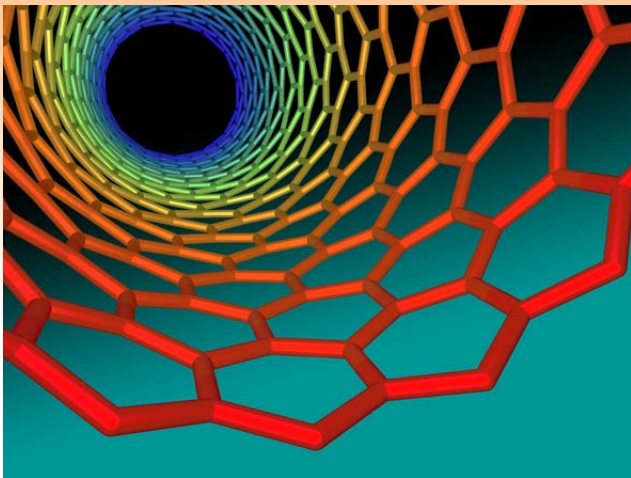




The Nano Landscape in the World of Risk

Jo Anne Shatkin



Computer-rendered view inside a carbon nanotube

Photo courtesy of Geoff Hutchison, flickr.com

If I were to survey the membership of the Society for Risk Analysis (SRA) to measure, in our collective expert opinion, which sources of hazards pose the greatest risks to global health, occupational safety, and environmental impacts, it is difficult to envision the risks posed by the use of engineered nanomaterials topping the list, when compared with broad impacts of infectious diseases, resource scarcity, climate change, or conflicts. Yet, the pace of development and breadth of potential applications keep this emerging class of materials in the forefront of numerous international research and governance organizations. This brief overview highlights a few recent developments of note.

In 2010 SRA published a series of papers assessing the state of the science, key uncertainties, and research needs for assessing the risks of emerging nanoscale materials (ENM) and nanotechnologies (*Risk Analysis* Vol 11 [10]). In the two-plus years since, there have been many developments in risk science, risk communication, risk analysis, and risk policy for ENM, however fundamental uncertainties remain. Today, risk analysis, risk management, and governance for novel nanoscale materials and technologies remain a dynamic landscape. Notable developments include that there are now several published risk assessments; it is possible, and more common, to find review articles on environmental, health, and safety issues.

Current risk analysis paradigms continue to be affirmed as a valid approach to assessment of nanomaterial risks, yet key uncertainties limit the ability to conduct quantitative assessments, particularly outside of the bounds of occupational inhalation exposures. As new data and tools emerge, this situation is

Nano continued on page 2

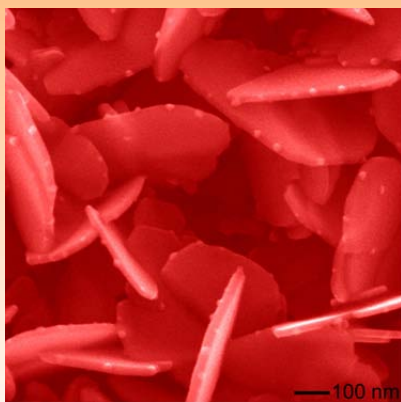
Inside Risk

President's Message	9	Risk Analysis Journal	14	What Do We Do?	28
2013 SRA Council Election	10	Risk Analysis in the News	15	News and Announcements	30
News Editor Position Open	11	Specialty Groups	16	Member News	31
2012 SRA Annual Meeting	12	Regional Organizations	18	2012 SRA Contacts	32



The Nano Landscape in the World of Risk

continued from page 1



These silver nanoplates are decorated with silver oxy salt nanoparticles along the edges. These nanostructures were grown under irradiation of high-energy x rays, which allowed scientists to “watch” them grow in real time. The image, by Yugang Sun and colleagues, is from a scanning electron microscope.

Photo courtesy of Argonne National Laboratory

likely to rectify—efforts to develop and standardize comparative data sets, such as the Organization for Economic Cooperation and Development (OECD) Working Party on Nanomaterials, and among the several large research collaborations, are now generating data that could lead to more predictive approaches that inform policy development.

This past year’s National Nanotechnology Initiative Environmental Health and Safety Research Strategy adopted a life-cycle approach to risk analysis. Similarly, the National Research Council’s Research Strategy for Environmental, Health, and Safety Aspects of Engineered Nanomaterials proposed a conceptual framework that adopts a life-cycle perspective to allow focus on critical research needs (NRC 2012).

Other highlights will be revealed during the 2012 SRA Annual Meeting in December, including several ENM risk symposia, focused on predictive toxicology, research strategies, governance, and perceptions (<http://birenheide.com/sra/2012AM/program/sessionlist.php3>).

State of the Science

Considerable investment has been made to assess the toxicity profiles, potency, and key attributes of diverse nanomaterials and build a greater understanding of their behavior in biological systems. The volume of studies has increased exponentially in recent years, and while knowledge increasingly links physical and chemical properties (e.g., particle size, surface reactivity, aggregation state) to effects, there remains a limited understanding of key determinants such that predictive toxicology remains elusive.

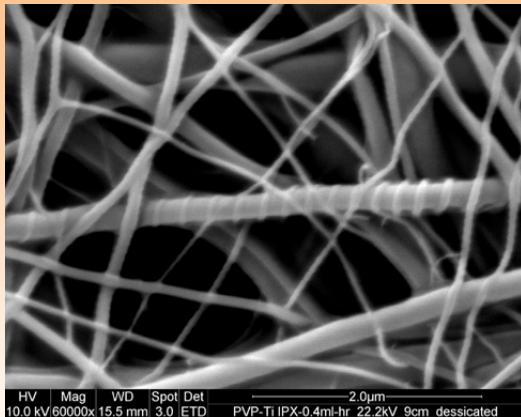
The situation with regard to data availability has improved considerably, as the number of studies of toxicity, both in vitro and in vivo, continues to grow. The quality of studies, particularly with regard to source material characterization, is better than it was in the mid-2000s. The ratio of published studies on ENM toxicity versus exposure remains high, and risk assessments are few. There are still major gaps in relating material properties to behavior and regarding long-term, or chronic, effects.

Occupational Risks

Not surprisingly, knowledge is accumulating more quickly for workplace exposure and risk to ENM than for consumer or environmental exposures. The greatest concern is over potential inhalation exposure

The Nano Landscape in the World of Risk

continued from page 2



Titanium dioxide nanofiber spiral

Photo courtesy of Kunal Mukherjee

to unbound nanoparticles during manufacturing. In the United States, the National Institute for Occupational Safety and Health (NIOSH) has assessed workplace exposure to ENMs in dozens of environments and has standardized the measurement of nanoparticles with a suite of instrumentation and measurement methods called Nanoparticle Emission and Assessment Tool (Methner et al. 2009). NIOSH has also conducted occupational risk assessments for two ENM, titanium dioxide (TiO_2) and multi-walled carbon nanotubes (CNT). While state of the art, these assessments reflect a continued reliance on mass-based measurement.

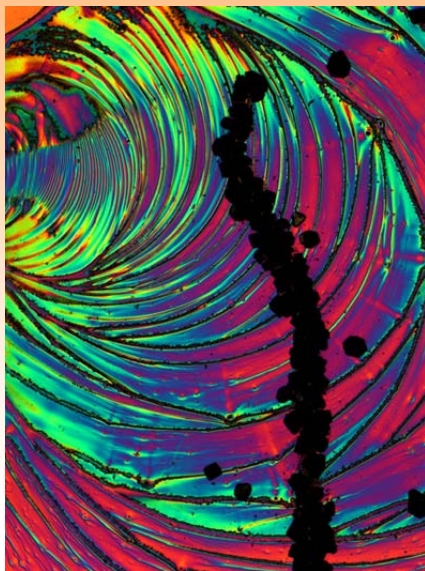
Nanoscale TiO_2 appears to have greater potency in the lung when inhaled than does conventional TiO_2 , when compared on the basis of mass. However, since the surface of nanoparticles contains most of the mass, the potency may not be greater for smaller particles if measured on the basis of surface exposure (Warheit 2007). Yet, classical measurement techniques do not report particle surface area, nor do existing standards measure by it. NIOSH has addressed this issue by lowering the mass-based recommended exposure limit (REL) for nanoscale TiO_2 for “ultrafine” TiO_2 (Peters 2012).

