

Safety for the Long Run

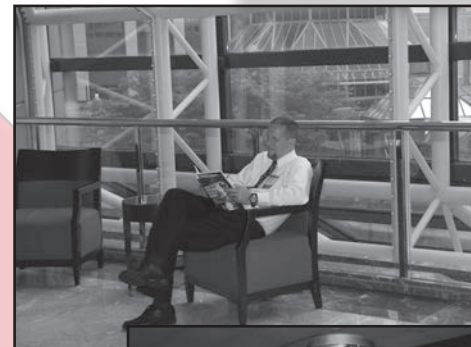
The 31st International System Safety Conference

August 12-16, 2013

Boston, Massachusetts was the setting for the 31st International System Safety Conference, and in one of America's oldest cities, attendees heard from some of the leaders in the field to map out safer paths into the future. The theme of the ISSC 2013, "Safety in the Long Run," spoke of the challenges that changing demands can place on new and existing technology, and how new tools, findings and ways of thinking can help safety practitioners make the world a safer place.



Photos by
Rod Simmons, John
Hewitt and Alan Oliver



Speakers



ISSS Fellow Member Emeritus Rex B. Gordon was the opening ceremonies' 50th Celebration Speaker. Rex, a past president and editor of Journal of System Safety, spoke about the origins of the Society and gave an overview of how far the ISSS — and the field of system safety in general — has come in the past 50 years to help renew the dedication and vision of current ISSS members.



Rex B. Gordon and ISSS President Robert A. Schmedake



Keynote Speaker James P. Keller, vice president of Health Technology Evaluation and Safety at the ECRI Institute, spoke on "Health Technology-Related Patient Safety Perspectives." He delivered information on safety management in hospitals from both a professional standpoint and his personal experiences of "alarm fatigue" from his mother's stay in the hospital.



James P. Keller and ISSS 2013 Chair Pam Alte



Dr. Nancy Leveson, from the Massachusetts Institute of Technology's Aeronautics and Astronautics Department, presented "The Path to More Cost-Effective System Safety" at the Sponsor and Exhibitor Luncheon. She spoke on how using hazard analysis techniques created 40 to 50 years ago are not effective, and how the role of humans in systems, and accidents, has changed.



From left, ISSC 2013 Chair Pam Alte, ISSC President Robert A. Schmedake and Dr. Nancy Leveson



Dr. John McDermid, professor of software engineering at the University of York, presented "Autonomous, Adaptive and Safe?" at the International Luncheon, looking at automation in unmanned aircraft, examining issues including safety, certification and assessments.



Manager of the Year



Pam Kneiss

Scientific R&D Award



Bruce Partridge

International Award



Rod Simmons

Professional Development



Dave West

Educator of the Year



Steve Mattern

New International System Safety Society Fellows (Not pictured)
Bob Schmedake and Don Swallow

Awards presented by Chuck Muniak

ISSC 2013 Awards

Chapter of the Year



Virtual Chapter

President's Award



Cathy Carter (presented by Bob Schmedake)

Best Paper Award



Towards Automatic Verification of Safety Properties in AADL System Models" — from left, Rikard Land, Stefan Björnander and Patrick Graydon.

Best Paper Award (Not pictured)

"Software Risk: The Third Rail of Safety Analysis" by Holly S. Hildreth, PhD, and Charles Greg Elcock, USN-R, Aviator.

