Welcome to IT Professional 2016!
We’re pleased that you, our readers, view IT Pro as valuable to you, as it continues to offer useful information on various topics of interest, trace advances in IT and discuss their effect on our work and lives, and address IT challenges and risks.

The vast majority of you are practitioners, professionals, and executives working in industry or government. Researchers in industry and academia and students are also part of our readership. We know you particularly value application-oriented feature articles, our various departments, and research articles of practical relevance.

I thank everyone who has contributed to IT Pro’s success and prominence—the readers, authors, reviewers, editorial and advisory board members, and editorial and production staff. (For a list of the 2015 reviewers and guest editors, please see the article on page 8.) In 2016 and the following years, we’ll continue to advance IT Pro to greater heights and further enrich its value to you.

Before I delight you with a glimpse at what’s in store for you this year, let me fill you in on what we offered last year. (You can access our past issues from IEEE Xplore, the IEEE Computer Society digital library, or Qmags).

A Look Back at 2015
Last year, each of our six issues focused on a specific theme of interest to you: IT security, IT-enabled business innovation, Internet of Anything, data analytics, wearable computing, and smart systems. In addition to 30 feature articles on these themes and other topics, we presented 38 timely articles in our departments—Data Analytics, From the Editors, Life in the C-Suite, IT in Emerging Markets, IT Trends, Mastermind, Securing IT, Smart Systems, and Spotlight. We also conducted a series of roundtables on data analytics and related topics, published edited summaries of the discussions, and presented expert perspectives (videos and articles). Our theme issues and selected articles were highlighted in Computing Now, ComputingEdge, the IEEE Internet of Things newsletter, and social media, bringing them to the attention of a wider audience.

Furthermore, to engage with IT practitioners and facilitate closer interaction, we collaborated with international and regional conferences and symposia relevant to IT professionals and managers. We organized and conducted the first IT in Practice (ITiP) Symposium as part of COMPSAC 2015 in Taiwan (further details are available in a prior column1).

What Awaits You This Year
As an IT professional, you must stay abreast of advances in IT, emerging novel applications, new challenges and issues facing IT, and new opportunities. You’re also expected to develop creative IT-enabled solutions that harness ongoing advances and trends in IT to address real problems facing society. You must satisfactorily address challenges facing IT systems and applications; uphold your professional, social, and ethical responsibilities; and work collaboratively with other professionals, managers, and colleagues. And, you should always be looking toward the future and points of potential disruption.

In 2016, IT Pro will continue to be of value to you in meeting these demands and expectations and in succeeding as a reputable IT professional.

This year, we’ll present you with six issues, each of which will focus on a specific theme of current relevance: managing cyberspace and energy, trends in IT governance and management, IT trends in healthcare and well-being, IT in smart cities, cybersecurity and privacy, and digital innovation and strategic transformation. In addition to peer-reviewed articles on these topics, we’ll also feature articles that address other topics of general interest. Furthermore, we’ll continue to offer timely, insightful articles in our department line-up.
and From the Editors and Spotlight columns.

We’ve also introduced a new department, IT and Future Employment. In this, we’ll examine the predictions and wide-ranging implications of IT-enabled automation on future employment. This and the Mastermind department will appear in alternate issues, and the Smart Systems department will be discontinued for now.

We also plan to progressively include more multimedia content—video clips, interactive graphics, animation, and demos. To serve you better, we’ve given a facelift to our editorial team (see the “Editorial and Advisory Board Updates” sidebar).

In This Issue
In addition to department articles on interesting topics (automation and future unemployment, cyber-physical-human systems, and more), this issue presents five features on current challenges facing us—managing cyberspace and energy. These articles focus on:

- current trends in and the scope of cyberspace interventions, such as attacks and exploitations that impact us in many ways, and suitable measures to protect against them;
- trustworthy user identities, credentials, and access management in cyberspace;
- a framework for hosting desktop applications on a Web server and accessing them through a browser;
- a demand-response system that integrates demand management in a datacenter into power scheduling processes that aim to “green” the datacenter; and
- the findings of a study on employee engagement in energy conversation and the role of feedback on employees’ behavior toward conserving energy.

In Memoriam: Harry Gilbert (Gil) Miller, 1952–2015

We mourn the loss of Harry Gilbert (Gil) Miller, former IT Pro advisory board member, who died on 8 November 2015. We acknowledge with thanks his contributions to and great support of IT Pro. Miller was corporate vice president and CTO of Noblis in Falls Church, Virginia, where he was responsible for R&D programs and established the Noblis Center for Applied High Performance Computing, a unique public-private initiative. Prior to this, he worked at MITRE. Exhibiting a wide spectrum of knowledge and expertise, he was a teacher, an engineer, an executive, but most of all, an innovator. His out-of-the-box thinking was handy in creating innovative solutions both within his organizations and for a diverse set of external clients. He taught and mentored a generation of engineers and researchers.

Miller was born in Baltimore, Maryland, and received a PhD in engineering and public policy from Carnegie Mellon University. In 2013, he was recognized with the Smart CEO’s Washington Executive Management Award. He served on several advisory boards, including the Dean’s Advisory Board of the School of Engineering at George Mason University. He was an avid wildlife photographer. Miller was honored and respected by all he touched. He will be greatly missed.

