IT Professional Enters its 25th Year: Ready to Face the Challenges Ahead

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Welcome to the 25th year of *IT Professional* (*IT Pro*)! The magazine is entering 2023 as an established, highly reputable publication. Thanks to the devotion and hard work of the members of the Editorial Board (EB) and the support of the IEEE Computer Society (CS) staff.

In this issue and as the incoming Editor-in-Chief (EIC), I would like to present an overview of the future plans and also to pay tribute to the people who have contributed to the success of the magazine so far.

EB

One of the key elements in the success of *IT Pro* has been the support of its EB, which consists of a diverse, highly skilled, and experienced group of academics, professionals, and IT enthusiasts. The motivation, devotion, and experience of our EB members—some having served as associate EICs, columnists or department editors, special issue (SI) guest editors (GEs), or conference liaisons—is a guarantee for the future of the magazine.

In 2023 and in light of the challenging era that we are entering for all publications, especially for those related to IT, the EB of the magazine will be renewed, with some members stepping down after providing excellent service to the magazine for many years. New members are joining the board, bringing expertise in liaisons with high-impact IEEE conferences and reviewing research proposals, implementing R&D projects; providing market insights; and, of course, supporting the publication of books, journals, and magazines. The names of the new EB members as well as a reference to the support work of the members stepping down will be presented in the next issues of the magazine.

I am sure that the renewed EB of the magazine, standing on the shoulders of experienced members and drawing from the spirit of newcomers, will live up to the high expectations that have been set in the 25 years of the magazine.

SUBMISSIONS

IT Pro strives to publish exceptional, innovative articles that present advances in IT and discuss new concepts and ideas that will affect our lives but that also have a critical eye on the risks and challenges that technology introduces. The magazine publishes six bimonthly issues per year, with at least half of them being SIs curated by a team of subject matter experts as GEs.

With a view on the hottest topics in IT, in 2022, *IT Pro* published two issues with regular articles:

› "Innovation in Information Technology" (January/February 2022).
› "Countering Malicious Intent" (July/August 2022).

It also published four SIs:

› "Information Hygiene: The Fight Against the Misinformation 'Infodemic'" (March/April 2022).
› "Society 5.0: Human Centric, Decentralized, and Hyperautomated" (May/June 2022).
› "Responsible, Explainable, and Emotional AI" (September/October 2022).
› "Digitally Cloning the Physical" (November/December 2022).

All published issues can be accessed from the Past Issues tab at https://www.computer.org/it-professional or directly from IEEE *Xplore* or the CS Digital Library (CSDL).

The magazine has five SIs planned for 2023:

› "Next-Generation Artificial Intelligence: Advances and Applications Shaping the Future" (March/April 2023).
› "xG impact on Information Technology and Systems" (May/June 2018).
› "Green ICT" (July/August 2023).
› "Security and Data Protection During the COVID-19 Pandemic and Beyond" (September/October 2023).
› "IT Empowering Rescuers and First Responders in Saving Lives" (November/December 2023).

ALSO IN THIS ISSUE

FEATURES

This issue of *IT Pro* is loaded with insightful feature articles that focus on many aspects of interest to IT professionals.

Moving to the edge to offload the cloud is not without its challenges. In "Toward a Performance and Energy-Efficient Edge-of-Things," Akhunzada et al. explore the use of dynamic policy-based task allocation as measured by response time, internal computation time, and energy consumption at the edge.

Along the same theme, Navimipour et al. offer "A QoS-Aware Technique for Computation Offloading in IoT–Edge Platforms Using a Convolutional Neural Network and Markov Decision Process." This article explains the use of Q-learning and a convolutional neural network as a means to optimize offloading from the cloud to the edge in terms of energy consumption and acceptable delay.

In "HADPoS: Improvement of the DPoS Consensus Mechanism Based on Heat Attenuation," Chen et al. propose a novel way of improving decentralization in blockchain consensus mechanisms using a variation on Newton's law of cooling.

Salman et al. examine how audio and video deepfakes are developed in "Deepfake Generation and Detection: Issues, Challenges, and Solutions." They go on to propose multimodal analytic techniques to detect audiovisual fakes based on how they are created.