In addition to NIOSH, several organizations have addressed carbon nanotube toxicity and derived risk-based exposure levels. CNT have one or more concentric lengths of carbon forming a tube shape. There are many variations in size, shape, purity, aspect ratio, and surface properties, once calculated to be as many as 50,000 combinations (V. Colvin 2009, pers. comm., May). NIOSH has proposed an REL of $7 \mu\text{g m}^{-3}$ for CNT, which is at the limit of quantitation (NIOSH 2010). A few private organizations have also proposed limits: a limit of $2.5 \mu\text{g m}^{-3}$ was derived from inhalation toxicity studies for BASF’s Nanocyl, while Bayer’s limit of $50 \mu\text{g m}^{-3}$ has also been developed, based on testing for the Baytube product (Shulte et al. 2010). The Japanese New Energy and Industrial Technology Development Organization has proposed a limit of $30 \mu\text{g m}^{-3}$ (Nakanishi 2011). These standards reflect differences in data collection, characterization, source material, and interpretation. While there are now recommended exposure levels that form the basis of workplace protection, there is a need to refine the assays used as the basis of the RELs. The need to link specific material properties to toxicity and to identify key material properties for dose-response assessments are needed, as are efforts to standardize the test methods, endpoints, and reported parameters, as well as to validate existing methods for nanomaterials.



The Nano Landscape in the World of Risk

continued from page 3



In order to invent new materials to use in better batteries, solar cells, and other technological advances, scientists must delve deeply into the nanoscale—the nearly atomic scale where structures determine how materials react with each other. The pattern in this image by Paul Podsiadlo and Elena Shevchenko represents a film of 7.5-nanometer lead sulfide nanocrystals evaporated on the surface of a silicon wafer. The picture is a true, unaltered image, obtained with an optical microscope in reflected light mode.

Photo courtesy of Argonne National Laboratory

Consumer Risk

Engineered nanomaterials are currently used in a wide variety of products, including paints and coatings, electronics, textiles, batteries, sporting goods, sunscreen and other cosmetics, and some medical applications. In some cases, exposure would be anticipated to be low, for example, when nanomaterials are tightly bound in a composite matrix in a bicycle or tennis racket. However, nanomaterials used as flame retardants or in coatings in consumer products are possible sources of exposure; past experiences with lead and brominated flame retardants indicate elevated blood levels could result. Sunscreen and cosmetics are applied directly to the skin, and medical treatments might be swallowed or injected in the body.

Current requirements for product and ingredient disclosures in consumer products vary widely by geography and class of material. Few market data about the current use of ENM in products are considered reliable, and there is great uncertainty about levels of production or product disposition for most ENM. According to some estimates, there are hundreds of consumer products that contain ENM (e.g., Woodrow Wilson Center).

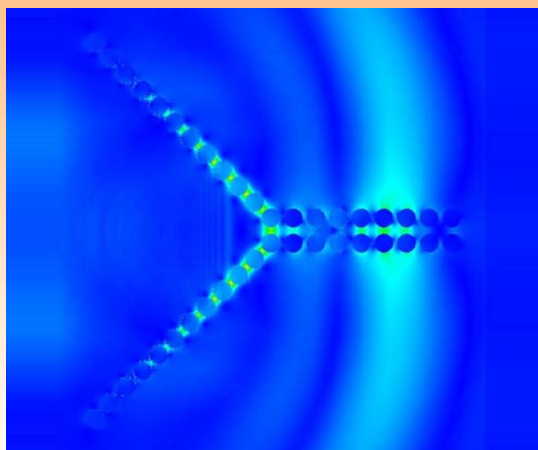
Production data for ENM are sparse, however, and there is no centralized national or international registry of ENM. The U.S. Environmental Protection Agency has reviewed over 100 submissions of new nanoscale substances under the Toxic Substances Control Act; however, most data submitted with the Pre-Manufacturing Notices has been classified as Confidential Business Information.

In Europe, there is ongoing discussion of disclosure of nanoscale ingredients in certain product classes, including cosmetics. Labeling is highly contentious because it remains unclear whether the specific ENM in products have any associated adverse effects, and disclosing to consumers any nanoscale ingredients, which may be safer than the non-nanoscale alternatives, raises concerns about equity for producers in comparison to other ingredient classes. Further, the European Commission definition of a nanomaterial is not limited to ENM and might be interpreted to include some long-used ingredients.



The Nano Landscape in the World of Risk

continued from page 4



Optical funnel of silver nanowires localizes light on the 100 nm scale. The image is from a simulation of a light pulse interacting with a silver nanoparticle array and was generated by Stephen Gray, who was supported by the U.S. Department of Energy's Office of Basic Energy Sciences, Division of Chemical Sciences, Geosciences and Biosciences.

Photo courtesy Argonne National Laboratory

Environmental Risks

Use of ENM containing marine coatings and biocidal applications may result in direct environmental exposures. Environmental exposures to ENM otherwise may be low and diffuse, but raise concerns from applications such as packaging or fabric treatments that have direct pathways to environmental receptors. There have been many studies, for example, evaluating the fate of nanosilver, used as an antimicrobial additive, in wastewater and aquatic environments.

The past few years have brought progress on assessing the behavior and effects of ENM in the environment, in soil and aquatic systems. The biggest challenge continues to be the ability to measure nanoparticles in complex environments. The proverbial needle-in-a-haystack analogy applies here, when background levels of nanoparticles are in the low thousands range in clean environments, in the tens or hundreds of thousands in urban and industrial areas and near

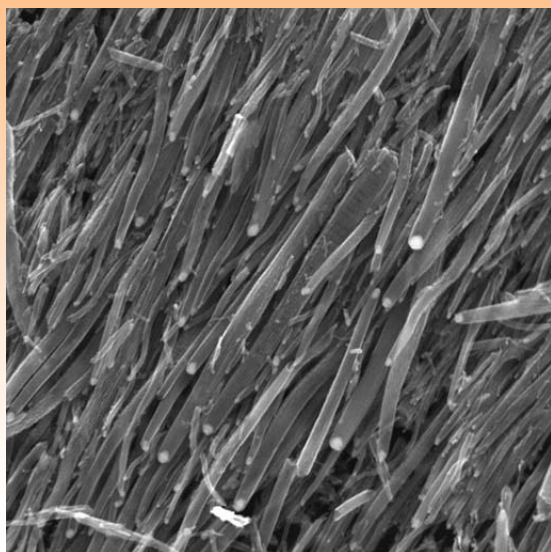
transport corridors. Equally the case for carbonaceous and elemental materials, identifying ENM from background can be challenging in any environmental media, particularly in the presence of biological components.

Governmental, Standards, and Regulatory Developments

On the regulatory front, most governmental organizations continue on a "case by case" approach to assessing nanoscale material submissions. There is a general recognition that risk assessment remains a sound approach to inform ENM risk management, but that uncertainty and poor measurements suggest modification of some metrics or assays, which may necessitate alternative approaches or endpoint consideration. Various mechanisms are applied to ensure agencies gain access to necessary data for evaluating ENM. For example, Australia's New Chemicals Program has been amended to ensure that all industrial nanomaterials will undergo a premarket assessment. The European Food Safety Authority released guidance in 2011 for assessing food and feed with ENM. If it is adequately demonstrated that the ENM do not reach the gastrointestinal tract, either because they dissolve or are not in contact with the food, then a traditional assessment is performed. If there is exposure to ENM, detailed physical chemical characterization protocols are used to measure properties, along with absorption, distribution, metabolism, and excretion studies (Shatkin 2012).

The Nano Landscape in the World of Risk

continued from page 5



Carbon nanotubes

Photo courtesy of St Stev, flickr.com

A recent report by the European Commission (EC) finds, “The REACH [Registration, Evaluation, Authorisation and Restriction of Chemicals] approach to hazard assessment and risk characterisation, with its built-in flexibility, makes it overall suitable for nanomaterials” (EC 2012). Further: “In the light of current knowledge and opinions of the EU [European Union] Scientific and Advisory Committees and independent risk assessors, *nanomaterials are similar to normal chemicals/substances in that some may be toxic and some may not*. Possible risks are related to specific nanomaterials and specific uses. Therefore, nanomaterials require a risk assessment, which should be performed on a case-by-case basis, using pertinent information. *Current risk assessment methods are applicable, even if work on particular aspects of risk assessment is still required.*”

The EC is systematically addressing nanomaterials in all legislation and is developing, in consultation, guidance for ENM submissions. Progress is farthest along for REACH and medical applications, which are considered appropriate frameworks for nanomaterials, while policies are under development for occupational health and safety, consumer product legislation, food, biocides, and cosmetics, including labeling requirements. Environmental legislation is developing, but challenging due to limited ability to measure or control nanomaterials in the environment (EC 2012). An issue raised about REACH is the triggering threshold of 1,000 tons, which might miss many engineered nanomaterials produced at smaller scale. The EC conclusion: “*the Commission considers REACH appropriate . . .*” (EC 2012).

While the EC has affirmed its use of risk assessment under REACH for assessing the safety of nanomaterials, “the key remaining question is to what extent data for one form of a substance can be used to demonstrate the safety of another form, due to still developing understanding of e.g. drivers of toxicity” (EC 2012).

