### **Specialty Group Reports from the Field**

A brief look at what is new and exciting in the risk analysis field, provided by SRA specialty group chairs and members

## What's New in the Field of Nanomaterial Risk Assessment

J. Michael Davis, Chair, Emerging Nanoscale Materials Specialty Group

A "Public Information Exchange on the EPA Nanomaterial Case Studies" was held by the U.S. Environmental Protection Agency (EPA) on 4 January 2011 at Research Triangle Park, North Carolina. The purpose of this meeting was to explain the background and rationale for the EPA Nanomaterial Case Studies and related workshops and to receive feedback on the approach EPA is using in developing a *Comprehensive Environmental Assessment Research Strategy for Nanomaterials*.

Thus far, EPA has released two documents on case studies of nanomaterials: Nanoscale Titanium Dioxide in Water Treatment and in Topical Sunscreen (http://cfpub.epa.gov/ ncea/cfm/recordisplay.cfm?deid=230972) and Nanoscale Silver in Disinfectant Spray (http://cfpub.epa.gov/ncea/cfm/ recordisplay.cfm?deid=226723). These documents were used as part of a process to identify and prioritize research directions for these nanomaterials. A collective decision method (Nominal Group Technique) was employed in structured workshops with selected participants from various disciplines and sectors to rank the research or information most needed to conduct a comprehensive environmental assessment of the nanomaterials in question. One objective in applying a formal collective judgment process was to go beyond merely creating a list of several "research needs" and to move toward a more strategic understanding of which research directions would best support future efforts to assess the potential risks and benefits of nanomaterials.

The case studies were constructed around a Comprehensive Environmental Assessment (CEA) framework that includes product life-cycle stages as well as fate and transport processes, exposure-dose, and ecological, human health, and other impacts. CEA comprises two aspects: a framework for organizing information in a systematic manner (as in the nanomaterial case studies cited above) and a process for using collective judgment to evaluate complex tradeoffs and choices. Given the limitations in knowledge about several key issues surrounding nanomaterials, CEA is currently being used primarily for research planning and strategy development purposes (as in the workshops mentioned above) rather than for actual assessment purposes. However, as more information becomes available, comprehensive environmental assessments of specific nanomaterials will become more feasible. Jeffery Steevens with the U.S. Army Corps of Engineers, for example, has been applying the CEA framework as part of an evaluation process supporting major acquisitions decision making related to nanomaterials within the Department of Defense (http://el.erdc.usace.army.mil/ nano/pdfs/CenterDirectedResearch.pdf). And the Board of Scientific Counselors to EPA's Office of Research and Development noted that the CEA approach provided a valuable framework for evaluating the broad implications of nanomaterials in the environment (http://www.epa.gov/osp/ bosc/pdf/nano1008rpt.pdf).

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### President's Message

Rachel Davidson

Welcome! I hope this newsletter finds everyone well. I am delighted to be able to share the following news about all the recent and upcoming happenings at the Society for Risk Analysis (SRA).

### **Annual Meeting**

The next annual meeting will be 4-7 December 2011 in Charleston, South Carolina. President-

elect Ann Bostrom and the Planning Committee are putting together a fantastic event with the theme of "Coastal Risk Analysis." The programs introduced last year to enhance the experience for students and young professionals will be happening again, so look for the roundtable on professional development, career fair, student discounts for workshops, and student/young professional mixer. Submit abstracts now for papers and symposia (due 27 May). See page 8 of this newsletter or visit the website at <a href="http://www.sra.org/events">http://www.sra.org/events</a> 2011 meeting.php for details.

### **Regional Meetings**

In addition, there are many SRA gatherings being organized through regional organizations (see <a href="http://www.sra.org/events.php">http://www.sra.org/events.php</a> for more information). I encourage all to participate as they can. Upcoming events include:

- 3<sup>rd</sup> International Conference on Risk Analysis and Crisis Response (Laredo, Texas, 22-25 May 2011)
- 20<sup>th</sup> SRA-Europe Meeting: Multi-Risk Analysis in a Global World (Stuttgart, Germany, 6-8 June 2011)
- Quantitative Risk Analysis and Disease Modeling in Epidemiology (Fort Collins, Colorado, 27 June-1 July 2011)
- Animal Agriculture and Food Safety Risk Analysis (London, UK, 5-16 September 2011)

#### **World Congress**

Looking a little farther down the road, the date and venue for the next World Congress have been set—18-20 July 2012 (Wednesday-Friday) at the Sydney Convention and Exhibition Center in the central business district of Sydney, Australia. Save the date and plan to attend! Further

details will soon be available at <a href="www.sra.org/worldcongress2012">www.sra.org/worldcongress2012</a>. It's not too late to get involved. Just contact one of the co-chairs—Allison Cullen, Daniela Leonte, or Jonathan Wiener—if you're interested.

#### **Website Overhaul**

We are moving ahead with a major initiative to revamp the SRA website to both improve its appearance and enhance the functionality it offers to members, regional organizations, specialty groups, and the general public. Thanks to the efforts of several SRA members, we have developed a detailed request for proposals for the new website and have a strong list of potential bidders. We expect to receive proposals over the next month and hope to award the contract soon after, with development occurring over the summer.

#### **Educational Materials**

Development of another exciting new initiative to collect, organize, and distribute risk analysis course materials is continuing as well. Through this project we hope to provide a valuable new service to members who teach risk analysis (me included!). Contact Education Committee Chair Michael Siegrist (msiegrist@ethz.ch) if you are interested in participating ... especially those of you who have taught courses in the past or are planning to in the future.

#### **New Initiatives**

As I mentioned at the last annual meeting, we are actively seeking ideas for additional new initiatives that will improve and expand our ability to serve our membership and carry out our mission. Anyone can propose a new initiative, so contact Treasurer Jeff Lewis (r.jeffrey.lewis@exxonmobil.com) with your ideas today!

There are many opportunities to participate in SRA activities. I encourage anyone with the inclination to get involved. Visit <a href="www.sra.org">www.sra.org</a> for updates on events and other activities and programs. I look forward to seeing everyone in Charleston, if not before.

#### **In Memory of Evan Armstrong North**

The Society for Risk Analysis (SRA) expresses condolences to SRA Past President Warner North and his wife Cherie on the death of his son Evan Armstrong North. A graduate student at Georgetown University, Evan died suddenly on 4 April 2011 while working out on a treadmill at the Yates Field House. There was no prior known health condition, and the cause of death has not yet been determined. A memorial service was held at the Dahlgren Chapel in Georgetown University on 16 April. A funeral service will be held at the Fernwood Cemetery in Mill Valley, California, on 30 April.

The family requests that, in lieu of flowers, contributions will be welcomed for the Evan Armstrong North Memorial Fund, at the Georgetown University Advancement Office, PO Box 571253, Washington, DC 20057-1253.

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### **Homeland Security and Defense Notes**

Bob Ross, Chair, Security and Defense Specialty Group

We are, as the apocryphal "Chinese Curse" has it, "... living in interesting times." Many of the issues that make these times so interesting fall squarely within the purview of the Security and Defense Specialty Group—revolutions in the Middle East and what they might mean for U.S. national security, natural disasters, international and domestic terrorism, man-made disasters, emergency response, cybersecurity. As a result, there is both opportunity and need to move the state of the art and the state of the practice forward.

In that vein, there are a number of noteworthy things going on that may be of interest. For example, Sara Klucking here in the Department of Homeland Security (DHS) Science and Technology is sponsoring five independent studies looking at how adaptive adversaries could be handled in doing terrorism risk assessments. There are already a few papers coming out of this work, with the promise of additional future progress and contributions. I know of other work in several of DHS's components—Coast Guard, Transportation Security Administration, Federal Emergency Management Agency (FEMA)—as well as at various universities and in foreign governments that would be of interest to our larger community.

Unfortunately, beyond academia and the government policy realm, reality has given us a number of events from which we can and should learn lessons. The Japanese earthquake, tsunami, and nuclear disaster have implications for both homeland security (FEMA, natural disasters, emergency response, societal resilience) and defense (military support to civil authorities, international assistance operations). What happened in Japan, and what will happen there over the coming weeks and months, is likely to impact U.S. domestic risk management policies as well as our emergency response planning and operations. Similarly, the Deepwater Horizon oil spill should hold many lessons for us-if we want to look for them. The U.S. Coast Guard has just released the report of the Incident Specific Preparedness Review for the Deepwater Horizon incident and response. It is available online (http:// www.uscg.mil/foia/docs/DWH/BPDWH.pdf).

If you have a good risk story to tell or insights flowing out of your risk analysis or risk management work in homeland security or defense, I strongly encourage you to share it with others, either through presentation at the annual meeting or through a paper in the SRA journal, *Risk Analysis*.

