

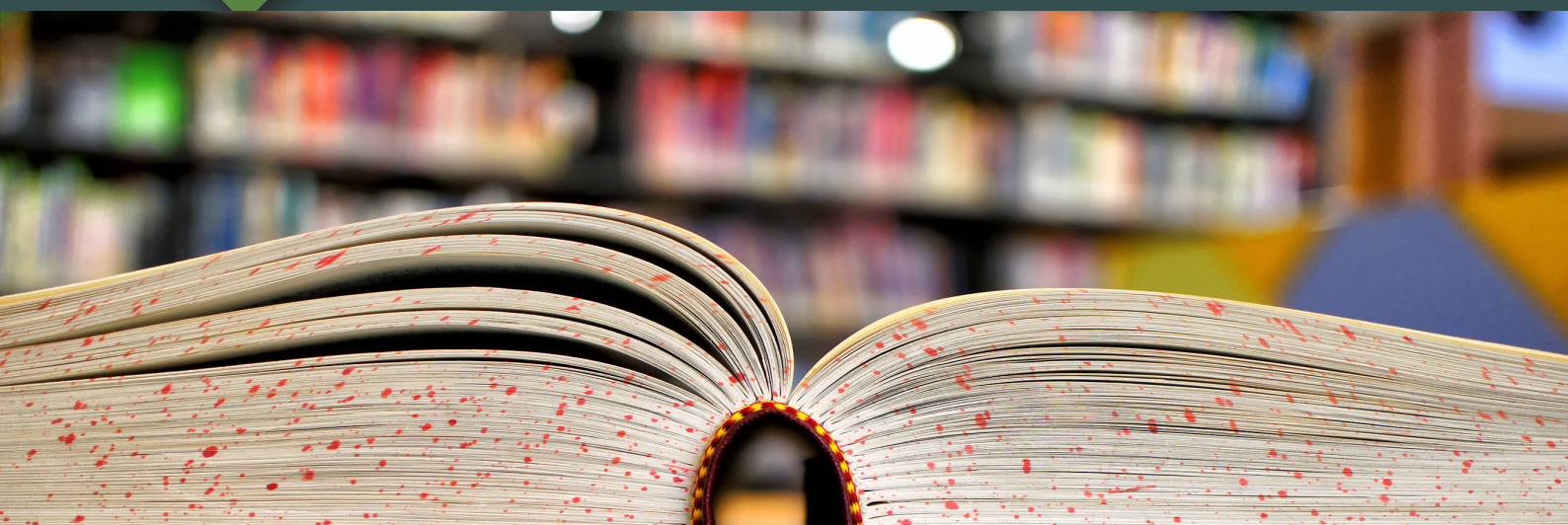


Special Interest Group for Information Technology Education



Association for  
Computing Machinery

Advancing Computing as a Science & Profession



**SIGITE**

ACM Special Interest Group on IT Education

# NEWSLETTER

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# EDITOR'S NOTE

Welcome back to the *SIGITE Newsletter*. The main event last year was the 16th Annual Conference on Information Technology Education (SIGITE 2015) and the 4th Annual Conference on Research in Information Technology (RIIT 2015), which were both held in Chicago on September 30 - October 3. This edition of the newsletter provides information and highlights from that conference as well as some information about the upcoming conference in Boston. As this is my first year editing this newsletter as the Communications Director for SIGITE, I am looking forward to continuing the excellent tradition of this organization.

Diana Wang  
*George Mason University*

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Email: [ywangm@gmu.edu](mailto:ywangm@gmu.edu)

Editor

Diana Wang

Web: [www.sigite.org](http://www.sigite.org)



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# Steve Zilora **SIGITE CHAIR**

# MESSAGE FROM OUR CHAIR

## Dear Members

It seems like just last week that we were in Chicago, but a quick step outside confirms that the fall season is well behind us. It's with pleasant memories that I look back at Chicago though. We had near record attendance, a great variety of talks, panels, and workshops, and a fun night out on the town. The SIGITE/RIIT 2015 team did a great job. But with 2015 officially in the books, it's time to start planning for 2016.

