



## News

### 2013 CS Computer Pioneer Award Winner Steve Furber



Steve Furber, 2013 CS Computer Pioneer Award winner and the principal designer of the ARM 32-bit RISC microprocessor, presents an overview of the architecture of the SpiNNaker massively-parallel neurocomputer for his *IEEE Transactions on Computers* paper. SpiNNaker

was designed for brain-modeling applications, and will ultimately employ a million ARM processor cores to model up to a billion spiking neurons in biological real time. [Watch the video.](#)

### New Editors-in-Chief



Elisa Bertino, Professor of Computer Science at Purdue University and Director of Purdue's Cyber Center, has been named the new Editor-in-Chief of the *IEEE Transactions on Dependable and Secure Computing* starting in 2014.



Matthew B. Dwyer, a professor in the Department of Computer Science and Engineering at the University of Nebraska-Lincoln, has been named the new Editor-in-Chief of the *IEEE Transactions on Software Engineering* starting in 2014.



David Bader, a professor in the College of Computing at the Georgia Institute of Technology, has been named the new Editor-in-Chief of the *IEEE Transactions on Parallel and Distributed Systems* starting in 2014.

Lynette A. Jones, senior research scientist in the Department of Mechanical Engineering at the Massachusetts Institute of Technology, has been named the new Editor-in-Chief of the *IEEE Transactions on Haptics* starting in 2014.



## July 2013

Welcome to the Transactions Connection newsletter, which highlights the latest news and publications from IEEE Computer Society Transactions.

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Prasant Mohapatra, the Tim Bucher Family Endowed Chair in the Computer Science Department at the University of California, Davis, has been named the new Editor-in-Chief of

the *IEEE Transactions on Mobile Computing* starting in 2014.

#### Four Transactions Celebrate Anniversaries

Happy Anniversary to the *IEEE Transactions on Pattern Analysis and Machine Intelligence* which is in its 35th year, the *IEEE Transactions on Knowledge and Data Engineering* which is in its 25th year, and the *IEEE/ACM Transactions on Computational Biology and Bioinformatics* and the *IEEE Transactions on Dependable and Secure Computing* which are both in their 10th year. Congratulations!

#### Volunteer Spotlight: Ming Lin



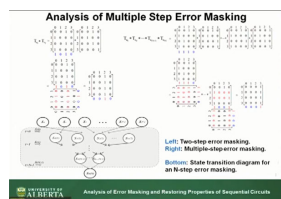
*IEEE Transactions on Visualization & Computer Graphics* Editor-in-Chief Ming Lin discusses her interest and accomplishments in the field of computing. [Read more.](#)

#### Important Message to *IEEE Transactions on Haptics* Subscribers

We are pleased to announce that *ToH* is introducing OnlinePlus in 2014. Please renew your subscription by 31 Dec. to avoid experiencing a disruption in your access to *ToH*. The renewal period starts in August.

## Multimedia

Visit our new [media center pages](#), which host all IEEE Computer Society Transactions multimedia submitted by our Editors-in-Chief, volunteers, and authors. This month's featured content is:



#### [Analysis of Error Masking and Restoring Properties of Sequential Circuits](#)

Scaling of CMOS technology into nanometric feature sizes has raised concerns for the reliable operation of logic circuits such as in the presence of soft errors. This paper deals with the analysis of the operation of sequential circuits. [Read the full article.](#)

A word from the Guest Editors [Alberto Nannarelli](#), [Peter-Michael Seidel](#), and [Ping Tak Peter Tang](#) seeking original manuscripts for the *IEEE Transactions on Computers*' Special Section on Computer Arithmetic. Submission deadline: 15 September 2013.

#### Join IEEE CS Now at 50%

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#### Make the Connection

The IEEE Computer Society Jobs features new product offerings for employers hiring computing professionals. And for job seekers, computing professionals and software developers will continue to find job listings from leading high-tech firms for advancing their careers and landing the best jobs available.

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#### Keep up to Date on What's New with IEEE Computer Society Transactions

Visit the What's New in Transactions webpage to see an overview of what's happening in the world of Transactions. It's ever changing like the research areas our journals cover, so make sure to come back frequently

#### Learning Resources from IEEE Computer Society

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The *IEEE Transactions on Haptics'* April-June 2013 podcast (NEW), produced by William

Provancher, provides a brief overview of the 10 articles in this issue.

855.727.3632!