Seeking “a balanced, science-based approach to regulating nanomaterials and other applications of nanotechnology in a manner that protects human health, safety, and the environment without prejudging new technologies or creating unnecessary barriers to trade or hampering innovation,” the U.S. Office of Management and Budget, with the White House Office of Science and Technology Policy, described principles for regulatory decision making for ENM. Specifically, the guidance offers, “*Nanomaterials*

The Nano Landscape in the World of Risk

continued from page 6



Carbon Nanotubes SEM micrograph of (multiwalled) carbon nanotube bundles (with false colour added). Magnification was about 7220x; the frame covers about 15 micrometres in the horizontal axis (1 micrometre = 1 millionth of a metre). The nanotubes themselves are roughly 10 nanometres (10 billionths of a metre) in diameter.

Photo courtesy of mattxb, flickr.com

should not be deemed or identified as intrinsically benign or harmful in the absence of supporting scientific evidence, and regulatory action should be based on such scientific evidence. . . . In general, however, and to the extent consistent with law, regulation should be based on risk, not merely hazard . . .” (OMB 2011).¹

These developments reflect the continued attention across governmental sectors to the issues of nanoscale risks. The development of policies, affirmation of existing regulations, and written guidance all demonstrate progress in ENM risk management, but do not suggest a lack of challenge in assessing and mitigating risks. Legal challenges, for example, to EPA’s conditional approval of a nano-pesticide or to Food and Drug Administration for failure to regulate nanomaterials in cosmetics, indicate otherwise.

Progress continues in developing standards for emerging nanoscale materials. The International Standards Organization (ISO) Technical Committee 229 has published 27 standards addressing terminology, characterization, toxicology, occupational health and safety practices, and risk guidance standards for nanotechnology (ISO 2012).² The British Standards Institute, ASTM International, TAPPI, the IEEEES, NIOSH, and others are working on nanomaterial standards.

Broadly, efforts to standardize terms, methods, and safe handling practices are improving commercial development, risk assessment, and risk management. There is a growing interest in “green” and sustainable nanotechnology development and a continued commitment among those in governance to proactive risk management of emerging technologies. The international meetings continue to convene on a weekly basis. Of greatest interest, the Emerging Nanoscale Materials Specialty Group of SRA is sponsoring several symposia during the 2012 SRA Annual Meeting covering these topics and more.

¹ “Memorandum for the Heads of Executive Departments and Agencies, Re: Policy Principles for the U.S. Decision-Making Concerning Regulation and Oversight of Applications of Nanotechnology and Nanomaterials” issued on 9 June 2011

² ISO 2012. Standards and projects under the direct responsibility of TC 229 Secretariat. ISO Catalogue. http://www.iso.org/iso/home/store/catalogue_tc/catalogue_tc_browse.htm?commid=381983&published=on



The Nano Landscape in the World of Risk

continued from page 7

References

European Commission. Communication from the commission to the European Parliament, the Council and the European Economic and Social Committee: Second regulatory review on nanomaterials. Brussels, COM(2012) 572 final; 2012. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0572:FIN:en:PDF>. Accessed 19 November 2012.

Methner M, Hodson L, Geraci C. Nanoparticle Emission Assessment Technique (NEAT) for the identification and measurement of potential inhalation exposure to engineered nanomaterials part A. *Journal of Occupational and Environmental Hygiene* 7:3:127–132; 2009. Available at: <http://dx.doi.org/10.1080/15459620903476355>. Accessed 19 November 2012.

Nakanishi J. Risk assessment of manufactured nanomaterials final report: Overview of approaches and results and executive summaries of three manufactured nanomaterials: Carbon nanotubes (CNT), fullerene (C60), and titanium dioxide. Kawasaki: New Energy and Industrial Technology Development Organization of Japan; 2011.

National Research Council. A research strategy for environmental, health, and safety aspects of engineered nanomaterials. National Academies Press: Washington, DC; 2012. Available at: http://www.nap.edu/catalog.php?record_id=13347#toc. Accessed 19 November 2012.

National Institute for Occupational Safety and Health. Draft NIOSH current intelligence bulletin: Occupational exposure to carbon nanotubes and nanofibers. Atlanta: Centers for Disease Control and Prevention; 2010. Available at: http://www.cdc.gov/niosh/docket/review/docket161A/pdfs/CarbonNanotube-CIB_PublicReviewOfDraft.pdf. Accessed 19 November 2012.

Peters TM. Chapter 8: Managing risks in occupational environments. In: Shatkin JA. *Nanotechnology health and environmental risks*, 2nd ed. In Press. Taylor and Francis: Boca Raton, Florida; 2012.

Shatkin JA. *Nanotechnology health and environmental risks*, 2nd ed. In Press. Taylor and Francis: Boca Raton, Florida; 2012.

Schulte PA, Murashov V, Zumwalde R, Kuempel ED, Geraci CL. Occupational exposure limits for nanomaterials: State of the art. *J Nanopart Res* 12:1971–1987; 2010. Available at: <http://www.nanoarchive.org/9468/>. Accessed 19 November 2012.

Warheit DB, Webb TR, Reed KL, Frerichs S, Sayes CM. Pulmonary toxicity study in rats with three forms of ultrafine-TiO₂ particles: Differential responses related to surface properties. *Toxicology* 230(1): 90–104; 2007.



President's Message

Ann Bostrom



Incorporated in 1980 to support our flagship journal, *Risk Analysis*, the Society for Risk Analysis (SRA) grew steadily for many years, comprising over 2,000 members at the turn of the century. International participation and activities characterized the Society from its outset, but became the focus of growth at around the same time, with the first World Congress on Risk, which took place in Brussels in 2003.¹ Early regional partnering organizations (from 1988) include the Society for Risk Analysis-Europe and the Society for Risk Analysis-Japan; both are thriving, independently recognized entities with their own journals—the *Journal of Risk Research* and the *Japanese Journal of Risk Analysis*—and their own annual meetings. The Society for Risk Analysis now recognizes two

dozen regional organizations throughout the world and has formally abandoned distinctions between sections and chapters.

Arguably, the global growth of SRA activities and organizations has served risk sciences well by fostering professional ties across borders and disciplines equally and promoting risk analysis. However, this international growth has not corresponded in recent years to demonstrable corresponding growth in SRA membership with representation in our members directory and subscription to *Risk Analysis*. The reasons for this are undoubtedly numerous. Among those mentioned during the regional summit at the World Congress in Sydney were the expense of traveling to meetings in the United States and other economic pressures on individual pocketbooks, language issues, and changes in social and professional networking and communications practices and expectations, partly attributable to information and communications technologies. To address some of these, SRA routinely offers travel subsidies and is broadening its use of information and communications technologies. Another contributory factor may be the relatively weak ties between some regional organizations and SRA international. To address this, the Council is developing new policies to clarify joint membership status for those who participate in regional organizations, improve membership benefits for those who do not attend meetings in the United States, and improve representation of regional organizations in SRA governance, as well as communications between all SRA organizations.

Currently, participants in SRA regional meetings who do not pay SRA membership fees are not readily identifiable as SRA members; on paper, SRA membership has declined steadily over the last decade. This suggests that U.S. membership has stagnated or declined—despite recent growth in student membership—and international membership in SRA (with subscription to *Risk Analysis*) has not grown.

¹ Kimberly M. Thompson, Paul F. Deisler, Jr., and Richard C. Schwing, Interdisciplinary Vision: The First 25 Years of the Society for Risk Analysis (SRA), 1980–2005 *Risk Analysis*, Vol. 25, No. 6, 1333-1386, 2005.



President's Message

continued from page 9

The Society's good financial health makes this an opportune time to reduce barriers to membership in multiple SRA organizations and to recruit new members with improved benefits and reduced costs. Successful as the World Congress in Sydney was, fewer people attended that meeting than usually attend annual SRA meetings in the United States. Further, SRA is indebted to and dependent on the services of its Secretariat, which is headquartered in the United States, and financially dependent on our flagship journal, *Risk Analysis*, which operates under the auspices of SRA international. For these reasons, moving to a less U.S.-centric operations model poses both logistical and financial challenges. Despite this, the Society has made some moves in this direction; the Council has evolved to include formal representation from SRA-Europe, and the annual SRA conference now includes a formal meeting of regional organization leaders. Making SRA a truly global organization will further strengthen our professional networks and help us share risk knowledge to meet the challenges of climate change and other global risks. A membership survey and a new online meeting evaluation form are in the works. It's also not too late to vote in the SRA elections (<http://www.sra.org/sravote>). Please make your voice heard! Your input will help us measure how well SRA is doing and what we could do better.

