SIGITE

ACM Special Interest Group on IT Education

NEWSLETTER Vol. 13, Issue 1, Mar. 2018

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EDITOR'S
NOTE

Welcome back to the *SIGITE Newsletter*. The main event last year was the 18th Annual Conference on Information Technology Education (SIGITE 2017) and the 6th Annual Conference on Research in Information Technology (RIIT 2017), which were both held by Rochester Institute of Technology in Rochester on October 4 - 7, 2017. This edition of the newsletter provides information and highlights from that conference as well as some information about the upcoming conference in Fort Lauderdale.

Diana Wang
George Mason University

Steve Zilora
SIGITE CHAIR

MESSAGE FROM OUR CHAIR

Dear Members

Three years have gone by quickly. This summer, someone new will take over as SIGITE chair. As I look back on these past few years I am pleased with our growth and accomplishments as a society. We started some new initiatives and we are in a great position financially to support that work.

But one of my greatest experiences as SIGITE Chair has been the enthusiasm and generosity of SIGITE members. We may be one of the smallest SIGs, and that sometimes limits what we can do, but our size also works to our advantage. Annual conferences, like SIGITE 2017 in Rochester, are like a family gathering; and each time I sent out a call to action, I received two to three times the number of volunteers I hoped for. I cannot overstate how gratifying that experience is when you're trying to lead a volunteer organization.

And while the SIGITE membership as a whole is a great group of people, I have to single out a few of them. Rob Friedman and Richard Helps have been great fellow officers of the SIG. There have been many times, especially in the first year or two when I needed their advice. They were always very responsive and very thoughtful in their counsel. I want to particularly single out Rick Homkes, our treasurer and secretary. I could write an entire column on the work he has done for the SIG, but I could not begin to convey what a help he has been. His organization, his understanding of issues, his foresight, and his mid-western common sense were invaluable to me. I truly hope he gets re-involved in SIGITE leadership.

I am looking forward to continuing to serve SIGITE as past-chair for the next three years, helping out however I can. Thank you to all the SIGITE members for the great experience I have had.

Steve Zilora
Rochester Institute of Technology

SIGITE
EXECUTIVE

CHAIR

Steve Zilora

Rochester Institue of Technology

VICE CHAIR

Richard Helps

Brigham Young University

SECRETARY

Rick Homkes

Purdue University

PAST CHAIR

Rob Friedman

University of Washington Tacoma

SIGITE/RIIT 2017
REPORT

CONFERENCE REPORT
SIGITE/RIIT 2017

October 4 - 7, Rochester, New York

The SIGITE/RIIT 2017 Annual Conference was held in Rochester, New York and hosted by the Rochester Institute of Technology. The program featured a combination of papers, panels and lightning talks, a poster session and a reception for Community College educators sponsored by the Golisano College of Computing & Information Sciences @ RIT and the Committee for Computing Education in Community Colleges (CCECC).

The Hyatt Regency Rochester, situated along the Genesee River in downtown Rochester proved to be an excellent choice in terms of conference facilities and proximity within the city. Also helping in the success of the event was a cadre of students from The Rochester Institute of Technology who served as able assistants. The conference also continued the inclusion of a social excursion in order to help participants get acclimated to the region. This year's tour of the historic Genesee Brew House situated with a wonderful view of the High Falls area in downtown Rochester was enjoyed by all who participated.

The keynote speaker for the conference was

Steve Shapiro, co-founder and Chief Technical Officer of Token, an identity ring that allows users to live keyless, cardless, and free of passwords. Steve previously co-founded Digsby, where he was CEO until it was acquired in 2011. He went on to run product and design at Tagged, and also spent time at Bloomberg, where he reimagined the world's largest conversational trading network from the ground up. Steve received a BS from the Rochester Institute of Technology, where he studied Information Technology and Human Computer Interaction. He's passionate about the point in space where product, technology, and design intersect.