### The IEEE Computer Society Digital Library is Your Expert Resource

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### Register for a Conference in Your Specific Technical Area

Visit the IEEE Computer Society event calendar to find upcoming conferences in your technical field.

### New Computer Society Webinars Feature Leading Thinkers

IEEE Computer Society webinars deliver insights from some of the profession's leading thinkers in keeping with the mission to advance the practice of software engineering and computer science. View the [full catalog](#).

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## Latest Issues

### [IEEE Transactions on Affective Computing](#)

Vol. 4, No. 2, [April-June 2013](#)

#### **Detecting Depression Severity from Vocal Prosody**

By Ying Yang, Catherine Fairbairn, and Jeffrey F. Cohn

"To investigate the relation between vocal prosody and change in depression severity over time, 57 participants from a clinical trial for treatment of depression were evaluated." [Read the full article](#).

### [IEEE/ACM Transactions on Computational Biology and Bioinformatics](#)

Vol. 10, No. 1, [January/February 2013](#)

#### **SuperQ: Computing Supernetworks from Quartets**

By Stefan Grünewald, Andreas Spillner, Sarah Bastkowski, Anja Bögershausen, and Vincent Moulton

"Supertrees are a commonly used tool in phylogenetics to summarize collections of partial phylogenetic trees." [Read the full article](#).

### [IEEE Transactions on Computers](#)

Vol. 62, No. 8, [August 2013\\*](#)

#### **A New Second-Order Side Channel Attack Based on Linear Regression**

By Guillaume Dabosville and Emmanuel Prouff

"Since the preliminary works of Kocher et al. in the nineties, studying and enforcing the resistance of cryptographic implementations against side channel analysis (SCA) is became a dynamic and prolific area of embedded security." [Read the full article](#).

\*Enjoy the Special Section on Adaptive Hardware and Systems.

### [IEEE Transactions on Dependable and Secure Computing](#)

Vol. 10, No. 4, [July/August 2013\\*](#)

#### **Security and Privacy-Enhancing Multicloud Architectures**

By Jens-Matthias Bohli, Nils Gruschka, Meiko Jensen, Luigi Lo Iacono, and Ninja Marnau

"Security challenges are still among the biggest obstacles when considering the adoption of cloud services. This triggered a lot of research activities, resulting in a quantity of proposals targeting the various cloud security threats." [Read the full article](#).

\*Enjoy the Special Section on Cloud Computing Assessment: Metrics,

Algorithms, Policies, Models, and Evaluation Techniques.

[IEEE Transactions on Haptics](#)

Vol. 6, No. 2, [April-June 2013](#)\*

### **A Hand-Centric Classification of Human and Robot Dexterous Manipulation**

By Ian M. Bullock, Raymond R. Ma, and Aaron M. Dollar

"This work contributes to the development of a common framework for the discussion and analysis of dexterous manipulation across the human and robotic domains." [Read the full article.](#)

\*[Listen](#) to the new podcast by William Provancher, which provides a brief overview of the articles in this issue.

[IEEE Transactions on Knowledge & Data Engineering](#)

Vol. 25, No. 9, [September 2013](#)

### **A Survey on Region Extractors from Web Documents**

By Hassan A. Sleiman and Rafael Corchuelo

"Extracting information from web documents has become a research area in which new proposals sprout out year after year." [Read the full article.](#)

[IEEE Transactions on Learning Technologies](#)

Vol. 6, No. 2, [April-June 2013](#)

### **Preparing for Future Learning with a Tangible User Interface: The Case of Neuroscience**

By Bertrand Schneider, Jenelle Wallace, Paulo Blikstein, and Roy Pea

"In this paper, we describe the development and evaluation of a microworld-based learning environment for neuroscience." [Read the full article.](#)

[IEEE Transactions on Mobile Computing](#)

Vol. 12, No. 9, [September 2013](#)

### **Bicriteria Optimization in Multihop Wireless Networks: Characterizing the Throughput-Energy Envelope**

By Canming Jiang, Yi Shi, Sastry Kompella, Y. Thomas Hou, and Scott F. Midkiff

"Network throughput and energy consumption are two important performance metrics for a multihop wireless network." [Read the full article.](#)

[IEEE Transactions on Parallel & Distributed Systems](#)

Vol. 24, No. 8, [August 2013](#)

### **Formal Specification and Runtime Detection of Dynamic Properties in Asynchronous Pervasive Computing Environments**