"Vulnerability Assessment of Learning Management Systems" by Sancristobal et al. provides vivid examples as to why learning management system administrators must be well steeped in cybersecurity know-how.

Last but hardly least, the feature article, "Connecting Dots Between Entrepreneurs, Research Publishers, and Software Engineering Researchers: An Outcome of Mixed-Methods Empirical Research" by Gupta et al. examines the weak relationship between start-ups and academic research. The article reports on a survey seeking to bolster entrepreneurial success by enhancing reliance on available scientific knowledge.

COLUMNS AND DEPARTMENTS

The departments and columns in this issue of *IT Pro* are equally stimulating.

In the Cybersecurity column, former *IT Pro* Editor-in-Chief Irena Bojanova teams up with Carlos C. Galhardo to offer "Bug, Fault, Error, or Weakness: Demystifying Software Security Vulnerabilities." This column reports on their work to understand the causal chain between the presence of a bug in software and failure. It is written in the context of a rigorously defined framework to remove the ambiguity of terms often associated with the phenomenon.

The IT Trends department explores the types of relationships between employers and employees in the deployment of behavioral biometrics and offers recommendations for the successful use of these measures. The article "Implementing Behavioral Biometrics With TRUST" was written by Killoran et al.

In his Life in the C-Suite column, Andriole notes that the ways of working are undergoing dramatic change, which must be considered carefully in the specific context of the IT enterprise. His stimulating column is "New Ways of Working Are Already Old."

While many perceive the Metaverse to be an instrument of entertainment, Khetri explores the burgeoning industrial metaverse in "The Economics of the Industrial Metaverse" for the IT Economics department.

Finally, the Software Technology department examines the effects of how we perceive time as applied to software. The department is titled "Perception of Time and Its Representation in Technical Systems" by Hurlburt.

The calls for articles for the first three issues have been closed, and the submitted articles are in review, while the open calls can be found at https://www.computer.org/publications/author-resources/calls-for-papers?type=mags&publication=it.

COLUMNS AND DEPARTMENTS

IT Pro EB members write or invite authors to write opinions or research-based articles in the following columns and departments:

› Columns: From the Editors, Life in the C-Suite, IT Security, Spotlight, Cybersecurity, and Formal Methods.

› Departments: IT Economics, Software Technology, IT and Future Employment, IT Trends, and Mastermind.

If you are interested in serving as a department editor or writing a new column of interest to IT professionals, we would love to hear from you. Some potential topics include but are not limited to a student forum; data analytics; extreme automation; robotics; the Internet of Things; artificial intelligence; and virtual, augmented, or extended reality.

PUBLICATION AND DELIVERY METHODS

IT Pro considers original works written in standard English that enhance the existing body of knowledge. Results described in the submitted articles should not have been submitted or published elsewhere, with expanded versions of conference publications accepted for review. All articles are peer reviewed in accordance with the requirements set forth in the IEEE PSPB *Operations Manual* (sections 8.2.1.C and 8.2.2.A). *IT Pro* is a hybrid open access publication that publishes both traditional subscription-based content and open access content. More information can be found at https://open.ieee.org/publishing-options/hybrid-journals/.

IT Pro is delivered through and IEEE *Xplore* (in PDF and HTML formats) and is also available as a print subscription. The magazine's articles are also featured in *ComputingEdge* as well as on the *IT Pro's* website (https://www.computer.org/it-professional).

COLLABORATION WITH CONFERENCES

IT Pro has partnered for three years with COMPSAC (https://ieeecompsac.computer.org/2023/) to cosponsor and organize the IT in Practice (ITiP) Symposium. Submissions and participation have been solicited for the fourth ITiP, which will be held in June 2023 in Torino, Italy, as a hybrid conference (with a virtual presentation option available). *IT Pro* has also partnered with the IEEE Software Technology Conference (STC) since 2017. The 30th STC will be all virtual on 25–27 September 2023. Please see the Call For Papers at http://ieee-stc.org.

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