SIGITE/RIIT 2016 will be in Boston with a theme of "Securing the Future". There is no doubt that cyber security is in the forefront of many people's minds today whether they are in academia, government, or the public sector. What is the role of IT in cyber security? I believe our role should simply remain what it has always been—leveraging the tools and techniques from our colleagues in computer science to develop solutions that satisfy business and personal needs. In the case of cyber security, our primary contributions likely will not be in cryptography or forensics, but rather in securing the network, guarding against attacks such as cross-site scripting and SQL injection, and ensuring the integrity of the data. In short, our approach to security is making sure the appropriate people have access to the appropriate data in the appropriate manner.

SIGITE/RIIT 2016 will be a great opportunity to showcase these contributions. Because of the holistic approach of information technology I expect that while

some papers will home in on IT security, many others will deal with topics that serve to support our IT security efforts. And of course, there are the curricular and pedagogical adaptations we employ to make our students more aware of security issues. Taken all together, the work we present at SIGITE/RIIT 2016 will go a long way toward defining IT security. Be part of it!

**Steve Zilora**

*Rochester Institute of Technology*

# SIGITE EXECUTIVE

## CHAIR



**Steve Zilora**

Rochester Institute of Technology

## VICE CHAIR



**Richard Helps**

Brigham Young University

## SECRETARY



**Rick Homkes**

Purdue University

## PAST CHAIR



**Rob Friedman**

University of Washington Tacoma



# **SIGITE/RIIT 2015 REPORT**

# CONFERENCE REPORT

## SIGITE/RIIT 2015

September 30 - October 3, Chicago, Illinois



The SIGITE/RIIT 2015 Annual Conference was held in Chicago, Illinois and hosted by DePaul University. The program featured a combination of papers, panels and lightning talks, a poster session and a reception for Community College educators sponsored by the ACM Committee for Computing Education in Community Colleges.

The venue at the DePaul Conference Center proved to be an excellent choice in terms of layout and accessibility as indicated in comments from both attendees and sponsors. Also helping in the success of the event was a cadre of students from Illinois Institute of Technology who served as able assistants.

The conference also featured a return of the social excursion, an event that was always popular at conferences years ago. This year's tour of Chicago by trolley aptly revived that experience and was thoroughly enjoyed by all who participated.



### The keynote speaker for the conference was

Mike Shannon, a 2012 graduate of Illinois State University and co-founder of the Chicago-based Packback. This startup provides college students a variety of affordable eTextbook offerings and a platform for student-faculty engagement and its founders appeared on ABC's "Shark Tank" in March 2014 where they reached an agreement with financier Mark Cuban. It was a dynamic and inspiring talk focusing on the need to pursue your dreams and not to be discouraged by the hurdles in front of you. The talk was one of the most highly rated activities at the conference.

**Amber Settle and Terry Steinbach**

*Conference Co-Chairs SIGITE/RIIT 2015*

# ACADEMIC REPORT SIGITE/RIIT 2015

September 30 - October 3, Chicago, Illinois

## The joint theme for the SIGITE/RIIT

was “Creating the Future”, showcasing innovative approaches in information technology that continue to define and strengthen our field. The call for participation attracted 98 submissions, 72 of which were submitted to SIGITE and 26 to RIIT. The technical areas of networking, mobile devices, security, and development continued to be popular with researchers; as did innovation in content, pedagogy and assessment. 80 of the submissions were papers, with 58 papers submitted to SIGITE and 22 papers submitted to RIIT. SIGITE has 24 papers in its program for an acceptance rate of 41% and RIIT has 10 papers for an acceptance rate of 45%.

A best paper was chosen from each conference, which are both highlighted on the following pages.