In closing, I am very sad to announce that Mary Walchuk, who has edited this newsletter for 16 years, is leaving to take another position. Mary's contributions to SRA have been enormous, and we will all miss her greatly. Please join me in thanking her and wishing her all the best in her new endeavors.

See you down by the Bay!

SRA 2013 Council Election

The Society for Risk Analysis (SRA) ballot for elections and bylaws changes is web-based. Online voting is underway. To cast your vote, go to the SRA website at <http://www.sra.org/sravote> and sign in using your last name and ID number. If you need assistance or would rather vote using a paper ballot, please call 703-790-1745 and one will be faxed to you. Only one vote will count. If we receive duplicate votes, only the electronic vote will be counted. We are looking forward to your participation in the SRA election. Polls close **22 November 2012**.

Candidates for President-elect are **Charles "Chuck" Haas**, **Igor Linkov**, and **Orwin Renn**.

The Councilor candidates for Race 1 are **Cindy Jardine** and **Katherine McComas**.

The Councilor candidates for Race 2 are **Jun Zhuang** and **Akihiro Tokai**.

The Councilor candidates for Race 3 are **Margot Kuttschreuter** and **Mathew White**.

Additionally, the SRA Ethics Statement is presented for approval by the Society membership.



Society for Risk Analysis News Editor Position Open

The Society for Risk Analysis (SRA) is seeking an experienced News Editor to provide part-time support for its online and print communications. The News Editor will be responsible for writing and editing articles about SRA activities and about the field of risk analysis more generally, and also for visual communications (including photographs) to support these news items.

Historically, SRA has provided news through a periodic newsletter (available on www.sra.org) and is now expanding its online postings. In December 2012, it will be launching a new website, which will allow it to post individual news items on an ongoing basis. SRA is also beginning to increase its use of social media, now maintaining sites on LinkedIn (<http://www.linkedin.com/groups/Society-Risk-Analysis-4265467?home=&gid=4265467>) and Flickr (http://www.flickr.com/photos/society_for_risk_analysis). It is considering whether and how to expand its use of social media, including Facebook, Twitter, and other outlets.

The News Editor will write news items and provide related graphics and photographs for the redesigned website, LinkedIn, and Flickr and will help support SRA's use of social media. She/he will be responsible for soliciting contributions from SRA members, editing these submissions, and posting them on the SRA website and other news outlets. The News Editor will also be responsible for writing articles on issues of interest to SRA members and conducting supporting interviews as needed. In addition, the News Editor will aid SRA in identifying, assessing, and implementing improvements to SRA's communications strategy.

The News Editor will work as an independent contractor for the SRA Secretariat, which provides management and administrative services and is operated by Burk and Associates in McLean, Virginia. The News Editor will also work closely with SRA's Communications Committee Co-Chairs and its Council President. She/he will work remotely, supplying her/his own office space, supplies, and equipment. She/he will be expected to attend SRA's Annual Meeting each December; travel and lodging costs will be covered by SRA.

Qualifications

Candidates must have at least 5 years of experience in print media as well as experience in online and social media. Excellent writing, interviewing, and editorial skills are required. Candidates must also possess visual communication skills (including photography) or provide information on an associate who will supply these skills. Candidates must be interested in SRA activities and in risk analysis and risk communication more generally; work experience in these fields is desired but not required.

Compensation

The News Editor will be expected to work between 10 and 20 hours per week. Compensation will be determined based on the qualifications of the selected News Editor and is expected to be between \$20,000 and \$30,000 per year.

Application Instructions

Interested individuals should submit a letter that summarizes their relevant experience and describes their vision for the position, as well as three writing samples, a copy of their résumé, and contact information for three professional references. This information should be sent via email to both David Drupa (SRA Secretariat) at ddrupa@burkinc.com and Lisa Robinson (Communications Committee Co-Chair) at Lisa.A.Robinson@comcast.net no later than Friday, **14 December 2012**.



Society for Risk Analysis

Risk Newsletter

November/December 2012

“Advancing Analysis” Society for Risk Analysis Annual Meeting 9–12 December 2012 San Francisco, California



Photo by Genevieve Roessler

Annual Meeting Workshops

Attend one of the Continuing Education Workshops at the 2012 Society for Risk Analysis (SRA) Annual Meeting. We offer a nice variety of topics during half-day and full-day workshops.

Students may attend any workshop for a low flat fee of just \$50!

All workshops are offered on Sunday, 9 December, and Probabilistic Risk Analysis is also offered on Thursday, 13 December.

Full Day Workshops – Sunday, 8:30 a.m.–5:30 p.m.

WK1: Benchmark Dose (BMD) Modeling – An Introductory Modeling Method and Use of EPA’s Benchmark Dose Software (A. Davis) \$300

WK2: Ecological Risk Assessment and Management–Processes and Applications (M. Pattanayek) \$250

WK3: Application of Web-Based Risk Assessment Information System (RAIS) and Free Spatial Analysis and Decision Assistance (SADA) Software (D. Stewart) \$300

WK7: Probabilistic Risk Analysis with Hardly any Data (S. Ferson and J. Siegrist) \$275

WK9: Screening-Level Air Dispersion Modeling for Risk Assessors (S. Zemba) \$350

WK10: Cumulative Risk Assess: Addressing Combined Environmental Stressors (L. Teuschler) \$350

WK12: Use of Expert Elicitation to Inform Decisionmaking (A. Sertkaya, C. McLaughlin) \$300



“Advancing Analysis” 2012 SRA Annual Meeting

continued from page 12

AM Workshops – Sunday, 8:00 a.m.–Noon

WK1A: Benchmark Dose (BMD) Modeling – An Introductory Modeling Method and Use of EPA’s Benchmark Dose Software (A. Davis) \$175

WK5: Simplicity in Biocomplexity: Influence Diagrams for Modeling Human-Environment Interactions (M. Convertino) \$225

WK8: Project Risk Management (O. Cretu) \$195

WK9A: Screening-Level Air Dispersion Modeling for Risk Assessors (S. Zemba) \$225

PM Workshops – Sunday, 1:00–5:00 p.m.

WK1B: Benchmark Dose (BMD) Modeling – An Introductory Modeling Method and Use of EPA’s Benchmark Dose Software (A. Davis) \$175

WK4: Fundamental Concepts of Risk Management, Risk Assessment, & Risk Perception/Communication (B. Johnson) \$300

WK6: Training Resources for Research Ethics and Cultural Competence in Risk Assessment (D. Quigley) \$65

WK9B: Screening-Level Air Dispersion Modeling for Risk Assessors (S. Zemba) \$225

WK11: An Overview of the Science, Economics and Policy on Climate Change (E. Gilmore) \$275

Full-Day Workshop – Thursday, 8:30 a.m.–5:30 p.m.

WK13: Probabilistic Risk Analysis with Hardly any Data (S. Ferson and J. Siegrist) \$275

Specialty Groups and Regional Organizations:

Learn How to Implement and Maintain Your Own Websites!

The Society for Risk Analysis (SRA) redesigned website, scheduled for completion soon, allows easy, plain-text editing of specialty group, regional organization, and students and young professionals group microsites hosted on the main SRA site. Training for those interested in developing and maintaining such sites will be held at the 2012 SRA Annual Meeting on Wednesday, 12 December, from 7:30 to 8:30 a.m. (If you prefer to maintain an independent site, a link to that site will be provided on the main SRA website.) More information will be emailed to the group leadership soon; please contact Lisa Robinson (Lisa.A.Robinson@comcast.net) or Jim Butler (webmaster@sra.org) if you have any questions.



Risk Analysis Journal

Editor in Chief Michael Greenberg and Managing Editor Karen Lowrie

We hope many of you have checked out our newest virtual issue on the topic of ecological risk analysis, compiled this summer by Wayne Landis, area editor for ecological risk analysis. It is found on the journal's Wiley Online Library site under "Special Features." The issue features key articles from the journal from the past 30 years, along with an introductory editorial written by Dr. Landis setting the articles into context. Articles are still free for anyone, including non-SRA members, until the end of 2012. Please let us know your opinions on our virtual issues and your ideas for future topics.

In August, all SRA members received the print edition of a special issue supplement: "The Impact of the Reduction in Tobacco Smoking on U.S. Lung Cancer Mortality (1975–2000): Collective Results from the Cancer Intervention and Surveillance Modeling Network (CISNET)." Collected and edited in collaboration with the National Cancer Institute, the articles discuss models to assess the impact of tobacco control efforts on U.S. lung cancer mortality. We are interested in your feedback on this special supplement provided to members.

Our next special issue arrives in your mailboxes this month. The November issue has 13 articles collected by Yacov Haimen and colleagues at the University of Virginia on the topic "Risk of Extreme and Catastrophic Events." We hope you find this set of articles timely and thought-provoking and we welcome your letters or perspectives.