Dan Bogaard & Tom Ayers
Program Co-Chairs SIGITE/RIIT 2017

ACADEMIC REPORT
SIGITE/RIIT 2017

October 4 - 7, Rochester, New York

The joint theme for the SIGITE/RIIT was "Enabling the Future", focusing on the need to prepare Information Technology students for their future defining the Internet of Things. The call for participa¬tion attracted 94 submissions, of which 58 papers were sub¬mitted to SIGITE and 11 to RIIT. The technical areas of networking, mobile devices, security, and software development continued to be popular with researchers; as did inno¬vation in content, pedagogy and assessment. SIGITE had 23 papers in its program for an acceptance rate of 39% and RIIT had 6 papers for an acceptance rate of 54%.

Both conferences selected a best paper, which are both highlighted separately in this newsletter.
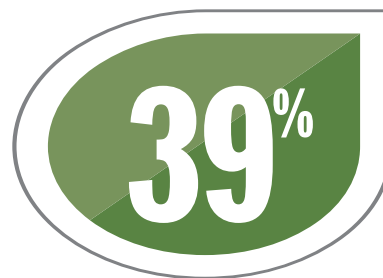
Conferences cannot happen without the help of reviewers, and SIGITE 2017 and RIIT 2017 were no exception. 90 reviewers worked diligently to ensure that every paper had at least three independent reviews and that, where divergences occurred, consensus was reached. Over 384 reviews were ultimately conducted providing constructive feedback that hopefully benefitted the authors regardless of the decision.

We hope you found the conference compelling and motivating. We also hope you took time to engage in opportunities to reconnect with familiar col¬leagues, identify new collaborators, and left with a renewed commitment to research and innovation that will result in exciting submissions to SIGITE this year.

Dan Bogaard & Tom Ayers
Program Co-Chairs SIGITE/RIIT 2017

39% **Acceptance Rate at SIGITE 2017**

54% **Acceptance Rate at RIIT 2017**

90 reviewers worked diligently to ensure that every paper had at least three independent reviews.

TOP PAPER
SIGITE 2017

Educational Approach to Cyber Foundations in an Undergraduate Core Program

Jason Hussey

United States Military Academy

Jacob Shaha

United States Military Academy

https://dl.acm.org/citation.cfm?id=3125691

Maximizing a student's learning in a general education information technology course is critical when teachers have only a little time to cover numerous topics within the discipline. It is therefore paramount that programs utilize the most effective pedagogical approach to educating students on these topics. This allows teachers to take full advantage of this limited time per topic. The principal contribution of this paper is a statistical analysis of student performance in an intermediate-level information technology course when exposed to two popular methods of teaching information technology concepts. This course is part of the larger cyber education model at the United States Military Academy. Our study implemented and analyzed the results from a control group educated with systematic, skills-based instruction versus a treatment group where a problem-centered learning approach was utilized. Our experimental results provide statistically significant reinforcement of the idea that problem-centered learning is superior to skills-based instruction for educating students in information technology topics as a part of their cyber education.

TOP PAPER
RIIT 2017

Monitoring Multicopters Energy Consumption

Ilenia Fronza

Free University of Bozen-Bolzano

Nabil El Ioini

Free University of Bozen-Bolzano

Luis Corral

ITESM / UAQ, Queretaro, Mexico

Matthias Moroder

FlyingBasket, Bolzano, Italy

Moritz Moroder

FlyingBasket, Bolzano, Italy

https://dl.acm.org/citation.cfm?id=3125657

Multicopters are small, typically unmanned helicopters having more than two rotors. The wide range of possible applications of multicopters, spanning from environmental research to recreation, has raised the need to come up with innovative solutions to reduce the power demand of these platforms, with the goal of guaranteeing safe completion of missions. To this end, it is of paramount importance to understand the way in which the energy is invested and spent. The goal of this work is to provide reliable means to monitor multicopters energy consumption.

We developed a monitoring platform to keep track of the energy consumption of multicopters. The platform relies on a set of sensors to collect the energy consumption data at different points of interest; data are then visualized in a monitoring dashboard. The monitoring system allows further analysis of the recorded data, which could be used to optimize multicopters energy consumption.