Finally, I want to close by acknowledging a debt of gratitude to Steve Bennett, last year's president for the Security and Defense Specialty Group, and to Igor Linkoff. Without their efforts and guidance, this specialty group would not have been approved or become a part of the SRA family. I

hope that we will be able to build on their foundation and grow in both numbers and accomplishments over the next year.

### A Note on Engineering and Infrastructure Risk Analysis

Joost Santos, Chair, Engineering and Infrastructure Specialty Group

Global awareness on risks of natural and man-caused disasters is increasingly becoming more pervasive. The recent 9.0-magnitude earthquake in Japan literally created severe "ripple" effects, which notably include the destructive tsunami that swiped the northeastern coastal regions, threat of nuclear reactor failures, and worldwide financial contagion. Other prominent disasters in recent years (like the Haiti earthquake, 9/11 terrorist attacks, hurricane Katrina, China earthquake, Myanmar cyclone, Indian Ocean tsunami, epidemics, and several others) have resulted in massive loss of lives, disruptions to economic livelihoods, environmental destruction, and irreversible damage to critical infrastructure systems.

Risk analysis of catastrophic events spans multidisciplinary fields including natural sciences, social sciences, applied sciences, and engineering. Although these fields are seemingly inseparable in the context of disaster risk assessment and management, this note primarily focuses on engineering and infrastructure risk analysis. Critical infrastructure systems (e.g., oil and gas pipelines, transportation, telecommunications, electric power, banking, etc.) are highly complex and interdependent. These interdependencies take the form of physical connections, information flows, organizational partnerships, and exchanges of commodities and services, among others. Our modern world has become more reliant on the essential services these critical infrastructure systems provide, hence ensuring their availability and recovery is of paramount importance, particularly in the aftermath of disasters. Failure of infrastructure systems can also spin off additional public safety and environmental concerns, as proven by recent incidents including the I-35 bridge collapse, Gulf Coast oil spill, nuclear reactor breach, and many others. In his seminal book, Normal Accidents, Charles Perrow coined the term "interactive complexity" to describe chaotic outcomes that can potentially stem from a combination of two or more discrete failures.

Research publications and funding opportunities on infrastructure safety and disaster management areas have gained momentum in light of the recent catastrophic disasters. A case in point, the majority of recent grants given by National Science Foundation's (NSF) Hazard Mitigation and Structural Engineering program are notably earthquake related. Theoretical and practical innovations in disaster modeling and analysis are also pursued by recent award grantees of NSF's Infrastructure Management and Extreme

Events program. The number of infrastructure risk analysis and disaster-related articles also appears to be on a steady rise. For example, a keyword search for "earthquake" reveals dozens of new infrastructure-related articles in journals like *Transportation Research Record, Structural Design of Tall and Special Buildings, Soils and Foundations*, and many others. In the Web of Knowledge database, a multi-keyword search for terms such as "engineering," "infrastructure," and "risk analysis" generates a significant number of new articles pertaining to the adverse effects of disasters on infrastructure systems (several of which relate to climate change, energy, and sustainability).

With its diverse members and international chapters, the Society for Risk Analysis is uniquely poised to deliver a synergistic impact on assessment, management, and communication of disaster risks. Integration of available modeling tools, policymaking activities, and best practices on enhancing infrastructure resilience is necessary in today's interdependent global society. On behalf of the Engineering and Infrastructure Specialty Group, I would like to urge our members and all interested parties to submit papers or organize symposia on engineering and infrastructure-related topics to this year's annual meeting (and ultimately to *Risk Analysis: An International Journal*). Students are also highly encouraged to compete in travel grants and student merit awards. Please send email to joost@gwu.edu for questions and additional information.

### **Economics and Benefits Analysis Notes from the Field**

Amber Jessup, Chair, Economics and Benefits Analysis Specialty Group Economics and regulatory analysis continues to be an area of great interest in the third year of the Obama Administration. On 18 January 2011, President Barack Obama issued "Improving Regulation and Regulatory Review—Executive Order." This new executive order supplements and reaffirms Executive Order 12866 on Regulatory Planning and Review. The new executive order directs agencies "... to quantify anticipated present and future benefits and costs as accurately as possible. Where appropriate and permitted by law, each agency may consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts."

In addition, the U.S. Environmental Protection Agency (EPA) recently published new guidance on the conduct of regulatory analysis. In addition to providing information on EPA requirements, this guidance is a useful reference for anyone interested in economic concepts and benefit-cost analysis of environmental, health, and safety regulation. EPA's Science Advisory Board is now reviewing a White Paper prepared by EPA staff that may substantially change the approach used to value mortality risk reductions (i.e.,

the value per statistical life—VSL).

All of these materials are posted on our website at <a href="http://www.sra.org/ebasg/links.html">http://www.sra.org/ebasg/links.html</a>. We will continue tracking related initiatives for Economics and Benefits Analysis Specialty Group (EBASG) members and posting materials on our website as they become available. We hope that you will comment on these issues and provide information on other topics of interest to EBASG members by joining our discussion group, which can be accessed from the side menu on the EBASG website (<a href="www.sra.org/ebasg">www.sra.org/ebasg</a>) or directly at <a href="http://groups.google.com/group/sra-ebasg">http://groups.google.com/group/sra-ebasg</a>).

### **Key Developments in Dose Response**

Lynn Haber, Chair, Dose Response Specialty Group

A key development in the areas related to dose-response assessment and the underlying biology is the dramatic growth in research and applications related to the use of in vitro and in silico (computer-based) analytical approaches, growing in part out of the 2007 National Research Council (NRC) report "Toxicity Testing in the 21st Century." This report envisions a shift from evaluation of a limited number of chemicals using expensive, time-consuming tests that cost many animal lives to a focus on high- and mediumthroughput in vitro assays, supplemented with targeted in vivo studies. Toxicogenomics (evaluating the impact of a chemical exposure on gene expression of the broad genome), proteomics (evaluating the impact of a chemical exposure on protein levels), and other molecular toxicology techniques and analytical methods are rapidly developing, with the ability to rapidly screen hundreds of chemicals.

A number of initiatives are developing and validating systematic approaches to evaluating chemicals. Tox21 is a collaboration among the U.S. Environmental Protection Agency (EPA), the National Institutes of Environmental Health Sciences/National Toxicology Program, the National Institutes of Health, and the Food and Drug Administration that works to "research, develop, validate and translate innovative chemical testing methods that characterize toxicity pathways." The International Life Sciences Institute Risk21 program is bringing together people from industry, academia, the government, and other stakeholders to guide the development and use of risk assessment approaches that use recent advances in biology and risk assessment methods. EPA's Computational Toxicology program has additional programs to forward these goals, including ToxCastTM, a program to use high-throughput assays to screen hundreds of chemicals. Results from these sorts of assays are beginning to be used to screen and prioritize chemicals for further evaluation. However, there are a number of challenges to the more extensive use of in vitro techniques. Among the most challenging are accounting for metabolism and the influence of organs on each other via hormonal and other interactions. In addition, study validation is needed, and relationships between in vitro doses and internal doses in in vivo studies need to be developed. The Dose Response Specialty Group's (DRSG) 2011 teleseminar series will be addressing various aspects related to the developments growing out of the NRC report, culminating in a symposium at the annual meeting.

A second key development was stimulated by the 2009 NRC report "Science and Decisions: Advancing Risk Assessment." Among other recommendations, this report highlighted the importance of problem formulation and related the choice of dose-response method to one of three conceptual models. A particularly controversial aspect of the report was the recommendation to conduct "linear extrapolation" for noncancer endpoints that follow certain conceptual models. The NRC report further explains that "low-dose linear means that at low doses 'added risk' (above background) increases linearly with increasing dose; it does not mean that the dose-response relationship is linear throughout the dose range between zero dose and high doses." The NRC report has stimulated substantial discussion in the risk assessment community, including several DRSG teleconferences, symposia at the SRA and Society of Toxicology annual meetings, an EPA colloquium, a workshop series sponsored by the Alliance for Risk Assessment, and published papers.

### **Decision Analysis and Risk Report from the Field**

Jim Lambert, Jeff Keisler, Chris Karvetski, Matthew Bates, and Igor Linkov, Decision Analysis and Risk Specialty Group

Increasingly, agencies and industry are welcoming decision analysis to support their technology-focused negotiations, particularly where there are diverse stakeholder interests and difficult tradeoffs to be made among risks, costs, and benefits. Decision analysis, particularly multi-objective or multi-criteria decision analysis, can help assure that relevant evidence is considered by the stakeholders earlier in the life cycle of a technology investment. Diverse stakeholders bring evidence and experience from different quarters of the physical and social sciences. Good decision analysis will ensure that stakeholders remain at the table and collaboratively focused on the system goals of innovation, health and environmental safety, cost-effectiveness, etc. Decision analysis has many variants and related fields, including decision theory, decision science, game theory, economic behavior, utility theory, optimization, operations research, resource allocation, linear and nonlinear programming, industrial engineering, management science, balanced scorecard, negotiation analysis, risk management, risk-informed decisions, influence diagramming, systems engineering, system dynamics, reliability-centered maintenance, financial engineering, engineering economics, prospect theory, and many others. Decision and risk programs in agencies and industry aim to bring systematic methods to serve the missions and investments of the organization. SRA members are involved in various decision analysis professional societies, including the International Society on Multiple Criteria Decision Making, the Institute for Operations Research and Management Science, the Decision Analysis Society, the Society of Decision Professionals, the IEEE Engineering Management Society, the Military Operations Research Society, and many others. The experience of Decision Analysis and Risk Specialty Group members is that decision analysis and risk analysis are essential partners to bring knowledge and science to the benefit of public policy, management and investment, and technology innovation.