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 2011, the SRA added two new inductees nominated by SRA members: Lester Lave and Stan Kaplan.

The full list is on the SRA website, at www.sra.org/about_pantheon.php, with links to the relevant Wikipedia page on each honoree. Links are provided for biographies of 2011 honorees Drs. Lave and Kaplan.

New nominees are welcome. To nominate other legends in the field, please contact Past President Rachel Davidson (rdavidso@udel.edu).



Risk Analysis in the News

The SRA Communications Committee has supported media outreach efforts on two recent news releases from articles that appear in *Risk Analysis*, the Society for Risk Analysis (SRA) journal, one on sea level rise in Washington, DC, and one on college students' willingness to get the H1N1 vaccine.

The first news release, “Long-Term Sea Level Rise in Washington, D.C. Could Have Significant Impact” (<http://www.newswise.com/articles/long-term-sea-level-rise-in-washington-d-c-could-have-significant-impact>), was based on the article “Prediction and Impact of Sea Level Rise on Properties and Infrastructure of Washington, DC” by researchers Bilal Ayyub, Haralamb G. Braileanu, and Naeem Qureshi of the University of Maryland (<http://onlinelibrary.wiley.com/doi/10.1111/j.1539-6924.2011.01710.x/full>).

Several of the media outlets that picked up this news include:

United Press International: http://www.upi.com/Science_News/2012/11/01/Washington-DC-at-risk-from-rising-seas/UPI-84621351801320

Wall Street Journal – Market Watch: <http://www.marketwatch.com/story/long-term-sea-level-rise-in-washington-dc-could-have-significant-impact-2012-11-01>

CNBC: <http://www.cnbc.com/id/49640781>

Environmental Protection Magazine: <http://eponline.com/articles/2012/11/01/sea-level-rise-in-washington--could-have-significant-impact.aspx>

The second news release, “As Flu Season Approaches, Why Do College Students Ignore the H1N1 Vaccine?” ([http://www.newswise.com/articles/as-flu-season-approaches-why-do-college-students-ignore-the-h1n1-vaccine?ret=/articles/list&category=my-articles&page=1&search\[billing_institution_id\]=1617&search\[sort\]=date+desc&search\[has_multimedia\]=](http://www.newswise.com/articles/as-flu-season-approaches-why-do-college-students-ignore-the-h1n1-vaccine?ret=/articles/list&category=my-articles&page=1&search[billing_institution_id]=1617&search[sort]=date+desc&search[has_multimedia]=)), was based on the journal article “Too Scared or Too Capable? Why Do College Students Stay Away from the H1N1 Vaccine?” by Janet Yang of the University of Buffalo (<http://onlinelibrary.wiley.com/doi/10.1111/j.1539-6924.2012.01799.x/full>).

Several of the media outlets that picked up this news include:

The Street: <http://www.thestreet.com/story/11722571/2/as-flu-season-approaches-why-do-college-students-ignore-the-h1n1-vaccine.html>

Science Daily: <http://www.sciencedaily.com/releases/2012/10/121001123818.htm>

Yahoo News: http://news.yahoo.com/flu-season-approaches-why-college-students-ignore-h1n1-220000025.html;_ylt=ApJLU0dWYDjjqakItkEWnVMEKekE;_ylu=X3oDMTRIZ3FxoGdkBG1pdANUb-3BTdG9yaWVzIFBvbGl0aWNzIFByZXNzUmVsZWZlZXNTU0YEcGtnA2VhY2NhNjI4LWEzOTItMzlhMS1hZTY3LTgwYTA5YTgxMTczZQRwb3MMDMQRzZWMDdG9wX3N0b3J5BHZlcgMyMjZkZjQ4M

E-Science News: <http://esciencenews.com/sources/newswise.scinews/2012/10/01/as.flu.season.ap-proaches.why.do.college.students.ignore.h1n1.vaccine>



Specialty Groups

Risk Communication Specialty Group

Craig Trumbo, Chair

The Risk Communication Specialty Group (RCSG) is looking forward to a very engaging schedule at the 2012 Society for Risk Analysis (SRA) Annual Meeting in San Francisco. We'll have a great number of posters on display at the opening reception and some 14 sessions and symposia over the three days of the convention. The preliminary schedule is now on the SRA website (www.sra.org); please check out our offerings.

The business meeting will be held Monday, 10 December, from 12 to 12:30. During the meeting we'll vote to approve specialty group bylaws (to be circulated in advance) and will select the next chair-elect, student representative, and webmaster. At this writing we are currently reviewing papers submitted for the Exxon student paper award; we'll make that announcement then. RCSG will then be turned over to the capable leadership of Robyn Wilson. A pleasant upcoming task will be the implementation of the group's website. SRA is rolling at its redesigned website and will provide a platform for specialty groups. Organizing and presenting our material will be a fun activity for the next year. We might want a couple webmasters!

Dose Response Specialty Group

www.sra.org/drsg

George Woodall, Chair

The Dose Response Specialty Group (DRSG) will be holding elections in November for three posts on the Executive Committee: chair-elect (one year as chair-elect, one year as chair, and a third year as the past chair), secretary/treasurer (two-year term), and councilor-at-large (two-year term). We look forward to announcing the winning candidates prior to the 2012 Society for Risk Analysis (SRA) Annual Meeting in San Francisco.

DRSG is pleased to report that we will be sponsoring eight sessions, covering approximately 35 individual presentations, and 20 posters at the upcoming annual meeting. DRSG will again be co-sponsoring a mixer with the Exposure Assessment Specialty Group and the Microbial Risk Analysis Specialty Group—please plan to attend this mixer event during the meeting (Tuesday evening, 11 December), as well as the DRSG business meeting (lunchtime on Monday, 10 December).

As a reminder, DRSG has developed a group on LinkedIn to help facilitate communication and outreach (http://www.linkedin.com/groups?gid=4353900&trk=hb_side_g). Please consider joining our LinkedIn



Specialty Groups

continued from page 16

community, as well as the long-standing Yahoo group (<http://tech.groups.yahoo.com/group/DRSG/>). We are hoping that increasing our online presence will increase awareness of our activities, especially with students and their academic advisors.

DRSG is also putting forward a proposal to increase participation of local students and academics during the annual SRA meetings, a topic that will be discussed at DRSG events during the meeting, as well as with the specialty group chairs and the SRA Council. Kan Shao (shao.kan@epa.gov) is also continuing his efforts to increase DRSG participation by academics and students; please contact Kan if you have suggestions or would like to assist in his efforts to increase student and academic involvement in DRSG.

Decision Analysis and Risk Specialty Group

President Jim Lambert, President-elect Myriam Merad, Secretary/Treasurer Chris Karvetski, Secretary/Treasurer-elect Matthew Bates, Past President Jeff Keisler, and Past Past President Tom Seager

Decision Analysis and Risk Specialty Group (DARSG) members, we look forward to seeing you in San Francisco for an entire track of oral and poster-platform presentations and posters. We received nearly 180 abstracts for DARSG alone and the quality and quantity of the result is impressive. Check the preliminary program at the sra.org website for the details.

Our annual DARSG business meeting will be held at the 2012 SRA Annual Meeting on Monday, 10 December, as described in the program. Please send ahead or bring your nominations for the 2013 president-elect to this business meeting. We do not elect a new secretary/treasurer at this meeting since it is a two-year term of office.

Congratulations to the two 2012 winners of the DARSG student merit award competition. Be sure to attend the presentations of the winning students in San Francisco: Douglas Bassette will present "Decision Aiding for the Creation of Energy Strategies" and Danail Hristozov will present "A Weight of Evidence Approach for Hazard Screening of Engineered Nanomaterials." The students will receive cash awards and complimentary registrations for the annual meeting.

Our DARSG founding president, Dr. Igor Linkov, produced an eight-minute video (<https://www.youtube.com/watch?v=dbts9glxxQA>) on the outcomes of the SRA- and DARSG-sponsored NATO Advanced Research Workshop "Sustainable Cities and Military Installations: Climate Change Impacts on Energy and Environmental Security," which convened in Hella, Iceland, in June 2012. This event had the participation of many DARSG members. Expect to hear more details of the results at the annual meeting.



Specialty Groups

continued from page 17

Jim Lambert is the co-editor with Yacov Haimes of the *Risk Analysis* special issue on the “Risk of Extreme and Catastrophic Events.” This special issue should appear in print by the time of the 2012 SRA Annual Meeting, as most papers are appearing online as this newsletter goes to press.

Please contact DARSG President (through December 2012) Jim Lambert at lambert@virginia.edu with your latest ideas for continuing education, symposia, journal papers or perspectives, and other service of DARSG to the SRA and beyond.