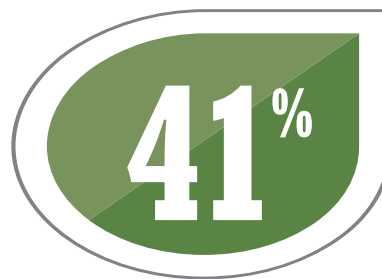
Conferences cannot happen without the help of reviewers, and SIGITE 2015 and RIIT 2015 were no exception. 45 reviewers and 2 meta-reviewers worked diligently to ensure that every paper had at least three independent reviews and that, where divergences occurred, consensus was reached. Over 300 reviews were ultimately conducted which hopefully resulted in constructive feedback that benefitted the authors regardless of the decision.

I hope you found the conference compelling and motivating with opportunities to reconnect with colleagues you know, identify new collaborators, and left

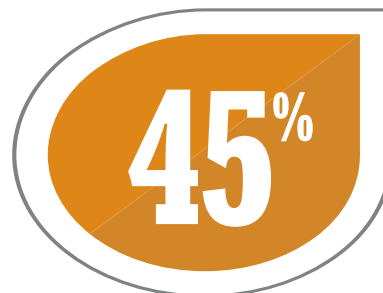
with a commitment to research and innovation that will result in new submissions to SIGITE or RIIT this upcoming year.

**Deborah Boisvert**

*Program Chair SIGITE/RIIT 2015*



**Acceptance  
Rate  
at SIGITE 2015**



**Acceptance  
Rate  
at RIIT 2015**

**Forty-seven reviewers worked diligently to ensure that every paper had at least three independent reviews.**

# TOP PAPER

## SIGITE 2015

### Serious Toys: Introducing Sensors and Sensor Networks in Pre-collegiate Classrooms

**Yvon Feaster**

Clemson University

**Jiannan Zhai**

Florida Atlantic University

**Jason O. Hallstrom**

Florida Atlantic University

<http://dl.acm.org/citation.cfm?id=2808037>

Sensors have become pervasive throughout our daily activities. Virtually all appliances use one or more sensors. Networks of sensors are used to support home and medical monitoring, wildlife behavioral monitoring, military applications, and environmental management. Observing the value of sensors in computing, we developed the third in a series of serious toys for use in pre-collegiate classrooms. The “toy” is an embedded hardware device designed to enhance a lecture titled “Learning About Sensors and Sensor Networks.” In this paper, we describe the curriculum module and its use in five classes from a local mid-

dle school, and four groups from a summer outreach program. We conclude with a summary of evaluation results that show the program produced positive results.

# TOP PAPER

## RIIT 2015

### Studying the Effect of Multi-Query Functionality on a Correlation-aware SQL-to-MapReduce Translator

**Thivviyan Amirthalingam**

Purdue University

**John Springer**

Purdue University

**<http://dl.acm.org/citation.cfm?id=2808066>**

The advent of Big Data has prompted numerous solutions that aim to meet the needs pertaining to data with high volume, veracity, velocity and variety properties. The exponential growth in data has dictated a simpler and more scalable environment with high fault tolerance and control over availability. With this motivation in mind and as an alternative to relational databases, numerous Not-Only Structured Query Language (NoSQL) databases were conceived. Nonetheless, relational databases and their de facto language, Structured Query Language (SQL), are still prominent among wider user

groups. This project ventures into bridging the gap between Hadoop and relational databases through allowing multi-query functionality to a SQL-to-MapReduce translator. This study includes an analysis of the modified translator's behavior under different sets of conditions. Our results suggest that the modified translator scales linearly as the data size increases.

# EVALUATION REPORT

## SIGITE/RIIT 2015

### Survey Results

**66 attendees** submitted surveys

**43%**

Continuing past practices, the organizers of SIGITE/RIIT 2015 asked conference attendees to complete an evaluation. There were 66 responses to the conference evaluation, for a 43% response rate. A majority of responses (37 or 57%) reported that they primarily attended SIGITE sessions. Three respondents (5%) attended primarily RIIT sessions, twenty-three (35%) attended both conferences equally, and two (3%) (sponsors) indicated other.