# Recent Advances (and Retreats) in Risk Policy and Law

Tee Guidotti, Chair, Risk Policy and Law Specialty Group

The application of, initially, quantitative risk assessment and now a broadening spectrum of risk science to public policy has been the core mission of the Society for Risk Analysis (SRA) from the beginning. Indeed, it could be said that in designing a policy tool, risk experts discovered a science.

For several years there has been a feeling in the risk community that progress in regulatory policy had stalled. Just now, as forward momentum is resuming, the world of risk management is suddenly facing what could become a perfect storm in the United States.

Ferociously partisan and implacable political forces, with a libertarian and market-driven ideology, have attacked what is perceived to be an oppressive regulatory burden in order, as they see it, to reduce the role of government in daily life. The closely associated small-government movement seeks to "starve the beast" (i.e., shrink the federal government) by slashing the federal budget. If the combined movements are successful, deregulation would be riding a current, unique wave of libertarian political sentiment for zeroing out budgets and dismantling infrastructure.

At the same time, the ideology of market discipline, which has come back with a vengeance despite the failure of markets during the recession, provides an at least rhetorically plausible alternative to regulation. These converging trends have placed all regulatory agencies at risk, including the U.S. Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA). The current battle over the federal budget appropriations for the remaining months of 2011 is just the beginning. The battle for the 2012 federal budget will follow shortly and it will be much bigger. Even if these trends do not play out in full, the regulatory environment as we know it today is likely to change dramatically in the United States.

Ironically, this comes at a time of innovation in managing risk. The new EPA drinking water framework, discussed at the SRA annual meeting, provides a more flexible systems approach to water quality. Other agencies share EPA's renewed interest in regulation across exposures rather than contaminant-by-contaminant regulation, including OSHA (which it remains blocked for other reasons). Calls for reform of the 1976 Toxic Substances Control Act (TSCA), where the individual chemical approach is everything, now seem both long overdue and somewhat irrelevant because TSCA is rapidly becoming irrelevant. The European regulatory framework for chemicals known as REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) is well along in its implementation and is fast becoming the de facto standard for the global chemical industry.

On the law side of risk policy and law, the changes have been slower. The private BP Gulf Fund and the federal Oil Spill Liability Trust Fund seem to have curbed much litigation that would otherwise have resulted from the BP oil spill, although this drama is still playing out. In the wake of the triple disaster in Japan, the issue of "all-risk" and "named risk" insurance coverage is again hotly debated, as carriers seem to limit their liability by itemizing exactly what is covered rather than accepting liability for property loss from any and "all" risk.

### **Exposure Assessment**

Tony Fristachi, Chair, Exposure Assessment Specialty Group

The effects of the Gulf oil spill and the Fukushima nuclear catastrophe in Japan will undoubtedly be the focus of interest to exposure scientists in the coming year and foreseeable future.

A National Institute of Environmental Health Sciences study stated that a critical component of the response to the incident in the Gulf would be to characterize possible worker exposure to a number of chemical and physical agents associated with crude oil, dispersants, and other chemicals arising from the spill or used in the cleanup (http://www.niehs.nih.gov/about/od/programs/ gulfspill/gulfstudy/backgrounddocuments/ exposure\_strategy022611v2.pdf). In the Gulf, volatile organic compounds (VOCs) such as benzene, toluene, xylene, and ethyl benzene (BTEX); semi-volatile compounds, such as polycyclic aromatic hydrocarbons (PAHs) and higher molecular weight alkanes and aromatic hydrocarbons; 2-butoxyethanol (2-BE); propylene glycol (PG); particulate matter (PM2.5 and PM 10.0); oil mist and carbon monoxide; diesel; and gasoline engine were present during the cleanup activities. Other stressors such as heat, noise, and stress compound these exposures.

A wealth of data exists on the effects of radiation to members of the Japanese population from the atomic devices dropped on Hiroshima and Nagasaki. Studies from the Chernobyl and Three Mile Island incidents have added to that body of research. Unfortunately, now there exists another opportunity, in Fukushima, for exposure scientists and epidemiologists to further understand the scenarios related to human and ecological exposure to radionuclides. Exposure research will contribute to our understanding of the effect of widespread radiation contamination, the duration of such contamination, and the proximity of reactors to population centers.

The European Committee on Radiation Risk (ECRR) responded to Japanese government statements on elevated levels of radioactive species in foodstuffs and used the ECRR methodology to provide an interim calculation of cancer risks to the population. The committee published an advise notice where it commented that there is a significant lack of data on emissions of alpha- and beta-emitting radionuclides from the stricken reactors and the fuel storage facilities (<a href="http://www.euradcom.org/publications/fukushima19032011.pdf">http://www.euradcom.org/publications/fukushima19032011.pdf</a>). The ECRR estimated the lifetime cancer risk to be 0.4 percent, that is, in 1,000 individuals exposed for a week at current exposure levels, four will develop cancers. In 30 million, the population of Tokyo, this would result in 120,000 cancers in the next 50 years.

In the United States there has been a concerted effort to assist the Japanese government as well as to insure the protection of its citizens. The U.S. Environmental Protection Agency has been monitoring precipitation, milk, and drinking water in response to the Fukushima events. The results are presented in summary reports and with real-time monitoring data at <a href="http://www.epa.gov/radiation">http://www.epa.gov/radiation</a>. The U.S. Department of Energy has released data recorded from its Aerial Measuring System as well as ground detectors deployed along with its Consequence Management Response Teams (<a href="http://blog.energy.gov/content/situation-japan">http://blog.energy.gov/content/situation-japan</a>). The U.S. Nuclear Regulatory Commission actions can be found at <a href="http://nrc.gov/japan/japan-info.html">http://nrc.gov/japan/japan-info.html</a>.

### **Developments in Risk Communication**

David Berube, Chair, Risk Communication Specialty Group

We recently held a two-day symposium on risks (15-16 April 2011) in Raleigh, North Carolina. Some issues surfaced that I felt might interest members of the Risk Communication Specialty Group. As we begin to craft our abstracts and panels for the Society for Risk Analysis (SRA) annual meeting in Charleston 4-7 December 2011, it might behoove us to muse over two subjects that surfaced at our meeting.

First, communication of risk remains challenging given the transition to a digital world of information seeking. In late 2010, the Pew Center for People and the Press noted the Internet has become a more prominent source of information seeking on news. For the youngest demographic, information seeking on the Internet overtook even television (PEW December 2010).

We need some theory. What is it we find when we mine social media? Data or information. Both these words have interesting meanings. Data tends to be inert, though it has great potential to populate debates about information. However, lots of data never become information. Information involves purpose. In addition, at the conference we began to question whether social media was used to broadcast information and we spent some time discussing the network-based model for what people in social media do. What do we do on social media? Are we meeting friends and developing mutual interests? Are we directing fans to data/information posted at other sites? Are these sites uniquely new media or vestiges of more traditional media rebuilt to take advantage of the interactive characteristics of Web 2.0?

How people use the Internet must be better understood. Are people turning to the web for the same types of information they might have found in print or on television? Are they visiting online newspaper and televisual news sites? Do they stop there or do they move from social media online information to more traditional outlets to biangulate the information? How is trust resolved when anyone with web access, expertise notwithstanding, can post anything at anytime?

Are they using aggregators and assimilators, like Google News, to funnel only information about which they are interested to their online mailboxes? Not to argue every issue needs to be fair and balanced (climate), but some clearly do. When the public attends only to the voices who speak to their own interests, this produces competing voices that scream at each, other totally unprepared to negotiate common space.

How valid is the "Google Doctrine?" GD = social media means democracy. Is social media, especially Facebook,

Twitter, and YouTube, responsible for revolutions? While the platforms might be useful to organize groups of people, whether they are essential to revolution seems to devalue the people on the street as well as more detailed socioeconomic realities.

There is some interesting anecdotal information that Facebook, Twitter, and YouTube, in some circumstances such as natural disasters and emergencies, are powerful platforms that provide information to first responders and traditional news sources.