Regional Organizations

SRA-Egypt

www.sra-egypt.org

Shady Noureldin, President

SRA-Egypt Organizes a Forum for Risk Management at the Second Excellence in Engineering Day

The Second Excellence in Engineering Day took place on Tuesday, 25 September 2012, in Cairo, Egypt. The event was organized by the University to Work team, the Egyptian European Organization for Training and Development, and the Rotaract and Rotary Club of El Tahrir in cooperation with Engineering Consultant Group.

SRA-Egypt was invited by Dr. Nevine AbdelKhalek, the event’s founder and mastermind, to organize the Risk Management Forum, where three presentations had been conducted by Dr. Shady Noureldin, SRA-Egypt president; Mr. Sherif Mawsouf, SRA-Egypt founding member; and Mr. Tamer Ismail, SRA-Egypt Training Committee head. The three presentations tackled risk management technical background, risk management approaches, and application from business-development and project-management perspectives.



Tamer Ismail

Mr. Tamer Ismail conducted the first presentation and highlighted that risk management is an activity that integrates recognition of risk, risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources. He also provided introduction to risk management/planning, risk identification, qualitative risk analysis, semi-quantitative risk analysis, quantitative risk analysis, risk treatment and response plan, risk monitoring, and review.

In the second presentation, Mr. Sherif Mawsouf tackled risk management from a business-development point of view, particularly in African countries. He pre-



Regional Organizations

continued from page 18



Sherif Mawsouf

sent the major risks encountered by consultants conducting services in Africa, and he explored obstacles facing both African and Arab consulting firms in that regard. He also recommended a frame of actions and solutions that would facilitate business implementation of consulting firms in Africa.



Shady Nouredin

Dr. Shady Nouredin tackled risks from a project-management perspective in the third presentation and presented case studies in the aviation sector, especially in mega foreign funded projects in Egypt. He tackled risks associated with design requirements and the construction conditions in brown-field site conditions encountering demolition, pollution, and different ongoing construction projects. A systematic approach was presented to identify and assess the project risks for different risk categories including external, environmental, project management, construction, and engineering services risks. Also, control measures had been proposed and contingency budget calculations were explained for particular case studies.

SRA-Egypt speakers were granted the event's medal as a declaration of SRA-Egypt members' efforts and the SRA-Egypt logo was printed on the event's proceedings.

SRA-Australia/New Zealand

<http://www.acera.unimelb.edu.au/sra/index.html>

Rochelle Christian, President, and Jean Chesson, Secretary

The 2013 SRA-Australia/New Zealand (SRA-ANZ) annual conference will be held 17–19 September at the Australian National University's Crawford School for Public Policy. The conference will commence with a day of workshops followed by two days of presentations with national and international keynote speakers. Watch for the call for papers and further details on the SRA-ANZ website (<http://www.acera.unimelb.edu.au/sra/index.html>).

We also ran a further SRAonCampus event in collaboration with the new initiatives project managed by the SRA Upstate New York Regional Organization (<http://www.sra.org/upstateny>). The event was held at Lincoln University on 31 October on the risks of the import of augmentative predator biological control agents into New Zealand. Speakers included Mike Slim with a half-day workshop to be facilitated by Steven Corin.



Society for Risk Analysis

Risk Newsletter

November/December 2012

Regional Organizations

continued from page 19

This will be Jean and Rochelle's last newsletter in our current roles. Commencing 1 January 2013, Mark Colyvan will be president of SRA-ANZ and nominations for candidates to fill the secretary and other vacant roles on our executive committee closed on 31 October 2012, prior to elections.

SRA-Europe

www.sraeurope.org

Mathew White, Secretary



The 22nd SRA-Europe annual conference will be held 17–19 June 2013 at the Norwegian University of Science and Technology in Trondheim, Norway. The theme of the conference is “Safe Societies – Coping with Complexity and Major Risk,” concerning challenges related to our society's vulnerability to major risks of natural and industrial disasters, malicious attacks, financial breakdowns, and epidemic diseases. Confirmed keynote speakers are:

- Elisabeth Paté-Cornell, Stanford University: Engineering Risk Analysis in Complex Systems. Author of “Games and Risk Analysis” (2009) and “Probabilistic Early Warning for National Security Crises” (2011).
- Nick Pidgeon, Cardiff University: Risk Perception and Communication. Author/editor of *The Social Amplification of Risk* (2003) and *In Retrospect: Normal Accidents* (2011).
- David D. Woods, Ohio State University: Cognitive Systems Engineering, Human Factors and Ergonomics. Author/editor of *Resilience Engineering: Concepts and Precepts* (2006) and *Behind Human Error* (2010).

SRA-Japan

<http://www.sra-japan.jp/english>

Yasunobu Maeda, Vice President

SRA-Japan has a current membership of approximately 600 and the councilors have been updated for the 2012–2014 term. The Great-East Japan earthquake raised concern about risk management/governance and crisis management. Reflecting social situations following the disaster, SRA-Japan held some symposia and learned lessons from the theory and practice of crisis management and the risk issues of

Regional Organizations

continued from page 20



SRA-Japan 2012 Spring Symposium: “Another Way to Cope with LPHC Risks: Utilization of Financial Functions”

low-probability and high-consequence disaster and also published the special issues of the *Journal of Risk Analysis* (see English abstracts at <https://www.jstage.jst.go.jp/browse/sraj>).

The 25th annual meeting took place at Shiga University, 9–11 November 2012. The featured symposium discussed the role of our society in interdisciplinary fields for the next quarter century of SRA-Japan. The invited speakers from related disciplines talked about the interface and communication among the fields. After the great disaster, regulatory judgments and policy have been made using the risk concept. However, social confusion and disagreement among experts have been brought about by risk issues. Past experiences suggest that stakeholder involvement and risk communication can assist decision making to re-

duce social conflicts. Reflecting current situations, SRA-Japan wants to promote communication among different experts and to clarify how risk communication should get ahead through the symposium. Several sessions dealing with interdisciplinary communication were held.

SRA-Japan is looking at where we are going for the next quarter century. In particular, we continue to promote the membership certified as “risk managers” and the research that would bring a new insight on risk communication and governance across different disciplines.

SRA-Taiwan

Kuen-Yuh, Secretary General

Over 20 SRA-Taiwan members participated in the World Congress on Risk meeting held in Sydney, Australia, 17–20 July 2012. The theme of the congress was “Risk and Development in a Changing World,” which includes topics covering the fields of food safety, environmental health, natural hazards, and many others, as well as a variety of aspects of risk analysis, e.g., risk perception and communication.



Asian participants enjoy the dinner and happy hour at the end of the second day of the World Congress on Risk.

During the meeting, SRA-Taiwan members enjoyed excellent and well-received talks and keynote speeches from Professors Bette Meek (Canada), Geert Dancet (Europe), Saburo Ikeda (Japan), and many others. At the end of the second day, SRA-Taiwan hosted a session to discuss the idea of having a regular Asia regional meeting in the future among the SRA members in Asia, including Hong Kong, Japan, Malaysia,



Regional Organizations

continued from page 21



Participants of the “Changing Risks in Land Use and Air Quality” symposium. (By Dr. Yi-Ping Lin, National Yang-Ming University, Taipei, Taiwan, and SRA-Taiwan).

Singapore, South Korea, Taiwan, and Vietnam. The discussion was co-chaired by Professor Dong-Chun Shin (SRA-Korea), Dr. Yasunobu Maeda (SRA-Japan), and Dr. Kuen-Yuh Wu (SRA-Taiwan), who summarized the history of the local activities of SRA members in Asia in the last decade. After the discussions, most participants believed there are needs for a more formal platform to unify the researchers from the entire Asia region and to share and discuss the regional issues and ideas of risk analysis.

On the last day of the conference, Professor Chang-Chuan Chan (Taiwan) hosted a symposium titled “Changing Risks in Land Use and Air Quality” to discuss the health risk analysis from the exposure of air pollutants presented by the researchers from Mongolia, Malaysia, and Taiwan.

SRA-Latin America

www.srala.org

Mabel Padlog, Secretary

The Society for Risk Analysis-Latin America (SRA-LA) is going through the process of electing the EC-III officers. Dr. Sandra Demichelis, current president-elect, will become the new SRA-LA president for the period 2013–2014. Please visit our website (www.SRA-LA.org); biographical sketches and proposals of the candidates will be posted soon.

SRA-LA is sharing sponsorship at the VIth International Convention of Psychology, “Hominis 2013,” to be held 2–6 December 2013 in La Habana, Cuba. We are organizing a Symposium on Psychology of Emergency and Disasters. We invite our colleagues to send papers for this event.

