and operation. The advisory board members contribute to the magazine through their ideas, opinions, connections, and reviews of theme issue proposals, and by performing diverse ad hoc tasks. They often help put together guest editor teams by complementing a team’s initial members with someone familiar with the magazine’s peer review and publication process. One member of the advisory board is the awards chair, who manages IEEE Software’s awards program.

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The SE-Radio team is headed by the SE-Radio editor. Together, the team comments on proposed topics, reviews episode outlines, provides feedback on recorded episodes, and fine-tunes the podcast’s remarkably detailed processes. In the end, however, a single host proposes, organizes, and runs each episode.

The IEEE Software Blog is managed by its editor, who has recruited several associate editors for the blog’s team. Many of them are academics beginning their career. Through this post, they get the opportunity to cut their teeth at participating in the management of an academic publication. A notable feature of the blog is its regular summaries of Software and SE-Radio content.

The initiatives team comprises volunteers who aren’t members of the editorial and advisory boards. Its members manage Software’s social media presence, measure the magazine’s performance, provide conference reports, translate material into other languages, and represent the magazine in specific regions or constituencies.

All teams are globally distributed and benefit from the participation of both practitioners and academics with diverse levels and types of experience. As you might expect, teams collaborate mostly by email, electronic platforms, and teleconferencing. However, these methods can’t entirely replace physical meetings. So, those of us who attend our field’s large conferences often gather together for an informal discussion. More important, we hold a yearly physical meeting to review and discuss the magazine’s progress over the past year, plan the year ahead, and align ourselves with the magazine’s mission and goals.

A significant part of this meeting involves identifying emerging hot topics we want to see in our theme issues. Our last two board meetings were in Amsterdam before the 2016 SPLASH (ACM SIGPLAN Conference on Systems, Programming, Languages and Applications: Software for Humanity) conference and in Toronto before the 2017 Empirical Software Engineering International Week.
These volunteers’ work is complemented by that of the staff at the IEEE Computer Society and the organizations that work with it. They handle, with outstanding dedication and professionalism, text and audio editing, magazine and web layout, graphics design, peer review, plagiarism investigation (which, sadly, requires a dedicated person), and final magazine production and web maintenance.

If the description of IEEE Software’s inner workings has piqued your interest in joining this thriving ecosystem, here’s how you can contribute. First, continue reading our articles and posts, listen to SE-Radio, and point your colleagues to the content you like. Submit focus or feature articles through Manuscript Central. (Instructions to authors and theme issue topics are at www.computer.org/software-magazine, under Write for Us.) Submit a department article, or discuss an idea for one, by contacting the department’s editor. Write a blog post by contacting one of the blog’s editors. Act as an SE-Radio guest or host by getting in touch with the SE-Radio team. Propose a theme issue by responding to the calls we issue twice a year. Apply to be an associate editor by responding to the occasional open position calls (which also appear on SEWORLD). And, of course, follow IEEE Software on Twitter and like it on Facebook.

Reference

IEEE Software seeks practical, readable articles that will appeal to experts and nonexperts alike. The magazine aims to deliver reliable information to software developers and managers to help them stay on top of rapid technology change. Submissions must be original and no more than 4,700 words, including 250 words for each table and figure.

Author guidelines: www.computer.org/software/author
Further details: software@computer.org
www.computer.org/software