Second, we experienced two events at the symposium. We started the event on 15 April with a fire drill held at the university student union wherein we held the first day of presentations. The next day, by mid-afternoon we experienced a tornado alert and the meeting participants relocated to a basement without windows as we sat out the alert. Both events involved warnings and both passed. However, the juxtaposition of these warnings with a symposium on risk was more than serendipitous. While we study risk and risk messaging, sometimes the academic nature of our activities forces us to dislodge our understanding of risk from the events that define them.

For example, the disaster at Fukushima, while horrific, must be contextualized against the quake and tsunami that precipitated it. Thousands of Japanese died from the tsunami and thousands more are missing. While Western media's preoccupation with the nuclear reactors' release of radiation is a powerful subject for academic treatises, it might be wise to take moments to reflect on the many thousands of men, women, and children who died in the first tragedy. While Fukushima might be more relatable to nuclear fission issues in the West, as well as a broader climate change debate, catastrophes involving our Japanese brothers and sisters carry significance far beyond academic treatises and data-driven analyses of media coverage.

"Coastal Risk Analysis"

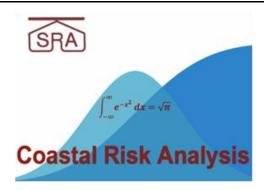
SRA Annual Meeting

4-7 December 2011

**Charleston, South Carolina** 



The Battery in Charleston
photo courtesy of Charleston Area Convention & Visitors Bureau



# SRA Annual Meeting 4-7 December 2011 Charleston, South Carolina Call for Papers Deadline 27 May 2011

**SAVE THE DATE.** The 2011 Society for Risk Analysis (SRA) Annual Meeting will be held at the North Charleston Convention Center and the Embassy Suites North Charleston Hotel in Charleston, South Carolina, 4-7 December 2011. This year the theme is "Coastal Risk Analysis." Join nearly 750 colleagues dedicated to the science and application of risk analysis—risk assessors, managers, communicators, and more—from academia, government, corporate, and nonprofit organizations.

**PRESENTATIONS AND POSTERS.** Be sure to submit your abstract for an oral presentation or poster no later than Friday, 27 May 2011, via the online submission form available at <a href="http://www.sra.org/events-2011\_meeting.php">http://www.sra.org/events-2011\_meeting.php</a>. The submission deadline is firm; the website link will be closed after that date.

As in past years, there is a limit on presentations by a single person. Each individual may submit one abstract for oral presentation, one symposium proposal, and one abstract for a poster presentation (although individuals may also serve as co-authors on other submittals). Oral presenters should anticipate 15-minute talks, with an additional five minutes allotted for questions and discussion.

**SYMPOSIA.** Symposia on specific topics are encouraged! Consider organizing a symposium with multiple speakers using the online form (website address below). Be sure to submit your symposium proposal in advance of the 27 May deadline to obtain a symposium number. This identifying number must be referenced by each individual submitting an abstract for inclusion in the symposium. Please note that the overall conference deadline will apply to all abstracts, including those submitted as a part of symposium.

**SPECIALTY GROUPS AND REGIONAL ORGANI- ZATIONS.** Please consider organizing symposia! Symposia themes can be generated by a single specialty group or regional organization or jointly proposed by multiple groups.

**WORKSHOPS.** Organize a Continuing Education Workshop to be held on the Sunday preceding the annual meeting (4 December). The workshop proposal information is online at the main website (<a href="www.sra.org/events\_2011\_meeting.php">www.sra.org/events\_2011\_meeting.php</a>).

STUDENTS AND YOUNG PROFESSIONALS. The Society for Risk Analysis is committed to supporting and mentoring students and young professionals in risk analysis in their academic and professional careers. The annual meeting is a great place to meet other students, young professionals, and the leading experts in risk. There will be a number of events targeted at students, postdoctoral fellows, and young professionals in Charleston, including a roundtable discussion where members of academia, government, and industry will provide advice about education and career opportunities. SRA will also be hosting its second annual career fair. The career fair provides opportunities for both job seekers and those looking to fill job positions with the next generation of risk researchers. Students can also take advantage of the numerous workshops or attend specialty group mixers to meet future colleagues.

**AWARDS.** Apply for a Student or International Travel Award or a Specialty Group Student Paper Merit Award by checking the relevant box on your online submission form.

**SPONSORSHIP/EXHIBITION.** To be a sponsor of the 2011 SRA Annual Meeting, sponsor your organization's exhibit booth, or include your book in the book exhibit, please contact Erin Johnson at <a href="mailto:ejohnson@burkinc.com">ejohnson@burkinc.com</a> no later than 30 September 2011.

**YOUR IDEAS.** Please share your ideas and suggestions for making the meeting even better by contacting Ann Bostrom at <a href="mailto:abostrom@uw.edu">abostrom@uw.edu</a>.

THANKS. Many thanks to the members of the Annual Meeting Program Committee who have generously agreed to serve the Society in this capacity: President-elect Ann Bostrom (chair), Stephen Beaulieu, Richard Belzer, David Berube, Amanda Boyd, Gail Charnley, Alison Cullen, J. Michael Davis, Kurt A. Frantzen, Anthony Fristachi, Tee Guidotti, Lynn Haber, Sandra Hoffmann, Amber Jessup, Jeffrey Keisler, Stanley H. Levinson, Jeff Lewis, Steven Lewis, Margaret MacDonell, Bob O'Connor, Bob Ross, and Joost Santos.

See you in Charleston!

Meeting information and online forms—www.sra.org/events 2011 meeting.php



### News and Announcements

### World Congress 2012 18-20 July 2012 Sydney, Australia

Save the dates!

The Society for Risk Analysis (SRA) invites you to join us for the World Congress on Risk 2012: Risk and Development in a Changing World, Wednesday, 18 July, to Friday, 20 July 2012, at the Sydney Convention and Exhibition Centre, Australia.

Co-chairs for World Congress 2012 are Professor Alison Cullen (University of Washington), Dr. Daniela Leonte (National Industrial Chemicals Notification and Assessment Scheme, Australian Government Department of Health and Aging), and Professor Jonathan Wiener (Duke University).

Contact the SRA Secretariat to join the organizing effort: <a href="mailto:ddrupa@burkinc.com">ddrupa@burkinc.com</a>.

Further details will be available soon at www.sra.org/worldcongress2012.

### Call for Nominations for 2011-2012 SRA Officers

The Nominating Committee invites nominations for the following officer and Council positions in the Society's fall elections for 2011-2012:

> President-elect Secretary Treasurer-elect Three Councilors

The terms of office and duties for each position, and the role of the Nominating Committee, are set forth in the SRA Bylaws (<a href="www.sra.org/about\_bylaws.php">www.sra.org/about\_bylaws.php</a>). Active members of SRA may submit in writing to the Nominating Committee the name and proposed office for any qualified nominee. Please submit nominations by 1 May 2011 (preferably by email) to Nominating Committee Chair Alison Cullen, email: <a href="mailto:alison@uw.edu">alison@uw.edu</a>, AND to David Drupa, email: <a href="mailto:ddrupa@burkinc.com">ddrupa@burkinc.com</a>, phone: 703-790-1745.

Additionally, as provided in the Bylaws, any active member may submit a petition to list a candidate on the next annual ballot for one of the open positions. Such petitions must include the signatures of at least five percent of the current SRA membership (i.e., at least 90 signatures of other active members), and the completed petition must be received by the Council by 15 May 2011, in time for its June midyear Council meeting, for the candidate to be listed on the ballot.

### Pantheon of Risk Analysis



Photo by John Collings

The Pantheon of Risk Analysis, launched in 2008, honors deceased giants in the field on whose shoulders we now stand and showcases how high-quality risk analysis can advance knowledge and the public good.

Any Society for Risk Analysis (SRA) member may nominate a candidate to the past president; the SRA Council selects the inductees.

In 2008, the SRA inducted 35 initial honorees into the Pantheon of Risk Analysis. In 2010, the SRA added three new inductees nominated by SRA members: William Haddon, David Blackwell, and Maurice Allais.

The full list is on the SRA website, at <a href="www.sra.org/about\_pantheon.php">www.sra.org/about\_pantheon.php</a>, with links to the relevant Wikipedia page on each honoree.

New nominees are welcome. To nominate other legends in the field, please contact Past President Rick Reiss (<a href="mailto:rreiss@exponent.com">rreiss@exponent.com</a>).

#### **CALL FOR NOMINATIONS**

*Risk Analysis, An International Journal* is seeking two editor positions:

- 1. Associate Editor for Risk Perception & Communication
- 2. Book Review Editor

The Publication Committee of the Society for Risk Analysis (SRA) seeks nominations for the positions of Associate Area Editor for Risk Perception & Communications and for a newly created Book Review Editor. Each position is a three-year appointment.

### 1. Associate Editor for Risk Perception & Communication

This position responds to the critical role of risk perception & communications in our field.