The upcoming annual meeting of SRA in San Francisco is around the corner. Several researchers from Latin America will be attending this meeting, presenting their risk analysis work. Luis Cifuentes and Nicolás Bronfman from Pontificia Universidad Católica and Universidad Andrés Bello, respectively (Santiago de Chile), Sandra Demichelis from Universidad de Lanús y Universidad J.F. Kennedy (Buenos Aires, Argentina), Marcelo Wolansky from Universidad de Buenos Aires (Argentina), and Felipe Muñoz from Universidad de Los Andes (Bogotá, Colombia) will be discussing their latest research with SRA colleagues. They will address quite dissimilar topics, such as the impact of fine particulate matter (PM_{2.5}) on human health, application of cost-benefit analysis in decision-making processes used to implement



Regional Organizations

continued from page 22

environmental quality standards for pollutants, the emerging environmental health risks of exposure to pharmaceutical waste in aquatic ecosystems, a proposal of a sequential, in vitro-in vivo-ex vivo system to predict the risks of neurotoxicity posed to humans by exposure to environmentally relevant pesticide mixtures (i.e., a combination of low doses of pyrethroid and organophosphate insecticides), and a comparison of accuracy and predictive power in fluid dynamics analysis using alternative simulation methods (i.e., Lattice Boltzmann Method with Free Surface versus FLUENT-VOF method), tested by using theoretical and experimental data.

New England

www.sra-ne.org

Eric Ruder, President

The New England Regional Organization of the Society for Risk Analysis (SRA-NE) kicked off the year with our first seminar on 10 October 2012. The seminar, "Assessing Risk to Modern Chemicals: Case Study of Flame Retardants in Homes and in Airplanes," explored the risks of exposure to modern chemicals in homes and in airplanes, with a focus on flame retardants. The event consisted of three talks: (1) Ruthann Rudel from the Silent Spring Institute presented a study of concentrations of flame retardants in dust in homes and serum, looking at the impact of standards for polybrominated diphenyl ether (PBDE) use in California, (2) Joseph Allen and Jack Spengler of the Harvard School of Public Health discussed a study of the risks to flight crews from PBDE exposure from flame retardants used in airplanes, and (3) Robin Dodson of the Silent Spring Institute presented the results of consumer products testing for endocrine disruptors and asthma-associated chemicals and discussed the significance of these results as related to consumer exposures.

Our next event was the annual joint seminar that we sponsored with the Massachusetts Licensed Site Professionals Association, which took place on 13 November 2012. Kimberly Tisa, the Region 1 polychlorinated biphenyl (PCB) Coordinator for the U.S. Environmental Protection Agency, presented on characterization of PCB-contaminated sites. She clarified key regulatory definitions of PCB bulk product waste and PCB remediation waste; described different ways to analyze and describe PCBs, including by Aroclors, homologues, and congeners; and explained the various types of remediation strategies available under the Toxic Substances Control Act for PCB-impacted soil and PCB-impacted building materials (including risk-based strategies).

SRA-NE seminars are free and open to the public (the joint seminars are free to members). These seminars provide an opportunity for those interested in the science and policy of risk assessment to hear



Regional Organizations

continued from page 23

about current issues, research, and initiatives. Please visit the SRA-NE website (<http://www.sra-ne.org/>) or join our LinkedIn group for periodic further details about these events, as well as postings on our other activities.

Looking forward, we are starting to plan for four or more additional seminars from January through June on topics involving the development and application of cutting-edge risk assessment methods, including another college-based seminar to continue with our university outreach program. We are also actively looking for additional opportunities for networking with each other, with local universities, and with other local professional associations. We will continue to explore using new technologies for connecting, including social media (such as our ever-growing LinkedIn group!) and webinar access to presentations.

SRA-NE also extends congratulations to our newly elected president-elect, Katherine Walker of the Health Effects Institute, and to our treasurer, Arlene Levin of ERG, and our secretary, Karen Vetrano of TRC, both of whom will be continuing their long-standing support of chapter activities.

National Capital Area

www.sra.org/ncac

Sally Kane, President

The National Capital Area Chapter (NCAC) is continuing to work with several partners in developing interesting technical programs of interest to risk analysts and policy analysts. Our partners include the U.S. Department of Agriculture's (USDA) Office of Risk Assessment and Cost-Benefit Analysis (ORACBA); George Washington University (GWU) Regulatory Studies Center, Center for Risk Science and Public Health, and Environmental Law Studies; Chesapeake-Potomac Regional Chapter of SETAC; Economics and Benefits Analysis Specialty Group; and Risk Policy and Law Specialty Group. We are in the early stages of planning collaborative efforts with the SRA New England Regional Organization. Below is a report on current activities with local partners.

Collaborations with USDA ORACBA on Risk Forum Lectures:

25 September Risk Forum: The speaker, Richard Reiss of Exponent, focused on the topic "Estimation of Cancer Risks and Benefits Associated with a Potential Increased Consumption of Fruits and Vegetables." Dr. Reiss' presentation analyzed the potential number of cancer cases that might be prevented if half the U.S. population increased its fruit and vegetable consumption by one serving each per day. This was contrasted with the upper-bound estimate of concomitant cancer cases that might be theoretically attributed to the intake of pesticide residues arising from the same additional fruit and vegetable con-



Regional Organizations

continued from page 24

sumption. The seminar was attended by a diverse audience including federal economists and risk assessors, academics, and risk assessors from outside the federal government. For the first time, the Risk Forum was available as a webinar for those unable to attend in person, including several participants from outside the Washington, DC, area. In the future, not only will these seminars be available in real-time via webinar, but the audio portion will be archived and available on the Office of Risk Assessment and Cost-Benefit Analysis website for those unable to listen to the live presentation. The presentations are available at http://www.usda.gov/oce/risk_assessment/forums.htm.

In the past year, the following programs have been co-sponsored: Ragnar Löfstedt on “Communicating Food Risk” and “Reviewing Health and Safety Legislation in the U.K.” and a panel discussion on “Emerging Risks of Synthetic Biology.” In the coming year, we anticipate a forum on the evaluation of environmental benefits from implementing conservation practices in the Chesapeake Bay. Providing access via webinar should result in real-time inclusion of more participants from outside the Washington area.

Continued Collaboration with GWU Regulatory Studies Center and the Center for Risk Science and Public Health

23 October Program: Enhancing Science and Policy for Chemical Risk Assessments.

The NCAC teamed up with the GWU Regulatory Studies Center and Center for Risk Science and Public Health, the American Chemistry Council, and the Administrative Conference of the United States to host an afternoon workshop on Enhancing Science and Policy for Chemical Risk Assessments. Discussion built on recent reports from the Bipartisan Policy Center, the National Academy of Sciences, and the Keystone Group and focus on data evaluation, data integration, and peer review. It is contributing to an Administrative Conference of the United States project focused on best practices for the use of science in the administrative process. The workshop, held at GWU, was led by subject-matter experts from academia, government, non-governmental organizations, and stakeholder organizations. Visit <http://www.regulatorystudies.gwu.edu/index.php/news-a-events> for more information and workshop materials.

New program

Hydraulic fracturing (fracking). The NCAC is moving forward in planning a timely program on the risks of fracking and management challenges. We welcome programmatic ideas and identification of potential speakers.

The NCAC Executive Council welcomes overtures of interest in working with us on programming and training—getting involved in the NCAC is an excellent opportunity to continue to learn and to become active in the risk analysis community in this unique metropolitan area.



Regional Organizations

continued from page 25

Research Triangle

Audrey Turley, Chair

Environmental Justice in North Carolina

The Research Triangle Chapter hosted a successful “Symposium and Dialogue on Science, Risk Assessment, and Environmental Justice” on the Environmental Protection Agency (EPA) campus in North Carolina on 15 October 2012. The daylong event brought together community advocates, researchers, risk assessors from EPA and National Institute of Environmental Health Sciences (NIEHS), and other Research Triangle Park organizations and universities to help scientists better understand and orient their research and assessments towards environmental justice within vulnerable communities.

Dr. Steve Wing, professor of epidemiology at the University of North Carolina–Chapel Hill set the stage for the day with his lecture “Environmental Justice 101.” Following his presentation, local environmental justice stakeholders discussed their work evaluating risks posed by concentrated animal feeding operations in eastern North Carolina, assessing disproportionate exposure to contaminants in air and water near a landfill, and promoting community involvement in political decision making for a proposed road expansion. In his community keynote presentation, Dr. Omega Wilson from the West End Revitalization Association described the need for community-engaged, actionable research—scientific studies that can be used to effect grassroots change to improve environmental public health in communities.



Dr. Omega Wilson criticized what he called the guinea-pig syndrome, when researchers come into a community, conduct their studies, and then fail to take the next step to protect public health.