Classes/Activities



*Northeast Chapter President
Scott Beecher*



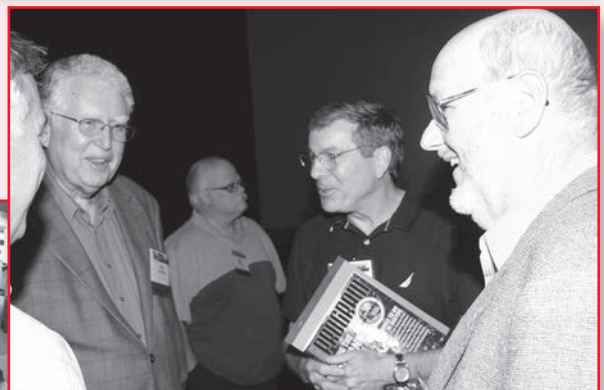
ISSC 2013 Chair Pam Alte

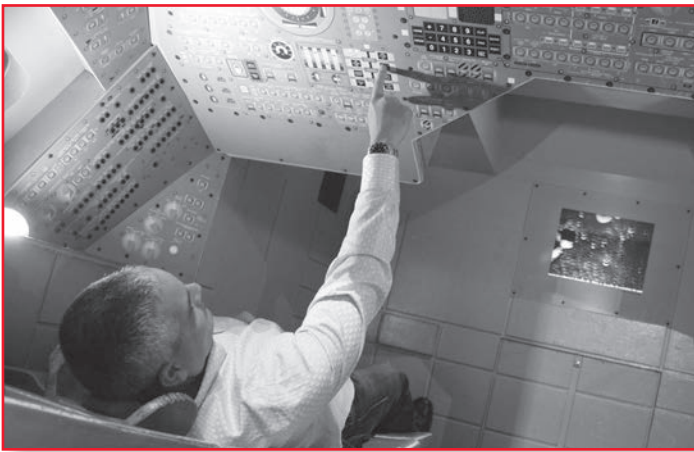


ISSC President Robert A. Schmedake

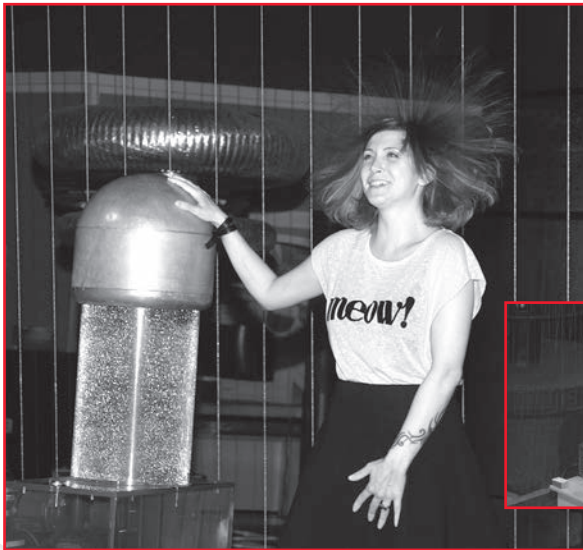
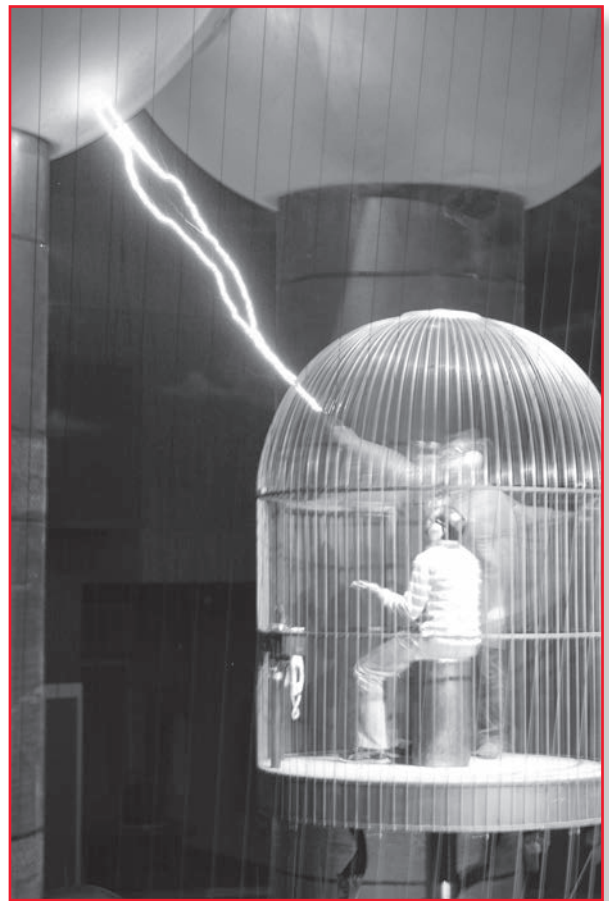


Attendees of the 2013 ISSC had the opportunity to meet in classroom settings, small group settings or network independently. The relationships built at conferences such as the ISSC can prove invaluable to careers and to the practice of system safety.





ISSC 2013 attendees also took a field trip to the Boston Museum of Science. Above, full-size models of the Apollo and Mercury capsules were available to explore.



A Van de Graaff generator (above) and displays of static electricity (left) were some of the sights to see — and feel — at the Boston Museum of Science's Theatre of Electrical Science.



The Boston Museum of Science also offers the exhibit "Mathematica," where the role of mathematics in science and post-modern design is explored.

Interview: Richard Hawkins

Doctoral Student

Richard Hawkins, a student in the software safety Ph.D. program at the University of York, attended the 2013 International System Safety Conference (ISSC). Journal of System Safety sat down with Richard and asked him about his views on the Conference, international cooperation and ways to move the field forward.