The Associate Area Editor works with Area Editor for Risk Perception & Communication Michael Siegrist, Editor in Chief Michael Greenberg, and Managing Editor Karen Lowrie to oversee the peer-review process for submitted manuscripts in this discipline area and to make recommendations about the suitability of submitted manuscripts for publication in the Journal. As a scholar in the field, the Associate Area Editor is expected to work in concert with Michael Siegrist and Michael Greenberg to invite submissions and to ensure that the Journal is publishing on the most prominent topics in the field. Applicants for the Associate Area Editor position should demonstrate a strong track record of publications on health and environmental risk-related risk perception & communications topics and familiarity with the associated areas of public policy. The committee welcomes applicants from a broad range of disciplines, including but not limited to anthropology, communication, geography, law, management, psychology, public policy, and sociology. The Associate Area Editor will be responsible for managing the peer-review process for a subset of the risk communication and perception manuscripts submitted to *Risk Analysis*.

Compensation is \$4,000/year.

#### 2. Book Review Editor

This position recognizes the need to provide high-quality and timely reviews of the numerous risk analysis-related books published every year.

This new position will be responsible for the inclusion of one to two book reviews in every monthly issue of *Risk Analysis*. The book review editor will scan for new risk-related books published, obtain review copies, maintain an updated inventory of available books by coordinating with the SRA webmaster, identify and contact potential reviewers, track their progress, respond to unsolicited reviews, and work with Editor in Chief Michael Greenberg and Managing Editor Karen Lowrie to get the reviews published. Applicants for this position should submit their ideas for standardizing and managing the book-review process and for ensuring high-quality and timely reviews.

Compensation is \$3,000/year.

Nominations for both of these positions should include a brief statement of the nominee's qualifications, relevant experience, plans for the journal, and a CV. In addition, both editors will be required to attend in person an annual editorial staff meeting that occurs during the SRA annual meeting, at which time the editorial staff discuss the agenda for the coming year and meet with members of the Editorial Board. Please submit nominations by **30 April 2011** and include a clear commitment to attend the annual editorial staff meeting by email to Editor in Chief Michael Greenberg (<a href="mailto:mrg@rci.rutgers.edu">mrg@rci.rutgers.edu</a>), Managing Editor Karen Lowrie (<a href="mailto:klowrie@rutgers.edu">klowrie@rutgers.edu</a>), and Publications Committee Chair Rick Reiss (<a href="mailto:reiss@exponent.com">reiss@exponent.com</a>). The search committee began reviewing applications and nominations on 1 March 2011 and will continue the search until the positions are filled.

# Call for Papers: Bridging Financial and Non-Financial Risk Analysis Risk Analysis: An International Journal

Risk Analysis: An International Journal seeks papers for a special issue on "Bridging Financial and Non-Financial Risk Analysis" (Guest Editor Arcady Novosyolov and Area Editor Tony Cox). This special issue will focus on advances in financial risk analysis that can also be applied to non-financial risks, and vice versa. The issue is expected to appear in 2012. See www.sra.org/journal for author submission instructions.

### The following types of papers will be considered for publication:

- Perspectives (2,000-4,000 words), including tutorials or papers that synthesize recent developments and apply them to risk assessment, perception, assessment, communication, and/or management, especially of health, safety, and environmental risks.
- Original research (about 7,000 words).

### **Important Dates**

31 May 2011: papers submitted 30 September 2011 (approx.): referees' initial decision announcement 31 December 2011: final papers due

### The proposed topics for submitted papers include, but are not limited, to:

- Quantitative and axiomatic definitions and measures of risk: How should "risk" be defined and measured for non-financial attributes (such as lives or life-years in heterogeneous populations), psychological outcomes (anxiety, disappointment, regret), and complex, multiattribute outcomes (national security, economic and social stability, way of life)?
- Coherent risk measures in static and dynamic environments; their generalizations and applications beyond financial risk analysis: Are the requirements for coherence normatively compelling for non-financial risk? How can frequency-severity definitions of risk be reconciled with conditional value-at-risk and other coherent risk measures?
- Extensions and generalizations of expected utility theory for unknown or ambiguous probabilities.
- Insights from behavioral economics and neuroeconomics of decisions under risk.
- Assigning blame and importance: Methods and measures for attributing risks to specific causes: Can epidemiological methods improve/be improved by financial methods for attributing risks to specific events or decisions?
- Decision optimization techniques for risky systems (e.g., advances in robust optimization, online algorithms, zero-regret algorithms).
- Evolutionary and learning theories for adapting to unknown and changing risks.
- Black swan risks and limits of predictability.
- Portfolio optimization, optimal resource allocation, and investment in uncertain projects.
- Qualitative and quantitative characterization and comparison of risk attitudes: When should all decision makers agree that one prospect is "riskier than" another, independent of personal risk attitudes? When is one individual or society objectively more risk-averse than another, and what does this imply for individual and societal risk management of health, safety, and environmental hazards with uncertain and delayed consequences?
- Methods for managing specific risks: market, credit, operational, investment, R&D, etc.
- Computational and Monte Carlo methods for solving risk-management problems.
- Joint distributions and heavy tails, dependence and copula functions.
- Choice of discount rates, individual and societal hyperbolic discounting, and evaluation of long-delayed and uncertain consequences.

*Risk Analysis: An International Journal* http://www.wiley.com/bw/journal.asp?ref=0272-4332



### *Risk Analysis* Journal

Karen Lowrie, Managing Editor

It is an exciting year for Risk Analysis. We will be hiring a new associate editor in the area of risk communication and perception and also a book review editor for the first time ever (see position announcements on page 10 in this newsletter). We also look forward to your nominations for the 10 greatest accomplishments in risk analysis over the past 30 years, and to spotlighting this list in articles that will appear later this year and into 2012. We are on pace to

receive over 500 paper submissions again this year and, as always, we are indebted to our area editors and hundreds of reviewers for allowing us to process this volume of papers.

Coming up this spring, readers can expect to see a special series of articles focusing on new ideas for risk regulation with articles that discuss the role of economic analysis, risk management, and equity concerns in regulating risks. We hope you enjoy this series as well as others planned for later this year.

### **Top 10 List Nominations Wanted**

Risk Analysis, An International Journal, would like SRA members to identify the 10 most important accomplishments in risk analysis and then write about each in the journal. We are asking you to nominate one or more key accomplishments in risk analysis theory, methods, and applications from 1980 to the present. Please state the contribution and the significance and provide several key references. Each nomination should be one or two pages.

Please send your nominations by **1 June 2011** to Michael Greenberg (<a href="mailto:mrg@rutgers.edu">mrg@rutgers.edu</a>) and Karen Lowrie (<a href="mailto:klowrie@rutgers.edu">klowrie@rutgers.edu</a>). Once we have received your nominations, a committee of Chuck Haas, Tony Cox, Rick Reiss, Karen Lowrie, and Michael Greenberg will review the nominations and make the selections. We may get back to you with questions. The ultimate products will be an editorial that summarizes the 10 and then individual editorials or perspectives about each. This will be a fun exercise for all of us.



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### Regional Organizations

## SRA-Egypt http://egyptsra.org

Shady Noureldin, President

After the success of the Egyptian revolution on 25 January 2011, Egyptians are looking forward to a youthful and stronger country. The hopes of the youth are not restricted to getting jobs and breaking the cycle of poverty, but looking forward to a new face that enshrines the principle of transparency and curtails corruption. In order to



achieve these goals, different axes embody the vision of reforming Egypt, namely, the rule of law, financial institutions, investments, review of the national budget allocated resources, and investing in civil society organizations.

Being members of the civil society, SRA-Egypt members are currently studying possible positive steps towards the Egyptians' society build-up. SRA-Egypt members are currently discussing two main issues, education and health:

- Education: currently, there are numerous educationreforming demands. It is proposed to work on two parallel axes:
  - Ministry of Higher Education. It is proposed to add risk analysis courses for undergraduates and emphasis on the importance of this science.
  - Civil Society. Training courses are proposed to be conducted via societies that focus on the educationreforming programs.

This mechanism is expected to contribute to the country's social, health, and environmental benefits. Esteemed SRA members from different regions (Egypt and Australia) proposed initiatives after reading SRA-Egypt's 1Q2011 newsletter and actively interacted with the article titled "Lotus Revolution" (<a href="https://docs.google.com/viewer?a=v&pid=explorer&chrome=true&srcid=0B3dtafA8">https://docs.google.com/viewer?a=v&pid=explorer&chrome=true&srcid=0B3dtafA8</a> CXB6ZTlkNzY4MGMtMWEwYi00YWZjLTg0Zm UtNzY2NGUyOTY0Nzlh&hl=en).

Daniela Leonte, Regions Committee co-chair, generously offered, without expecting any benefit, classes that could be held through the Internet and interactive courses that can be set up and offered remotely via the Internet. We are currently sharing ideas about setting up short courses, or even an entire training program.