**All aspects of the program (papers, panel, workshops, lightning talks, the keynote, and the sponsor interactions) were overwhelmingly rated at or above good, with the workshops, panels, and keynote address receiving primarily very good or excellent ratings.** All aspects of the venue and facilities also received very good ratings in-

dicating support for the logistical execution of the conference. Those who attended the reception or the excursion also had very positive feedback. Most respondents also rated the web site, registration at or above good, and the general organization typically split between very good and excellent.

When asked in an open-ended question about the positive aspects of SIGITE/RIIT 2015, the people and networking opportunities as well as organization of the conference were mentioned several times. The importance of being able to see what is happening in IT education and IT research was also mentioned as a positive. When asked how the conferences could be improved, some comments suggested improving the quality of the presentations, but the most common themes were addressing low attendance on Saturday and

providing more opportunity for networking. These same themes carried over into the third question that asked what would make SIGITE/RIIT 2016 a better conference.

The SIGITE/RIIT conference organizers appreciate the feedback provided by the attendees of the 2015 conferences and plan to use the comments shared to improve the 2016 conferences.

**Steve Zilora**



## UPCOMING CONFERENCES

### **SIGCSE 2016 MEMPHIS** MARCH 2-5, 2016

SIGCSE 2016 welcomes colleagues from around the world to present demos, lightning talks, papers, panels, posters, special sessions, and workshops, and to discuss computer science education in birds-of-a-feather sessions and informal settings. The SIGCSE Technical Symposium addresses problems common among educators working to develop, implement and/or evaluate computing programs, curricula, and courses. The symposium provides a forum for sharing new ideas for syllabi, laboratories, and other elements of teaching and pedagogy, at all levels of instruction.

### **CSEDU 2016 ROME, ITALY** APRIL 21-23, 2016

CSEDU 2016, the International Conference on Computer Supported Education, aims at becoming a yearly meeting place for presenting and discussing new educational environments, best practices and case studies on innovative technology-based learning strategies, institutional policies on computer supported education including open and distance education, using computers. In particular, the Web is currently a preferred medium for distance learning and the learning practice in this context is usually referred to as e-learning. CSEDU 2016 is expected to give an overview of the state of the art as well as upcoming trends, and to promote discussion about the pedagogical potential of new learning and educational technologies in the academic and corporate world.



# **PREVIEW** **SIGITE/RIIT 2016**

# COMING SOONER THAN YOU THINK SIGITE/RIIT 2016 - Boston, MA

## The joint theme for the SIGITE/RIIT: Securing the Future

SIGITE/RIIT 2016 will be hosted by **University of Massachusetts Boston** and take place in Boston, MA at the Hilton located in Boston's historic Back Bay on **September 28 – October 1, 2016**. Boston is one of America's oldest cities, with a strong economic and social history. Boston's rich history, diverse neighborhoods, and legacy of education, arts, sports and culture provides the perfect environment for a world class hub of innovation. Its colleges and universities, hospitals and entrepreneurial climate are considered among the best in the world.

The conference web site (<http://sigite2016.sigite.org/>) is currently being developed and will feature information about the venue and the conference and will be continually updated over the coming months.

The SIGITE/RIIT 2016 conference committee is in place, and they are happy to answer any questions you may have. The Conference Chair is Deborah Boisvert ([deborah.boisvert@umb.edu](mailto:deborah.boisvert@umb.edu)) from the University of Massachusetts Boston; the Program Chair is Steve Zilora ([Stephen.Zilora@rit.edu](mailto:Stephen.Zilora@rit.edu)) from Rochester Institute of Technology; and the Sponsorship Chair is Thomas Ayers ([tayers@broward.edu](mailto:tayers@broward.edu)) from Broward College.

Watch for a call for proposals in the early part of 2016!

**Deborah Boisvert**

*Conference Chair SIGITE/RIIT 2016*





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