Journal of System Safety: How did you get started in the field?

Richard Hawkins: When I graduated, I got a job as a safety advisor in the nuclear industry, but that was working more with occupational safety — it wasn't really involved with system safety. Then, I changed tack and did a master's degree in computing, and realized that there was actually cross-over between the two. When I found out about the opportunity to do a Ph.D. at York in system safety, I combined the safety and software aspects together and started working with John McDermott in the High Integrity Systems Group at York and earning my Ph.D. in software safety.

I'm extremely grateful that the Northeastern Chapter was good enough to fund my trip here. As part of John McDermott being the keynote speaker for the International Luncheon, they offered for one of his students to come across. Otherwise, the funding wouldn't have been available for me to come.

JSS: What are your overall thoughts on the ISSC?

RH: For me, the best thing about coming here is that there is such a large number of people from industry, and people with a lot of experience doing system safety over a long period of time. For someone like me who's trying to do research, it's good to be able to share in that knowledge and experience — particularly coming to the U.S. to get the views of people in the States, which are sometimes slightly different from the way we think about things in Europe. It's good to come here and get that different perspective that I wouldn't get necessarily from attending a conference in Europe.

In addition to the presentations, which are a good way of seeing what people are doing, the tutorials and



Richard Hawkins

workshops are very valuable. If there are specific things you want to know more about, you can get more information there than you would get from a presentation. So, I think that having a mix of the two is a really positive thing about the Conference.

JSS: What will you be taking back home with you from the ISSC for your research?

RH: One of the things that has really stood out for me is the increase in autonomous systems. A lot of people in their talks mentioned this increase in au-

tonomy, such as with UAV and aircraft, and cars becoming more autonomous. Even in medicine, there are more autonomous systems. That's been a real eye-opener for me, how much more important those aspects are going to become. That's encouraging for me, since the focus of my research is software.

JSS: What did you think of the ISSC's structure?

RH: It's good that there's space in the Conference for social events. I think, in terms of talking to people, social events are good for that, and one of the great things about this conference is that you feel that there's time for the social things, as well. It's not all about the technical stuff.

JSS: What are your future plans after you earn your degree?

RH: Ideally, I'd like to carry on with research, since there are so many areas that still need to be looked into. A lot of the research that we do at York is closely linked to industry, so a lot of our research is funded by companies that have specific problems they want us to look at for them. I think with enough problems that these companies face from a system safety — and particularly a software — point of view, hopefully that money will carry on.

JSS: Have you seen a big difference between Europe and the U.S. in the way that system safety is handled?

RH: Fundamentally, it's the same, but there's an emphasis, especially in the U.K., on more of a safety case

approach — a more goal-based regulation — whereas things seem proscriptive over here, although I know that's a sweeping generalization. It does seem that more people here are getting interested in the safety case approach, though.

JSS: Did the ISSC stand up to conference standards in the U.K.?

RH: Yes. It's slightly different, because a lot of the conferences in the U.K. are focused on academia, where this one seems more focused on industry. And I think that's a good thing, because you need both. There's a place for academic conferences, but there's a place for more industrial conferences. It provides an opportunity for people from academia, like myself, to link into that community and find out from a broad range of people what's actually happening — the current best practices in the industry. It feels like this conference is aimed more at the industrial side; I don't know if that was the intention, but that's how it feels to me.

JSS: Do you think we in the United States are too U.S.-oriented and not international enough?

RH: I don't think so. All countries are focused on their own issues, but I think that's inevitable, really, because the industry is so highly regulated. Each country has its

own regulators. Everyone gets a bit territorial because of that reason. It's almost a side effect, because you're regulated at a national level. For example, in Europe, the French, the Germans and the British all are a bit self-focused. The Americans are, too, but I don't think it's unusual. Maybe that's another reason we should be sharing across the community. No one has a perfect way of doing it.

JSS: Do you have any thoughts on improving the ISSC, or conferences in general?

RH: One thing I've talked about this week is trying to bring the U.S. and European communities together, because clearly from this conference there is a big community here. There's a big community in Europe as well, but I don't see a lot of cross-over. I've been to conferences in Europe and now this conference. There are a small number of faces you see at both, but it's quite a small number. It would be nice to see more cross-over. I realize that it's difficult to achieve because of travel expenses, but I think that there's a lot that could be done by bringing the two communities together. Maybe there are virtual things we could do by using video conference facilities, where we could have presentations in Europe attended by people here, to get the sharing of ideas without having to move people across the Atlantic. ☺

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