• **Health:** Health risk analysts are called to analyze the reasons for excessive childhood cancer and force an initiative for eliminating causes and not just be content

with having medication means available. Two main axes are proposed for this task:

- Postgraduate Research Studies—encouraging postgraduate students, at the faculties of medicine and other related institutes, to further study the childhood cancer causes and by recommending solutions for eliminating the roots of these causes.
- Anti-Childhood Cancer Campaigns—raising people's awareness of the general causes and symptoms of the illness. This awareness can be conducted through different media in close coordination with the Egyptian Ministry of Health and the Egyptian Children's Cancer Hospital.

I would like to take this opportunity to thank Daniela Leonte, SRA Regions Committee co-chair, and SRA-Egypt members Ibrahim Eshra, Feiby Nassan, Amina Farag, Marwa Enaba, and Amany Saad for adopting the aforementioned initiatives development.

# SRA-Europe www.sraeurope.org

Julie Barnett, on behalf of the SRA-E Executive Committee

Planning for the 20<sup>th</sup> SRA-Europe (SRA-E) conference, to be held in Stuttgart 6-8 June 2011, is now well advanced. There will be over 175 papers given over the course of the conference. We are pleased to be welcoming a prestigious lineup of keynote speakers to the SRA-E conference, which is being held alongside the iNTeg-Risk conference. Confirmed speakers so far include Dr. Ellen Peters, a psychologist with a special interest and expertise in the role that affective, intuitive, and deliberative processes play in decision making, Dr. Pierre-Alain Schieb, director of Future Programmes at the Organisation for Economic Co-operation and Development, Dr. Reto Schneider, head of Emerging Risk Management at Swiss Re, Dr. Terje Aven, professor of risk analysis and risk management at the University of Stavanger, Norway, and Dr. Charles Vlek, professor emeritus of environmental psychology and decision research at the University of Groningen, the Netherlands.

The general theme of the conference—"Multi-Risk Analysis in a Global World"—has elicited eight symposia and roundtable discussions. Of specific interest are the symposia on Na-Tech risk management, communication of food risks, and the controversy around mobile phones. We also have symposia on governance and risk regulation, global governance of climate change, and risk regulation under REACH.

We are also looking forward to the social activities that are part of the conference. At the conference dinner, we will join with the delegates to the iNTeg-Risk conference, which is running in parallel, in the famous Haus der Wirtschaft in Stuttgart.

We hope you can join us! Registration is now open at <a href="http://www.sraeurope.org">http://www.sraeurope.org</a>.

#### **SRA-China**

Chongfu Huang, President

### Journal of Risk Analysis and Crisis Response

The world faces more insecurities and challenges than ever. More uncertainties and more catastrophes the world has confronted are redefining the way countries approach disaster and crises management. The times call for more efforts to understand risks and avert crises. Particularly, the cultural fusion of the West and the East is most likely to help humanity to be free in the risk society.

The international *Journal of Risk Analysis and Crisis Response (JRACR)* will publish high-quality papers in risk analysis and crisis response beginning this summer. The publication, which is now accepting manuscripts, will facilitate the promotion and rapid development of risk analysis theory and application in the world, thus reducing natural and man-made disasters and avoiding major economic and social crises. The published papers will provide the necessary risk analysis theory and response techniques for the healthy development of society and economy.

JRACR, an official publication of the Society for Risk Analysis-China (SRA-China) that is produced by Atlantis Press, Paris, France, will publish both English and Chinese papers. Professor Chongfu Huang, president of SRA-China, will serve as JRACR editor in chief. Each year one volume will be published, consisting of four issues. The first issue (Volume 1, No. 1) is planned to be published in July 2011.

For more information and to submit papers go to <a href="http://www.atlantis-press.com/publications/jracr">http://www.atlantis-press.com/publications/jracr</a>. Scientific papers relevant to the following topics will be published with top priority:

- 1. Theory and Method on Risk Analysis
- 2. Theory and Method on Crisis Response
- 3. Risk Analysis and Crisis Response of Natural Disaster
- 4. Risk Analysis and Crisis Response of Accident Calamity
- 5. Risk Analysis and Crisis Response of Public Health
- 6. Risk Analysis and Crisis Response of Social Security
- 7. Risk Analysis and Risk Management in Financial Industry
- 8. Risk Analysis and Risk Management in Insurance Industry
- 9. Applications of Information Technology in Risk Analysis and Crisis Response
- 10. Risk Analysis of Economic Structural Imbalance and Asset Bubble
- 11. Emerging Risk Related to New Technologies
- 12. Emerging Risks Related to Global Climate Change

# National Capital Area www.sra.org/ncac

Sally Kane, President

The National Capital Area Regional Organization is actively planning activities for the next 18 months; the activities will promote educational outreach, examination of public policy issues, and further development of methods and techniques. We are collecting ideas and would like to hear from you.

If you are interested in participating in our planning process and/or have ideas to share, please contact us: ncac@sra.org.

Check our website for announcements of future programs. A session is being organized for the early spring on nuclear energy production—risks and disasters.

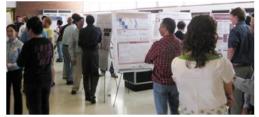
# Research Triangle www.rtc-sra.org

Douglas Johns, Chair

The Research Triangle Regional Organization cosponsored a symposium on nanotechnology organized by the North Carolina Chapter of the Society of Women Environmental Professionals and the Duke Chapter of Sigma Xi on 1 March 2011. Five local experts in various areas of nanotechnology presented research findings and participated in a panel discussion.

We also recently co-sponsored an environmental engineering student symposium organized by the Department

of Civil, Construction, and Environmental Engineering at North Carolina State University (18 March



2011). Several board members of our regional organization attended and served as student poster judges.

# Saint-Lawrence, SETAC www.chapitre-saint-laurent.qc.ca

Gaëlle Triffault-Bouchet, President

The 15<sup>th</sup> workshop of the Saint-Lawrence Regional Organization will be held in Montreal (Québec, Canada) at the Gourverneur Dupuis Hotel, 26-27 May 2011. The theme of the workshop—"A Sustainable Development of the Saint-Lawrence Aquatic Ecosystem: A Utopia?"—reflects our interest in the cradle of Quebec society and the historic gateway to North America, making for centuries many services that contribute to the development and well-being of the population!

The scientific program is available on our website: <a href="http://www.chapitre-saint-laurent.qc.ca">http://www.chapitre-saint-laurent.qc.ca</a>.



### Specialty Groups

## Dose Response Specialty Group www.sra.org/drsg

Lynne Haber, Chair

The Dose Response Specialty Group (DRSG) will continue its tradition of teleconference seminars, but will be providing a common theme for the seminars in 2011: "Tox21/NexGen: Dose-Response and In vitro to In vivo Extrapolation." The lead-off presentation was made by Weihsueh Chiu, who discussed "NexGen Risk Assessments: Challenges and Opportunities for Dose-Response Assessment" on 12 April 2011. Other presentations in the series will be announced when details are finalized. The series will culminate in a symposium at the annual meeting where leading scientists will comment on what they heard and discussed in the tele-seminars. Monthly teleconference meetings are announced via YahooGroups.com. To join, go to <a href="https://groups.yahoo.com/group/DRSG">http://groups.yahoo.com/group/DRSG</a>.

It's time to start thinking about ideas for symposia and workshops for the 2011 Society for Risk Analysis (SRA) Annual Meeting. For DRSG endorsement, submit your ideas and an abstract to George Woodall (Woodall@epa.gov); your submittal will be discussed at the next (April or May) teleconference after it is received. Please also spread the word about the DRSG student award, which comes with a \$500 honorarium, annual meeting registration waiver, a plaque, and, most importantly, recognition by your colleagues. See <a href="http://www.sra.org/drsg/docs/DRSG\_Student\_Award\_2011.pdf">http://www.sra.org/drsg/docs/DRSG\_Student\_Award\_2011.pdf</a> for more details.

### Economics and Benefits Analysis Specialty Group www.sra.org/ebasg

Amber Jessup, Chair

The Economics and Benefits Analysis Specialty Group (EBASG) continues to work on several activities suggested during our December meeting, including options for developing a workshop on the use of meta-analysis, expert elicitation, and systematic reviews for integrating the results from different studies. We welcome ideas and advice on other options for seminars and workshops that could be held over the summer or in conjunction with the 2011 Society for Risk Analysis (SRA) Annual Meeting. We plan to survey our members soon to identify the topics of greatest interest. We also encourage you to start thinking about presentations and symposia for the 2011 SRA Annual Meeting.

Please feel free to contact any of the EBASG officers—Amber Jessup (chair), Aylin Sertkaya (vice-chair), Lisa Robinson (immediate past-chair), or Elisabeth Gilmore (secretary/treasurer) with your suggestions or concerns. We look forward to hearing from you!