We Welcome Your Contributions
IT Pro covers the entire spectrum of an IT professional’s interest—technologies, applications, strategies, case studies, best practices, issues and challenges, and IT’s value proposition. We publish a mix of relevant, high-quality, peer-reviewed feature articles; short department articles; hot-topic spotlight articles; and perspectives and opinion pieces. You can contribute to IT Pro in the following ways:

- Feature articles—you can submit quality articles (approximately 4,200 words) for theme issues or on topics of general interest, which will be subjected to peer review. For author guidelines and calls for theme issues, see www.computer.org/itpro.
- Department articles—you can submit short articles (approximately 1,500 words) suitable for any of the departments to the respective editor (for contact information, see http://bitly.com/itpro-edboard).
- Reviewer—if you would like to serve as a reviewer, email your bio and details of your reviewing credentials to San Murugesan, Editor in Chief, at san1@internode.net.
- Theme issue proposal—we invite your proposals for our upcoming issues. If you would like to see a topic of relevance covered or wish to guest edit a theme issue, send your proposal to san1@internode.net.

We look forward to your active contributions and participation. Send your queries to san1@internode.net.

Symposium and Workshop
Furthermore, continuing our efforts to engage with IT practitioners and facilitate closer interaction, we’ve partnered with COMPSAC to cosponsor and organize a unique
Editorial and Advisory Board Updates

We’ve diversified the editorial and advisory boards and broadened their reach by inducting the following new members.

**Editorial Board**

**Saeid Abolfazli** is a research lead and data scientist at YTL Communication, Xchanging Malaysia. His interests include big data analytics and business intelligence, enterprise IT, the Internet of Things, and mobile cloud computing. Abolfazli has authored more than 40 research articles in prestigious international venues and is collaborating with several research labs across the globe. His works are cited more than 450 times and his h-index reached 10 in less than three years. Contact him at abolfazli@ieee.org; http://mobilecloudfamily.com.

**Claudio Giovanni Demartini** is a full professor of computer engineering at Politecnico di Torino and head of the Control and Computer Engineering Department, where he works on Industry 4.0, analytics for big data, and education. His interests include computing systems, software engineering, innovation management, and product development. Demartini co-chairs the COMPSAC Symposium on Computer Education and Learning Technologies (CELT) 2015/2016. Contact him at demartini@polito.it; www.daun.polito.it/personale/scheda/(nominativo)/claudio.demartini.

**Arijit Mukherjee** is a senior scientist at Innovation Labs Kolkata of Tata Consultancy Services, India. His interests include cyber-physical systems, parallel and distributed systems, cognitive computing, and big data technologies. Mukherjee was one of the main researchers on the internationally acclaimed myGrid, OGSA-DAI, and OGSA-DQP projects, which contributed to the development of W3C standards for Web services and service-oriented architectures. He is an executive committee member of the IEEE Computer Society, Kolkata Chapter. Contact him at Mukherjee.Arijit@tcs.com; https://www.linkedin.com/in/arijit72.

**Hiroyuki Sato** is an associate professor at the University of Tokyo. His interests include digital identity technologies, information security, and programming language design and implementation. Sato is accredited as a Level of Assurance 1 (LoA 1) assessor by the Kantara initiative (https://kantarainitiative.org), established to accelerate the adoption of digital identity relationship solutions to support and simplify our connected world. He received a PhD from the University of Tokyo. Contact him at schuko@satolab.itc.u-tokyo.ac.jp; http://www-sato.cc.u-tokyo.ac.jp/SATO.Hiroyuki/.

**Jilei Tian** is a research manager at BMW Technology Chicago. His interests include machine learning, big data processing and rich context modeling, personalized services, and spoken-language processing. Tian has authored more than 100 publications, and has about 100 patents and applications. He has chaired or served as a member of technical committees in international conferences, and on the editorial boards of journals, and has received 10-plus years of Nokia invention awards and best paper awards. Contact him at jilei.tian@bmwna.com; http://jileitian.wix.com/jileitian.

**Advisory Board**

**Stephen L. Diamond** is the global standards officer and general manager of the Industry Standards Office at EMC Corporation, where he is responsible for industry standards engagements and related intellectual property. His professional interests include the Internet of Things, big data, intercloud computing, the “third platform,” and related industry standards developments. Diamond is chair of the IEEE Cloud Computing Standards Committee, vice-chair of the IEEE Future Directions Committee, and president emeritus of the IEEE Computer Society. He was the founder and chair of the IEEE Cloud Computing Initiative. Contact him at s.diamond@computer.org; https://www.linkedin.com/in/stephendiamond.

**Farewell**

**Frank E. Ferrante** has concluded his service as our advisory board member. We thank him for his contributions, advice, and support.
symposium, IT in Practice (ITiP). This is the second symposium in the series, as part of COMPSAC 2016 in Atlanta (www.compsac.org), and we solicit your participation. Coinciding with the 2016 Olympics in Rio, we’re also organizing the IT in Olympics workshop at COMPSAC this year.

You can look forward to IT Pro 2016 offering you valuable assorted information of current interest and relevance. You, as an IT professional, can make a difference, helping change the world for the better, and we strive to help you in this endeavor by making IT Pro your IT magazine of choice. We welcome your contributions (see the related sidebar). I trust you’ll find IT Pro 2016 very valuable to you.

I welcome your thoughts, suggestions, and comments on how we’re doing and what else we can do (you can email me at san1@internode.net).

References

San Murugesan is the director of BRITE Professional Services and an adjunct professor at Western Sydney University, Australia. His areas of interest include cloud computing, green IT, the Internet of Things, and IT applications. Murugesan is the editor in chief of IT Professional and co-editor of the forthcoming Encyclopedia of Cloud Computing (Wiley, 2016); serves on the editorial boards of Computer, IEEE Transactions on Cloud Computing, and IEEE Institute; and edits Computer’s bimonthly column, Cloud Cover. He is a fellow of the Australian Computer Society and the Institution of Electronics and Telecommunication Engineers (IETE). Contact him at san1@internode.net; http://bitly.com/sanprofile.