CALLS FOR ARTICLES FOR COMPUTER

Computer plans a February 2017 special issue on human augmentation.

Human-augmentation technologies enhance human productivity, and improve or restore human capabilities. Such technologies are designed to empower individuals and to improve health, quality of life, and performance.

Implementations include implants and other devices that help advance sensory capabilities, such as glasses for viewing augmented visual content, next-generation cochlear implants to improve hearing, or limb-like devices that enhance movement or muscle usage.

Other types of human augmentation, such as watches or other wearable electronics, link users to outside sources of visual, audio, or textual information.

This special issue will focus primarily on approaches that utilize computation-related solutions.

Brief article descriptions are due 1 June 2016 (mail to co-0217@computer.org), and articles are due 1 July 2016. Visit www.computer.org/web/computingnowcocfp2 to view the complete call for papers.

Computer plans a March 2017 special issue on quality-of-life (QoL) technologies.

Emerging Internet technologies and computing services have become an indispensable part of our daily life. Now, their usage is becoming less passive and more mobile, interactive, and real time. They help us make informed decisions in many QoL-related areas, including those involving our physical and psychological health and our social interactions.

However, these services depend on the underlying heterogeneous Internet technologies and computing services. And we don’t yet fully understand how architects’, designers’, and developers’ decisions about these technologies and services affect users’ QoL.

The guest editors of this special issue solicit technical papers presenting research challenges and results, emerging methodological approaches, and case studies in which an Internet service influences a user’s QoL or in which the user’s QoL needs, expectations, and experiences influence the services.

Abstracts are due 1 July 2016 (mail to co-0317@computer.org), and articles are due 1 August 2016. Visit www.computer.org/web/computingnowcocfp3 to view the complete call for papers.

Computer plans an April 2017 special issue on security risk assessment.

Risk management is an integral part of information-security management and must be based on a security risk assessment that ideally comprises a quantitative risk analysis.

In theory, the level of risk is the product of the probability of occurrence multiplied by the threat’s expected damage. In practice, however, this formula is difficult, if not impossible, to apply, mainly because we have neither an exhaustive list of threats nor useful statistics for meaningfully estimating occurrence probability or expected damage. The resulting risk quantification is arbitrary and not appropriate to make mission-critical decisions.

This special issue will focus on assessing security risks in practice. The guest editors seek submissions offering research results, experimental solutions, case studies, and best practices related to security risk assessment.

Abstracts are due 1 August 2016 (mail to co-0417@computer.org), and articles are due 1 September 2016. Visit www.computer.org/web/computingnowcocfp4 to view the complete call for papers.

Computer plans a June 2017 special issue on VLSI for the Internet of Things (IoT).

The IoT promises to revolutionize a wide range of applications. But capitalizing on IoT will require a new generation of VLSI systems. IoT sensing and actuation devices must be extremely low cost while still delivering a complete system on chip (SoC)—capable of performing computation, security, and wireless communications—at extremely low power levels. Other types of edge devices can help close the gap in capabilities, cost, and energy usage between the traditional TCP/IP-based cloud and sensing/actuation nodes.

This new generation of IoT devices requires a very different approach to VLSI design at all levels of abstraction: technology, circuits, logic, architecture, and systems.
SEEKING PAPERS ON COMPUTATIONAL SOCIAL SYSTEMS

IEEE Transactions on Computational Social Systems welcomes submissions on topics such as modeling, simulation, analysis, and the understanding of social systems from the quantitative and/or computational perspective. Learn more at www.ieeesmc.org/publications /transactions-on-computational-social-systems/call-for-papers-and-special-issues.

SEEKING PAPERS ON SOFTWARE ENGINEERING

Computing in Science & Engineering seeks submissions on scientific-software engineering. The magazine seeks to provide a venue for the publication of significant work in the field, recognizing that the development of scientific software differs significantly from that of other software. Learn more at www.computer.org/cms /Computer.org/ComputingNow/docs/2016-software-engineering-track.pdf.

While the microprocessor market is driven by complex functionality, resulting in large chips that reach clocking and thermal limits, IoT systems require low-cost, low-power SoCs.

Abstracts are due 1 October 2016 (mail to co-0617@computer.org), and articles are due 1 November 2016. Visit www.computer.org/web/computingnow/cccfp6 to view the complete call for papers.

CALLS FOR ARTICLES FOR OTHER IEEE CS PUBLICATIONS


Computer animation has been an active computer graphics research field for years. The techniques developed are important to many modern computer tools in application areas such as virtual reality, computer games, special effects, virtual prototyping, and training simulators.