EVALUATION REPORT
SIGITE/RIIT 2017

Survey Results

40 attendees submitted surveys **33%**

Continuing past practices, con¬ference attendees of SIGITE/ RIIT 2017 were asked to complete an evaluation. There were 40 respon¬ses to the conference evaluation, for a 33% response rate.

All aspects of the program (papers, panel, workshops, lightning talks, the keynote, and the sponsor interactions) were overwhelmingly rated abo¬ve good to excellent (>90%), with the work-shops, panels, and keynote address re¬ceiving primarily very good or excellent ratings (>84%). The excursion had very positive feedback and those who attended the dinner re¬ception felt that it provided good food and valuable time to connect with others as well as seeing RIT's campus. Most respondents also rated the registration at or above good, and the general organiza¬tion typically split between very good and excellent.

When asked in an open-ended questions about the positive as¬pects of SIGITE/RIIT 2017, the people and networking oppor¬tunities as well as organization of the conference were mentioned several times. The importance of being able to maintain currency in a diverse set of IT education topics and IT research was also menti¬oned as a positive. When asked how the confe¬rence could be improved, the most common feedback suggested that the conference web presence was a bit dated and could be easier to use. A common complaint was the hotel's location and the construction happening around it. When asked what would make SIGITE/ RIIT 2017 a better conference, re¬spondents suggested that more access to a college campus would be a plus.

The SIGITE/RIIT conference chair appreciates the feedback provided by the attendees of the 2017 con¬ferences and plans to use the com¬ments shared to improve the 2018 conferences.

Dan Bogaard & Tom Ayers
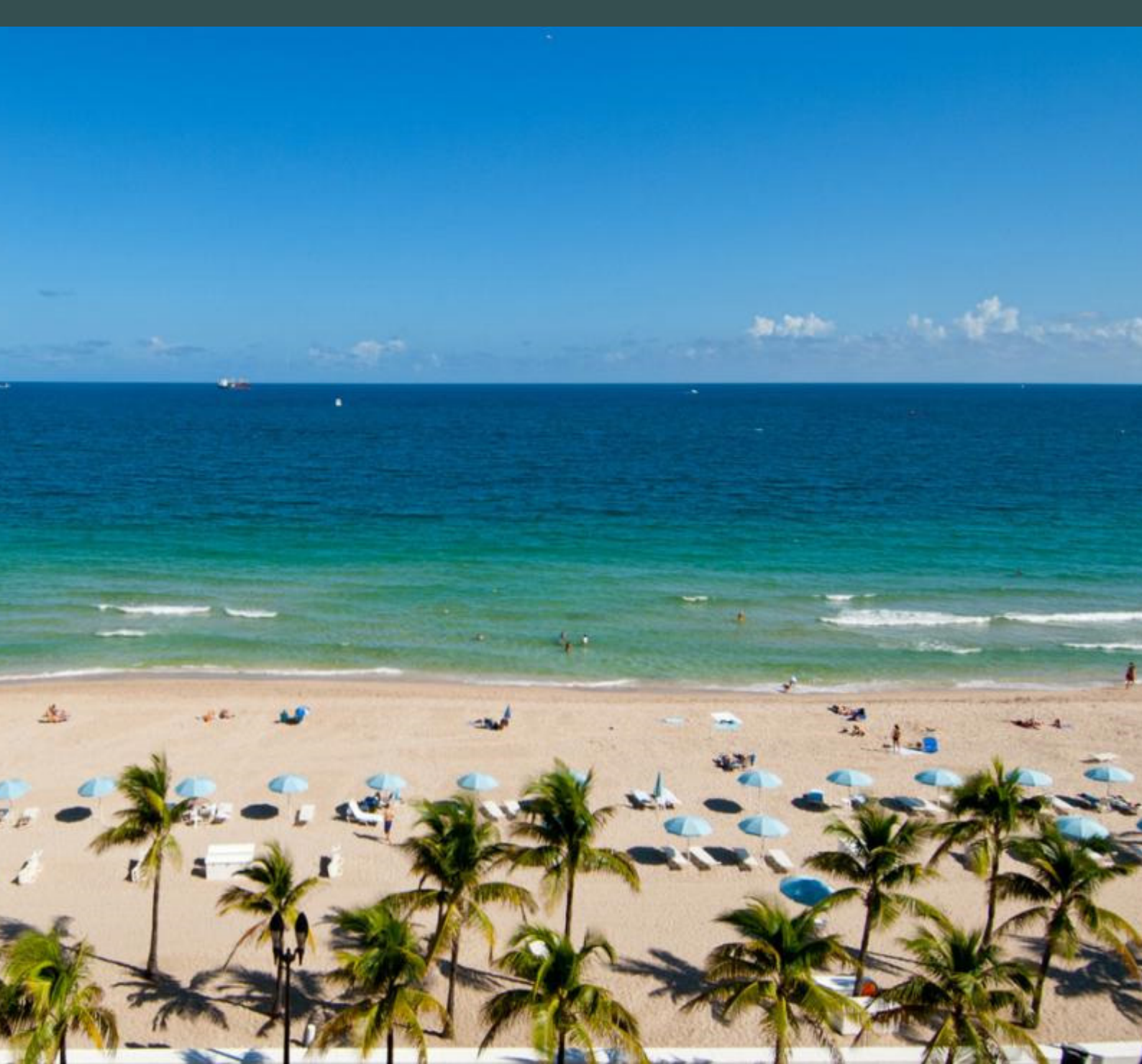*Program Co-Chairs SIGITE/RIIT 2017*