By Yiling Yang, Yu Huang, Jiannong Cao, Xiaoxing Ma, and Jian Lu

"Formal specification and runtime detection of contextual properties is one of the primary approaches to enabling context awareness in pervasive computing environments." [Read the full article.](#)

[IEEE Transactions on Pattern Analysis & Machine Intelligence](#)

Vol. 35, No. 9, [September 2013](#)

### **KNN Matting**

By Qifeng Chen, Dingzeyu Li, and Chi-Keung Tang

"This paper proposes to apply the nonlocal principle to general alpha matting for the simultaneous extraction of multiple image layers; each layer may have disjoint as well as coherent segments typical of foreground mattes in natural image matting." [Read the full article.](#)

[IEEE Transactions on Services Computing](#)

Vol. 6, No. 2, [April-June 2013](#)\*

**Cost-Based Optimization of Service Compositions**

By Philipp Leitner, Waldemar Hummer, and Schahram Dustdar

"For providers of composite services, preventing cases of SLA violations is crucial." [Read the full article.](#)

\*Enjoy the Special Section on Social and Economic Computing

[IEEE Transactions on Software Engineering](#)

Vol. 39, No. 6, [July 2013](#)

**EDZL Schedulability Analysis in Real-Time Multicore Scheduling**

By Jinkyu Lee and Insik Shin

"In real-time systems, correctness depends not only on functionality but also on timeliness." [Read the full article.](#)

[IEEE Transactions on Visualization & Computer Graphics](#)

Vol. 19, No. 9, [September 2013](#)

**Scheduling in Heterogeneous Computing Environments for Proximity Queries**

By Duksu Kim, Jinkyu Lee, Junghwan Lee, Insik Shin, John Kim, and Sung-Eui Yoon

"We present a novel, linear programming (LP)-based scheduling algorithm that exploits heterogeneous multicore architectures such as CPUs and GPUs to accelerate a wide variety of proximity queries." [Read the full article.](#)

[Computer Architecture Letters](#)

Vol. 12, No. 1, [January-June 2013](#)

**The Netflix Challenge: Datacenter Edition**

By Christina Delimitrou and Christos Kozyrakis

"The hundreds of thousands of servers in modern warehouse-scale systems make performance and efficiency optimizations pressing design challenges." [Read the full article.](#)

## Write for Us

**Submissions are being accepted for the following special issues:**

- *IEEE Transactions on Affective Computing's* [Special Issue on Technologies for Affect and Wellbeing](#) - Submission deadline extended: 1 August 2013
- *IEEE Transactions on Cloud Computing's* [Special Issue on Utility and Cloud Computing Science and Technology](#) - Submission deadline: 15 September 2013
- *IEEE Transactions on Computers' Special Issue on Computer Arithmetic* - Submission deadline: 15 September 2013
- *IEEE Transactions on Emerging Topics in Computing's* [Special Issue on Big Data](#) - Submission deadline: 15 October 2013 --- [View more IEEE Transactions on Emerging Topics in Computing Calls-for-Papers.](#)
- *IEEE Internet of Things Journal*, a new peer-reviewed journal that will publish the latest findings and review articles on the various aspects of IoT, seeks submissions for its [inaugural issue](#) to be published in 2014 - Submission deadline: 31 October 2013

View the open Calls-for-Papers for the following journals:

- [IEEE Transactions on Dependable and Secure Computing](#)
- [IEEE Transactions on Learning Technologies](#)
- [IEEE Transactions on Emerging Topics in Computing](#)
- [IEEE Transactions on Cloud Computing](#)

## Conferences

**Find out about upcoming 2013 IEEE Computer Society sponsored conferences, such as:**

8 - 14 Sep 2013

### **SOCIALCOM 2013**

2013 IEEE International Conference on Social Computing  
Alexandria , Virginia USA

22 - 28 Sep 2013

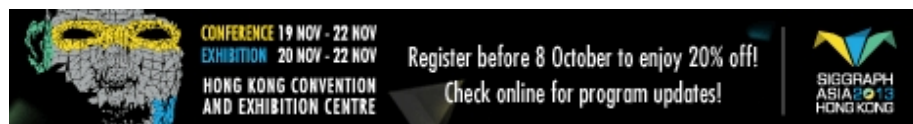
### **ICSM 2013**

29th IEEE International Conference on Software Maintenance  
Eindhoven, The Netherlands

6 - 9 Oct 2013

### **BIGDA 2013**

2013 IEEE International Conference on Big Data  
Santa Clara, CA USA



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