More recently, physically based simulation has become a popular topic. Researchers are investigating simulation methods to generate realistic animations of, for example, both rigid and deformable bodies, elastic rods, cloth, and fluids.

For this special issue, the guest editors seek papers describing innovative computer animation techniques.

Articles are due 1 July 2016. Visit www.computer.org/web/computingnow/cgacfp2 to view the complete call for papers.

IEEE Pervasive Computing plans an April–June 2017 special issue on smart buildings and cities.

Ubiquitous- and pervasive-computing researchers have expanded the focus of their work from the smart home to the smart city. Such environments aim to improve the transparency of information and the quality of life through access to smarter and more appropriate services.

The key to building smart environments is the fusion of multiple technologies including sensing, advanced networks, the Internet of Things, cloud computing, big data analytics, and mobile devices. This special issue will explore new technologies, methodologies, case studies, and applications related to smart buildings and cities.

Articles are due 1 July 2016. Visit www.computer.org/web/computingnow/pccfp2 to view the complete call for papers.

IEEE Security & Privacy plans a May/June 2017 special issue on electronic voting.

A highly mobile electorate and a decline in postal services are making it increasingly difficult to conduct traditional paper-only elections. However, the alternative, the electronic election, poses a very difficult security challenge. To provide the required public trust, electronic voting must prove it can maintain accuracy and privacy while counting secret ballots.

This special issue will focus on these issues in real-world deployments. The guest editors welcome submissions on poll-site and Internet voting, as well as on governmental and nongovernmental elections.

Abstracts are due 31 July 2016. Articles are due 1 September 2016. Visit www.computer.org/web/computingnow/spcfp3 to view the complete call for papers.

IEEE Software plans a March/April 2017 special issue on crowdsourcing for software engineering.

Crowdsourcing is revolutionizing software engineering.

IEEE Computer Graphics and Applications plans a March/April 2017 special issue on computational social systems.

IEEE Pervasive Computing plans an April–June 2017 special issue on smart buildings and cities.

IEEE Security & Privacy plans a May/June 2017 special issue on electronic voting.
For example, developers increasingly crowdsource answers to their questions via sites such as Stack Overflow. Software-engineering researchers can recruit developers from the crowd to evaluate their work. And crowdfunding helps decide what software will be built.

This theme issue solicits experience reports, research studies, and papers on crowdsourcing-based tools and techniques that solve software engineering problems, as well as those that demonstrate how crowdsourcing can enrich software engineering.

Articles are due **1 August 2016**. Visit [www.computer.org/web/computingnow/swcfp2](http://www.computer.org/web/computingnow/swcfp2) to view the complete call for papers.

**IEEE Computer Graphics and Applications** plans a May/June 2017 special issue on the intersection of computational design and fabrication with computer graphics.

Computer graphics researchers are increasingly interested in the high-level analysis and processing of geometric objects, focusing more on their structure, semantics, and even functionalities than their geometric details.

This is leading researchers to study design problems in which machine computation can replace or contribute to manual efforts. Because of rapid advances in 3D printing technologies for manufacturing, much of this work addresses fabrication-related issues.

The guest editors seek papers from visual computing communities that address real-world problems related to the computational design and fabrication of 3D objects.

Articles are due **1 September 2016**. Visit [www.computer.org/web/computingnow/cgacfp3](http://www.computer.org/web/computingnow/cgacfp3) to view the complete call for papers.

**IEEE Transactions on Emerging Topics in Computing (TETC)** plans the following theme sections for its September 2017 issue, with articles for each due **1 September 2016**:


**IEEE Transactions on Nanotechnology** and **IEEE Transactions on Emerging Topics in Computing** plan a September 2017 joint special section on VLSI and nanotechnology design trends for computing innovations.

Topics of interest include VLSI design; low-power and power-aware design; testing, reliability, and fault tolerance; VLSI circuits; computer-aided design; emerging technologies; and post-CMOS VLSI.

Articles are due **30 September 2016**. Visit [www.computer.org/cms/Computer.org/transactions/cfps/cfp_tetcs_i_vlsi_ndtci.pdf](http://www.computer.org/cms/Computer.org/transactions/cfps/cfp_tetcs_i_vlsi_ndtci.pdf) to view the complete call for papers.

**IEEE Internet Computing** plans a July/August 2017 special issue on energy-efficient datacenters.

In the last decade, datacenters have become the core of modern business environments as computation has moved into the cloud. Datacenters are among the US’s fastest-growing electricity users. This costs businesses money, consumes limited energy resources, and contributes to environmental pollution.

