The IEEE Computer Society’s 13 peer-reviewed technical magazines cover cutting-edge computing topics including scientific applications, Internet computing, machine intelligence, pervasive computing, security and privacy, digital graphics, cloud computing, and computer history. Here, we highlight recent issues of other Computer Society magazines.

**Software**

The Internet of Things (IoT) is a challenging combination of distribution and heterogeneity. Numerous software-engineering solutions address those challenges in isolation, but few tackle them in combination. **ThingML (Internet of Things Modeling Language)**—a model-driven, generative approach that integrates IoT-oriented concepts—attempts to do this. Over the past six years, ThingML has continuously evolved and been applied to cases in different domains, including a commercial e-health solution, according to “Model-Based Software Engineering to Tame the IoT Jungle,” from IEEE Software’s January/February 2017 issue.

**Internet Computing**

**Fog computing** could alleviate many of the Internet of Things’ unique challenges. IEEE Internet Computing’s March/April 2017 special issue explores the obstacles that fog computing faces and its potential for forming distributed, virtualized platforms; supporting computation-intensive tasks; and distributing advanced computing, storage, networking, and management services to the network edge.

**Computing**

In “The Roles of Code in Computational Science,” from CiSE’s January/February 2017 issue, the author outlines some of these roles and says it’s important to think about them before starting to write code.

**Security & Privacy**

IEEE S&P’s January/February 2017 special issue looks at the latest security and privacy research and highlights how the field is moving forward. Articles address topics such as the use of containerization to secure mobile devices, cloud data-auditing techniques, and a novel security-development lifecycle model.

**The Cloud**

“Osmotic Computing: A New Paradigm for Edge/Cloud Integration,” from IEEE Cloud Computing’s November/December 2016 issue, discusses this recent approach for efficiently executing Internet of Things (IoT) services and applications at the network edge. Osmotic computing promises to satisfy the need for a distributed system abstraction enabling the deployment of lightweight microservices on resource-constrained IoT platforms at the network edge, coupled with more-complex microservices running on large datacenters.

**Computer Graphics**

Sampling is becoming an essential tool for scalable interactive visual analysis. After outlining prior work by database experts in this area, the authors of “Sampling for Scalable Visual Analytics,” from CG&A’s January/February 2017 issue, considers how to improve the experts’ results and extend them to a broader setting.

**Intelligent Systems**

Economic theory and AI share many ideas, which has given rise to a large body of literature about areas in which the two fields intersect. IEEE Intelligent Systems’ January/February 2017 special issue reports on these areas. Articles address topics such as cooperation and competition.
when bidding for complex projects, mechanism design for demand-side management, multiwinner voting in genetic algorithms, multidefender security games, and online prediction via continuous artificial prediction markets.

IEEE MultiMedia

IEEE MultiMedia’s January–March 2017 special issue gathers state-of-the-art research on multimedia methods and technologies that enrich music performance, production, and consumption. The issue’s articles address topics such as enriched multimodal representations of music performances, computer-assisted understanding of symphonic-music dynamics, and an approach that enables creative participation by audiences of live music performances.

IEEE Annals

Before Symantec became a major security-software vendor, it sold various natural-language microcomputer software products. Its evolution into a security firm resulted from acquisitions of software companies and market conditions in the 1980s and 1990s, according to “Before It Was a Giant: The Early History of Symantec,” from IEEE Annals’ October–December 2016 issue.

IEEE Pervasive Computing

“A Survey of Diet Monitoring Technology,” from IEEE Pervasive Computing’s January–March 2017 issue, looks at wellness applications’ techniques for evaluating eating habits. It emphasizes sensor-based approaches such as audio signal processing, inertial sensing, image processing, and gesture recognition. The article’s focus is on noninvasive technologies that could be developed into real-time wearable devices, rather than techniques suitable for use only in laboratories.

IEEE Micro

IEEE Micro’s January/February 2017 special issue on cognitive architectures includes articles on spacetime computation and the neocortex, low-power automatic speech recognition via a mobile GPU and Viterbi accelerator, efficient situational scheduling of graph workloads on single-chip multicore and GPUs, and graph-analytics accelerators for cognitive systems.

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