### **Decision Analysis and Risk Specialty Group**

Jeff Keisler, President; Chris Karvetski, Secretary; Jim Lambert, President-elect; Matthew Bates, Secretary-elect

The Decision Analysis and Risk Specialty Group (DARSG) invites proposals for oral presentations, posters, poster platform sessions, and symposia for the Society's annual meeting to be held 4-7 December in Charleston, South Carolina. Submissions of extended abstracts for the DARSG student merit award and student travel awards are particularly welcome.

The coming May 2011 deadlines for all variety of proposals for activities at the annual meeting are described on page 8 in this newsletter.

There is high interest for continuing education workshops addressing decision analysis and risk both at the annual meeting and throughout the year. Proposals for organizing DARSG-related continuing education events either for profit or not for profit can be submitted at the Society for Risk Analysis (SRA) website. Non-SRA events of interest to DARSG members can be nominated for SRA cosponsorship and promotion at the SRA website.

Please consider how DARSG will contribute to the next World Congress on Risk, to be held 18-20 July 2012 in Sydney, Australia.

DARSG continues investigating how to create an interactive forum for our members and exploring partnerships with other of the SRA specialty groups on special topics to be announced.

We look forward to hearing from DARSG members about your interests and talents for the Society.

### Risk Policy and Law Specialty Group

Tee Guidotti, Chair

The Risk Policy and Law Specialty Group (RPLSG) executive is proposing to make several major changes in governance. A new set of bylaws will be presented at the annual meeting in December, adapted from the Economic Benefits and Analysis Specialty Group (EBASG) (which we thank for its cooperation). The executive would be expanded to include two non-officer board positions. There has been a lively discussion about whether to elect officers at the annual meeting or online (as does EBASG). The plan now is to continue elections at the annual meeting, on the assumption that the most heavily engaged and committed members are usually in attendance at the annual meeting, where they are also exposed to the issues and trends in risk science that are shaping the Society for Risk Analysis.

The RPLSG is inviting its membership to participate in a syllabus exchange. The plan is to post syllabi from risk policy/law classes on the RPLSG website so that members

can benchmark their own work, take inspiration for improvement, or use them as models for classes. The effort will be coordinated by Jennifer Kuzma, who is currently vice-chair of the RPLSG and will stand for election to chair at the annual meeting.

Our secretary-treasurer, Sarah Ryker, is coordinating an outreach to members by email. We will be querying members on additional programming ideas, such as webinars and conferences.

In our last report, we observed that the application of risk science to law is still relatively undeveloped and represents an area where the RPLSG may be able to make a unique contribution if we can bridge the professional communities. The legal system is the ultimate venue where such norms are worked out. The law is the final arbiter and its decisions can be enforced. Tort liability also serves a social function in managing risk. Through anticipation and fear of an adverse judgment, it deters the actor from actions that are likely to infringe on the rights or interests of others. It does so without being an absolute impediment, so that some "gray areas" may be explored and risks can be taken within a narrow range. Compared to criminal law and to government regulation, neither of which are very adaptable or flexible, tort liability emerges as the most flexible and potentially the most effective form of dispute resolution in law that our society has to offer. The problem with the social role of tort liability is that the costs for providing this social function for all are borne by the litigants individually. Thus litigants contribute to a social resolution of these problems in the process of resolving their own case and bear both the cost for this socially useful function and, in some cases, the risk of catastrophic judgments. The cost of this system is essentially underwritten by losers in these actions and, if the losers are commercial enterprises and government agencies, by the public in the form of higher prices or taxes. So, can we make a program agenda out of all this?

### **Emerging Nanoscale Materials Specialty Group**

J. Michael Davis, Chair

The Emerging Nanoscale Materials Specialty Group (ENMSG) is developing a strategic plan to serve as a "blueprint" to help guide the specialty group's activities over the next three to five years in support of the risk analysis of emerging nanoscale materials. A draft of the document is currently being circulated to the ENMSG members for review and comment. Three major areas of focus are identified in the draft plan, consistent with the stated purpose of the ENMSG in its bylaws and with past activities: (1) advancement of risk analysis science and policy, (2) information exchange, and (3) education. To support its objectives, the plan identifies several areas of activity, including organizing and sponsoring workshops, sym-

posia, and other meetings, both in conjunction with the Society for Risk Analysis (SRA) annual meeting and at other times and locations. The plan also proposes key target audiences and collaborators for such activities, including other SRA specialty groups/regional organizations (e.g., the Decision Analysis and Risk Specialty Group and the Risk Policy and Law Specialty Group and the National Capital Area Regional Organization), students, policy makers, and corporate, non-profit, and other organizations. ENMSG members are asked to provide comments by 30 April.

### **Risk and Development Specialty Group**

Alison Cullen, Co-chair

The Society for Risk Analysis (SRA) Council voted to approve a new specialty group at the December 2010 meeting—the Risk and Development Specialty Group (RDSG). At the 2008 and 2009 SRA Annual Meetings, small grassroots efforts first led by Garrick Louis and then by Alison Cullen evolved into open meetings of interested individuals who ultimately petitioned for the new group. With the following proposal signed by over 20 SRA members, and a vote of the Council, the new specialty group launched at the end of 2010.

We, the undersigned, petition the Council of the Society for Risk Analysis (SRA) to create a new Specialty Group on "Risk and Development." The eleven existing Specialty Groups cut across many technical risk issues, but do not collect and focus attention on such crucial topics as risk and sustainable development, the risks associated with poverty, the risks of economic growth, risk and distributional equity, risk and international development assistance, and at-risk youth and community development. These topics can engage risk analysts with expertise in health, environment, economics, engineering, decision making, communication, and law and policy, among other disciplines. Major debates, and major funding sources, aimed at scales from the global to the local, are keenly interested in issues of risk and development. SRA needs a focal point to address these issues and attract these funders. The need for such a Specialty Group is underscored by the increased emphasis on these topics at recent SRA annual meetings, the planning for our 2012 World Congress on Risk, and continuing targeted efforts by SRA to grow and serve communities at risk all over the globe.

Please welcome the Risk and Development Specialty Group and send your relevant annual meeting presentation and symposium proposals marked for consideration by the RDSG. We look forward to contributing to both future annual meetings and the upcoming World Congress on Risk 2012. Co-chairs are Garrick Louis and Alison Cullen.

# Exposure Assessment Specialty Group www.sra.org/easg

Tony Fristachi, Chair

The Exposure Assessment Specialty Group (EASG) is comprised of Society for Risk Analysis (SRA) members who are interested in the role of exposure assessment in risk analysis.

Open to all members, the EASG promotes and fosters communication and sharing of independent and collaborative research in all facets of exposure science to advance the state of the art and serves as a resource to the Society in matters concerning the role of exposure in risk analysis. The EASG charter responsibilities include reviewing abstracts for sessions, symposia, posters, and

workshops for SRA annual meetings and soliciting, arranging, and coordinating workshops at the annual meeting and elsewhere.

At the 2010 SRA Annual Meeting, EASG presented its student award to Nicole Hagan, a graduate student at the University of North Carolina at Chapel Hill, for her presentation "Legacies of Mercury Production and Use in the Andes: The cases of Huancavelica and Potosi" and to Tao Hong, a doctoral candidate at Drexel University, for his presentation "A Bayesian Monte Carlo Approach to Model Calibration for Weaponized B. anthracis Fate and Transport."

We have a teleconference on the second Wednesday of each month at noon Eastern time. Our 11 May teleseminar topic will be "Prioritizing Chemical Mixtures in Water from Public-Supply Wells in the U.S.," given by Patty Toccalino, PhD.

Further information regarding EASG can be found on our website: <a href="http://www.sra.org/easg/">http://www.sra.org/easg/</a>.



### What Do We Do?

### — a quarterly look at the incredibly diverse field of risk analysis —

### What is your job title?

I am a reader in healthcare research in the Department of Information Systems and Computing at Brunel University. A lot of my time at the moment is allocated to the Multidisciplinary Assessment of Technology Centre for Healthcare (MATCH, www.match.ac.uk).

Having previously been engaged in research projects where my main interest was around risk perception and risk com-

munication, this recent work touches on other aspects of risk, concerned as it is with the domain of medical devices and with helping industry to minimize risk by making good decisions early in product development and improving processes for adoption of innovations.

#### How is risk research a part of your job?

One way or another, much of the work I do is related to risk. I am a social scientist and in addition to the MATCH project mentioned above I am pleased to be part of the FoodRisC consortium (<a href="http://www.foodrisc.org/">http://www.foodrisc.org/</a>), which is exploring the networks and information sources contribut-

### Julie Barnett



ing to food risk and benefit communication across Europe.

The ultimate aim of the project is to develop a toolkit for policy makers, food authorities, and other stakeholders who will facilitate effective and coherent communication about food.