Because of this, there is a demand for more energy-efficient datacenters. This special issue calls for research on...
various approaches that can enable this. Brief article descriptions are due 28 September 2016 (mail to ic4-2017@computer.org), and articles are due 28 October 2016. Visit www.computer.org/web/computingnow/iccfp4 to view the complete call for papers.

IEEE Computer Graphics and Applications plans a July/August 2017 special issue on animation of natural virtual characters. Virtual characters are used in a range of applications—from interfaces to games—in which they must effectively employ human nonverbal communication. Building systems that can support these interactions involves both the automatic specification and generation of appropriate character motion, as well as coordination across communication modes and among multiple characters.

For this issue, the guest editors solicit papers describing innovative character-animation techniques and models. Abstracts are due 1 October 2016, and articles are due 1 November 2016. Visit www.computer.org/web/computingnow/cgacfp4 to view the complete call for papers.

IEEE Software plans a July/August 2017 special issue on reliability engineering for software. As the number of smart, interconnected devices in our cars and homes increases, engineers must increasingly consider software reliability in the connectivity tools and platforms they create. Reliability engineering emphasizes dependability, whether at a critical moment or throughout the software’s lifecycle.

This theme issue focuses on reliability challenges and successes in software engineering. The guest editors seek articles reporting case studies, experience reports, practices, approaches, techniques, and guidelines, all involving practical software results. Articles are due 1 December 2016. Visit www.computer.org/web/computingnow/swcfp4 to view the complete call for papers.

JULY 2016


SEPTEMBER 2016
7–9 VS-Games 2016
11–15 PACT 2016
12–16 SASSO 2016
19–21 MASCOTS 2016

OCTOBER 2016
3–5 ICCD 2016
4–7 ICHI 2016
17–19 WiMob 2016
23–27 eScience 2016
31 October–3 November…

EVENTS IN 2016

AUGUST 2016
2–5 ICGSE 2016
8–10 NAS 2016
17–19 RTCSA 2016
22–24 FiCloud 2016

SEPTEMBER 2016
7–9 VS-Games 2016
11–15 PACT 2016
12–16 SASSO 2016
Self-Adaptive and Self-Organizing Systems, Augsburg, Germany; https://saso2016.informatik.uni-augsburg.de


OCTOBER 2016


Help build the next generation of systems behind Facebook’s products.

Facebook, Inc.

currently has the following openings in Menlo Park, CA (multiple openings/various levels):

Software Engineer (SWEB516J) Create web &/or mobile applications that reach over one billion people & build high volume servers to support our content. Bachelor’s degree required. Exp. may be required depending on level/type. Software Engineer (SWEIN516J) Create web &/or mobile applications that reach over one billion people & build high-volume servers to support our content, utilizing graduate level knowledge. Master’s degree required. Exp. may be required depending on level/type. Application Engineer, Oracle (5847J) Develop and maintain integrated, scalable, corporate applications, build solutions using Oracle tech. SMB Analyst (Data Analyst) (6908J) Use data analysis to understand customer profiles, produce reports to track our business, and build models to provide insight into the Small & Medium Business customer base. Data Scientist, Analytics (7670J) Apply your expertise in quantitative analysis, data mining, and the presentation of data to see beyond the numbers and understand how our users interact with our core products. Systems Project Manager (7322J) Become a technical expert on all automation and routing systems across Community Operations (CO) and support the building and debugging of the infrastructure as needed. Hardware Validation Engineer (6876J) Work closely with server validation and data center engineering design teams to test and validate server systems and components. Network Engineer (4172J) Build out new infrastructure, analyze and implement new architectures, and develop and create new operational procedures. Systems Engineer (659J) Build, scale, and secure Facebook’s corporate infrastructure and systems software. Solutions Architect (4918J) Evaluate technical requirements and propose customized software solutions. Research Scientist (6467J) Research, design, and develop new optimization algorithms and techniques to improve the efficiency and performance of Facebook’s platforms. Engineering Manager (1854J) Drive engineering effort, communicate cross-functionality, and be a subject matter expert; and/or perform technical engineering duties and oversee a team of engineers.

Facebook, Inc. currently has the following openings in Redmond, WA (multiple openings/various levels):

Research Scientist (5439J) Research into perception and human factors, both in terms of basic science and how it informs other research and product directions.

Mail resume to: Facebook, Inc. Attn: SB-GIM, 1 Hacker Way, Menlo Park, CA 94025. Must reference job title & job# shown above, when applying.