UPCOMING CONFERENCES

SIGCSE 2018 BALTIMORE, USA FEBRUARY 21-24, 2018

SIGCSE 2018 welcomes colleagues from around the world to contribute to, review for, and attend SIGCSE 2018. 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 educators and researchers to share new ideas for computing syllabi, laboratories, teaching, pedagogy, and education research at all levels of instruction.

CSEDU 2018 FUNCHAL, MADEIRA - PORTUGAL MARCH 15-17, 2018

CSEDU 2018, 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 2018 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 2017

COMING SOONER THAN YOU THINK
SIGITE 2018 - Fort Lauderdale, FL

The theme for SIGITE 2018: Innovate, Educate, Create

SIGITE 2018 will be hosted by **Broward College** and take place in Fort Lauderdale, FL **October 3 – 6, 2018**.

Innovate, Educate, Create—that's the theme for SIGITE 2018 to be hosted by Broward College in Ft. Lauderdale, FL. Yes, we're heading back south this year for the fun and sun of Florida. Be sure to plan appropriately as it might get down to the 70's in the evening. Consider arriving early or staying late to enjoy the Las Olas area, or to find out why Ft. Lauderdale is called the "Venice of America." And, of course, there are the beautiful beaches and the nearby Everglades to explore.

While you're at the conference you'll get the usual great presentations, lightning talks, panels, and poster sessions. This year, we're also going to focus on special opportunities for community colleges, PhD students, job seekers, and job posters. Also, instead of hosting two conferences this year with a separate conference on Research in Information Technology (RIIT), the SIGITE conference will offer a conference track for Research in Information Technology.

Watch your email for more information about the conference as it approaches. For all the official information, refer to the conference website http://sigite2018.sigite.org.

This year the executive committee is made up of:

Conference Co-Chair—Tom Ayers, Broward College (tayers@broward.edu)

Conference Co-Chair—Steve Zilora, RIT (Stephen.Zilora@rit.edu)

Programming Co-Chair—Bryan Goda, UW-Tacoma (godab@uw.edu)

Programming Co-Chair—Dan Bogaard, RIT (Dan.Bogaard@rit.edu)

Sponsorship Co-Chair—Dale Rowe, BYU (dale_rowe@byu.edu)

Sponsorship Co-Chair—Hollis Greenberg, WIT (greenbergh1@wit.edu)

Feel free to contact any of us for more information!

Tom Ayers

Conference Chair SIGITE 2018

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