A different area I have recently been involved in, but keeping visible the common thread of risk, is a large United Kingdom project that explored challenges around assessing and communicating animal disease

risks: this used Lyme disease as its exemplar (<a href="http://www.forestresearch.gov.uk/fr/INFD-77CEKT">http://www.forestresearch.gov.uk/fr/INFD-77CEKT</a>).

### How did you decide to pursue this career?

I was a late starter in academia and to the field of risk. I did a master's in applied psychology in 1993-1994 at the University of Surrey, United Kingdom, and it was there that I did a course on risk and decision making that really grabbed my attention and interest.

That initial interest has grown and deepened each year since. I have always been interested in research and have been very

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lucky to have been able to keep doing that since I got my PhD in 1998—I think of it as the perfect job!

### What got you to where you are in the field of risk analysis today?

Well as I am sure most people would say, it is always interesting to work with good people and that has certainly been my experience. I have been very fortunate that my path has crossed many of the major players in the U.K. risk community—as well as farther afield—and in some cases I have had the pleasure of working alongside them. Apart from that, progress is dependent on hard work—the old story of 99 percent perspiration and 1 percent inspiration.

### What is the most interesting/exciting part of your job?

That is difficult—I find most aspects of my job interesting! Most of the projects that I have been involved with in the last 10 years have involved interdisciplinarity—not always easy but very often interesting and exciting.

As I have suggested above, working with colleagues to develop innovative questions and means to finding solutions is hugely stimulating.

# What would you recommend to those entering the field of risk interested in a job like yours?

I think it is really important to keep up with developments in the field—through the risk journals, books, reports, conferences—and of course learning from colleagues both relating to risk and in adjacent fields. Staying abreast of current policy issues and trends too is really important.

## How has membership/involvement in the Society for Risk Analysis (SRA) helped you in your work?

In lots of ways! For example having access to the journal, *Risk Analysis*—and through SRA-Europe to the *Journal of Risk Research*—has helped me align myself to many of the main debates in the field.

Attending the SRA-Europe conferences is also really important. I have been to the SRA conference in the United States a couple of times too and at both of these conferences it is great to find that there are papers of interest running right across the programme.

Most importantly though, it has been a privilege to be part of the SRA-Europe Executive Committee for the last few years. The committee has an important role in planning the annual SRA-Europe meeting and we are pleased to have teams identified to work with to organize the meeting for the next two years, following our meeting in Stuttgart this year.

Our website is regularly updated and increasingly is a source of information about the activities of the risk community across Europe.

We are always keen to hear from people who would like to get involved in serving SRA-Europe in this way—so if you are interested do get in touch.

### What Do You Do?

Are you a member of the Society for Risk Analysis who would like to be featured in the "What Do We Do?" column of the RISK newsletter? Send a photo (casual or formal, your choice) and the answers to the above questions to Mary Walchuk, RISK newsletter editor (editormw@hickorytech.net). I will be choosing one submission for each issue of the newsletter.

### **Member News**

If you have written a book, received a job promotion or award, or participated in an event that you would like other Society for Risk Analysis members to know about, send a paragraph or two (150-200 words) and a photo to Mary Walchuk, RISK newsletter editor, at <a href="mailto:editormw@hickorytech.net">editormw@hickorytech.net</a>.



### Member News

#### **Daniela Leonte**



Daniela Leonte has recently joined the National Industrial Chemicals Notification and Assessment Scheme (NICNAS) as principal scientist.

NICNAS is the Australian government regulator of industrial chemicals (www.nicnas.gov.au). Daniela will have responsibilities across a number of pro-

grams, including providing high-level support to the team of scientists assessing the potential of new chemicals imported or manufactured in Australia to pose risks to public health and/or occupational health and safety. She will have close communication lines with scientists in NICNAS's partnering agencies: the Australian Pesticides & Veterinary Medicines Authority, Therapeutic Goods Administration, and Food Standards Australia New Zealand and will participate in the activities of different international forums to which NICNAS subscribes.

### Terje Aven



Professor Terje Aven has recently published *Quantitative Risk Assessment:* The Scientific Platform, which builds a framework for analyzing and discussing the quality of the risk assessments using the scientific requirements of reliability and validity. The reliability requirement

is concerned with the consistency of the "measuring instrument" (analysts, experts, methods, procedures), whereas validity is concerned with the assessment's success at "measuring" what one set out to "measure." The quality of a risk assessment relates to the scientific building blocks of the assessment, but also to the role of the assessment in the decision-making process.

The book is general and relevant for all types of applications, but safety engineering has the main focus. It is available from Cambridge University Press.

For further information, see <a href="http://www.cambridge.org/no/knowledge/isbn/item5960732/?site\_locale=no\_NO">http://www.cambridge.org/no/knowledge/isbn/item5960732/?site\_locale=no\_NO</a>.

#### **Ortwin Renn and Terje Aven**

Professors Ortwin Renn and Terje Aven have recently published *Risk Management and Governance: Concepts, Guidelines and Applications*.

No single discipline can grasp the full meaning of risk. Investigating risk requires a multidisciplinary approach. Renn and Aven, coming from two very different disciplinary traditions, meet this challenge by building bridges among the engineering, the statistical, and the social science perspectives.

The book provides a comprehensive, accessible, and concise guide to risk assessment, management, and governance. It includes formal approaches to risk analysis without assuming a high level of mathematical proficiency, but it also offers reflection and deliberation about the sociopolitical context in which risk issues are embedded.

A basic pillar for the book is the risk governance framework proposed by the International Risk Governance Council. This framework offers a comprehensive means of integrating risk identification, assessment, management, and communication. Renn and Aven develop and explain new insights and add substance to the various elements of the framework. The theoretical analysis is illustrated by several examples from different areas of applications.

The book is available from Springer. For further information, see <a href="http://www.springer.com/economics/r+%26+d/book/978-3-642-13925-3">http://www.springer.com/economics/r+%26+d/book/978-3-642-13925-3</a>.

### Joseph Arvai and Elizabeth Wilson

Joseph Arvai and Elizabeth Wilson have been selected as 2011 Leopold Leadership Fellows.

Arvai is the Svare Chair in Applied Decision Research at Haskayne School of Business and Institute for Sustainable Energy, Environment, and Economy, University of Calgary. His research includes decision science and risk management across social, environmental, and economic contexts.

Wilson is an associate professor at the Humphrey Institute of Public Affairs, University of Minnesota. Her research includes technology and sociopolitical factors shaping low-carbon energy deployment.

The Leopold Leadership Program, located at the Woods Institute for the Environment at Stanford University, was founded in 1998 to fill a critical gap in environmental decision making: getting the best scientific knowledge into the hands of government, nonprofit, and business leaders to further the development of sustainable policies and practices.

Arvai and Wilson are among the 20 mid-career academic environmental scientists named as fellows this year. The group was selected through a highly competitive process on the basis of their exceptional scientific qualifications, demonstrated leadership ability, and strong interest in communicating science beyond traditional academic audiences. The fellows will take part in intensive leadership and communications training designed to hone their skills in delivering scientific information to decision makers, the media, and the public. They also become part of a network of past fellows and program advisors who are leaders in conducting scientific outreach beyond traditional academic and scientific circles.

More information about the program is available at <a href="http://leopoldleadership.stanford.edu">http://leopoldleadership.stanford.edu</a>.



RISK *newsletter* is published by the Society for Risk Analysis

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Deadline for RISK newsletter Submissions Send information for the Third Quarter 2011 SRA RISK newsletter, which will be on the SRA website mid-July, to Mary Walchuk, RISK newsletter Editor (115 Westwood Dr., Mankato, MN 56001; phone: 507-625-6142; email: editormw@hickorytech.net) no later than 27 June 2011.

# Future Society for Risk Analysis Annual Meetings

4-7 December 2011—Charleston,
South Carolina
9-12 December 2012—San Francisco,
California
8-11 December 2013—Baltimore,
Maryland

The Society for Risk Analysis (SRA) is an interdisciplinary professional society devoted to risk assessment, risk management, and risk communication.

SRA was founded in 1981 by a group of individuals representing many different disciplines who recognized the need for an interdisciplinary society, with international scope, to address emerging issues in risk analysis, management, and policy. Through its meetings and publications, it fosters a dialogue on health, ecological, and engineering risks and natural hazards and their socioeconomic dimensions. SRA is committed to research and education in risk-related fields and to the recruitment of students into those fields. It is governed by bylaws and is directed by a 15-member elected Council.

The Society has helped develop the field of risk analysis and has improved its credibility and viability as well.

Members of SRA include professionals from a wide range of institutions, including federal, state, and local governments, small and large industries, private and public academic institutions, not-for-profit organizations, law firms, and consulting groups. Those professionals include statisticians, engineers, safety officers, policy analysts, economists, lawyers, environmental and occupational health scientists, natural and physical scientists, environmental scientists, public administrators, and social, behavioral, and decision scientists.

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