*Photo by Steve McCaw
caption by Eddy Ball*

In the afternoon, Dr. Ken Olden, director of EPA’s National Center for Environmental Assessment, discussed why “neighborhood matters” and how environmental factors including pollution, diet, and social stressors can cause changes in gene expression and potentially impact health risks. Researchers from EPA discussed work focused on evaluating increased asthma risks in African American Children in Durham, North Carolina, development of community tools to promote evaluation of cumulative risks, and how community health affects outcomes after exposure to wildfire smoke. The day concluded with a discussion of EPA and NIEHS strategic initiatives to build community partnerships and address environmental justice issues through research and policy.

Andrew Geller (EPA), Shannon O’Shea (EPA), Janice Paré (EPA), David Svendsgaard (EPA), and Audrey Turley (ICF International) organized the event.



Working with the North Carolina Environmental Justice Network and Concerned Citizens of Tillery, North Carolina, Dr. Steve Wing has helped residents of eastern North Carolina oppose industrial farming practices that he said create environmental injustices.

*Photo by Steve McCaw
caption by Eddy Ball*



Regional Organizations

continued from page 26

SRA-China

Guofang Zhai, Secretary

The 5th National Risk Annual Meeting

As the Society for Risk Analysis-China (SRA-China) executing entity in China, with a license issued by the government, RAC (Risk Analysis Council of China Association for Disaster Prevention) held the 5th National Risk Annual Meeting (RAC-2012) 27–28 October 2012 at Nanjing University in Nanjing, China. The theme of RAC-2012 was “Innovative Theories and Methods for Risk Analysis and Crisis Response.” The meeting included 9 keynote speeches, 20 parallel sessions, 2 workshops, and 1 working meeting. More than 200 participants attended the conference, and 123 papers are included in the proceedings, published by Atlantis Press, Paris, France.



Participants of RAC-2012 in Nanjing

Two highlights of RAC-2012 will affect RAC and SRA-China: (1) the “China Risk Analysis and Management Elite Cup Award” was established and (2) Prof. Chongfu Huang was elected president of RAC.

Branch of China Life Insurance (Group) Company provided a considerable sponsorship to set up the award for outstanding papers published in the proceedings. We invited alien members of the Program Committee to nominate outstanding papers according to the English abstracts. The first prize, second prize, and third prize are awarded 5,000 RMB (about 802 USD), 3,000 RMB, and 1,000 RMB, respectively. China Life is the largest insurance company in China.

According to an amendment on term limits, the founding president of RAC, Prof. Chongfu Huang (Beijing Normal University), has again been elected as the president of RAC. Fifty-six fellows and 15 senior fellows were also elected. Prof. Zongfang Zhou (University of Electronic Science) and Dr. Qiang Xu (Willis Insurance Brokers Co., Ltd) were elected as the vice presidents of RAC. RAC has settled on Prof. Hongbin Cao (Beijing Normal University) as secretary-general. All will serve RAC for the next four years.



RAC Fellows

During the conference, all participants also took part in the excursion to the Confucius Temple area in Nanjing, organized by the host. They were greatly impressed with this visit to one of the most famous world cultural heritage areas in China.



What Do We Do?

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

Julia Diebol



What is your job title?

I'm a managing consultant in the Human Factors and Product Safety Group at Applied Safety and Ergonomics, Inc., in Ann Arbor, Michigan. Our company provides consulting services in product and occupational safety, including design and evaluation of warnings, instructions, and risk communications. I am also a doctoral candidate in the Department of Environmental Health Sciences at the University of Michigan School of Public Health, researching satisfaction with hazard and exposure communications received in a community setting.

How is risk analysis a part of your job?

My work has to do with developing and evaluating risk communications in consumer, occupational, and community settings. I draw on the large body of research about risk assessment, risk policy, and risk communication that has developed over the last century and continues to develop today. I also research standards and regulations from various governmental and non-governmental sources that guide and mandate risk communication in a variety of contexts.

How did you decide to pursue this career?

As an undergraduate in industrial and operations engineering, I became interested in human factors, ergonomics, and safety. When I started at Applied Safety and Ergonomics in 2005, I worked on some fascinating projects that involved researching the history of industrial hygiene, chemical hazard communication, and risk communication about chemicals more broadly. In 2007 I decided to pursue part-time graduate studies in this area, eventually leading to a PhD program in 2009.

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

I would not be where I am today without mentoring from a host of other talented people, including colleagues at my company, faculty at the university, and others during my undergraduate and graduate studies. Involvement with the University of Michigan Risk Science Center, including a Risk Science Center Summer Fellowship in 2011, has also helped guide my research and my career.

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

I love the variety in consulting, especially being able to see similarities and differences between risk communications in different contexts. Most exciting is to see how risk communication changes over time: to compare different standards and norms for risk communication historically and today and to



What Do We Do?

continued from page 27

see how things will change in the future. This is a field that is still growing and, I think, becoming increasingly important as we face the challenges of the 21st century.

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

Risk communication is highly interdisciplinary, drawing on work in the fields of public health, psychology, public policy, information science, engineering, and many others. Be open to beginning to explore this topic from whichever perspective most excites you.

How have you been involved in the Society for Risk Analysis (SRA) and what led you to join?

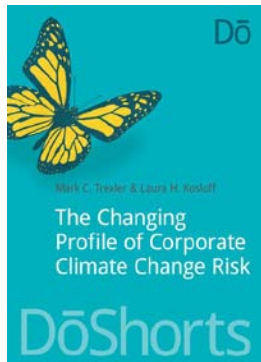
I've been a member of SRA since 2011, when I presented my research at the annual meeting in Charleston, South Carolina. I am looking forward to presenting some additional work at this year's annual meeting in San Francisco, California.

How has your involvement in SRA helped you in your work?

Meeting other people involved in SRA has been a great way to see firsthand the broad spectrum of risk-related research areas and to identify gaps and potential areas for interdisciplinary research. It's also been a great way to see how people with different perspectives view risk-related challenges and solutions.

What are your interests outside of work?

I enjoy photography and hiking with my husband Steve, vegetable gardening, and playing kickball and soccer with our company team, the Safety Monkeys.



NEW BOOK

The Changing Profile of Corporate Climate Change Risk

Dr Mark Trexler & Laura Kosloff

Sept 2012 * Dō Sustainability

[More info >>](#)

This book is part of a new series of short, expert sustainability ebooks for professionals.

Visit www.dosustainability.com for more info.



SRA's New Website Is Coming Soon!

- Updated look
- Easy navigation
- Timely news
- More content
- Increased social media use



News and Announcements

Electric Power Research Institute Requests Experts to Serve on an External Scientific Advisory Committee on Environmental Risk Assessment and Communication

The Electric Power Research Institute (EPRI) announces the formation of, and solicits nominations for, an external Scientific Advisory Committee (SAC) on Environmental Risk Assessment and Communication. The committee's mission is to provide guidance to EPRI's Environment Sector on research and communication strategies related to the environmental risks associated with the electric power sector.

The committee will review EPRI research results on environmental risk and will evaluate strategies, or programs, designed to communicate risks and/or benefits. The committee will provide comment and recommendations to the Environment Sector on presenting the risk-related research findings to multiple stakeholders—the public, the industry, the scientific community, as well as scientific and regulatory agencies. The committee will also receive feedback from the sector on the relative effectiveness of risk assessment and communication activities to inform future practices.

EPRI is a 501(c)(3) independent, non-profit organization founded 40 years ago by the late Dr. Chauncey Starr with the mission to conduct research and development relating to the generation, delivery, and use of electricity for the benefit of the public. EPRI's Environment and Renewable Energy research addresses environmental and health implications for the electric power sector including scientific questions about environmental, regulatory, and health risks associated with air emissions; energy and climate policy; land and groundwater remediation; worker and workplace safety; water use and availability; right-of-way management; and renewable energy development and grid integration.

EPRI is soliciting experts in fields from both the environmental and social sciences, particularly in the areas of risk assessment, communications, modeling and decision making, social marketing, science literacy, and other relevant sciences. Meetings will be held twice a year to review and comment on risk research within EPRI's Environment Sector, with committee members serving a minimum of two years.

Please direct questions regarding the EPRI SAC on Environmental Risk Assessment and Communication to Dr. Sharan Campleman, Senior Project Manager, at 650-855-2331. Individuals interested in serving on the committee, or in nominating another expert to do so, should forward a brief biography and curriculum vitae with contact information to scampleman@epri.com.

2012 SRA Annual Meeting Website
http://www.sra.org/events_2012_meeting.php



Member News

Kimberly Thompson

Dr. Kimberly Thompson, SRA past president, recently joined the faculty at the University of Central Florida (UCF) College of Medicine as Professor of Preventive Medicine and Global Health. She remains committed to improving the management of children's risks and is very excited to call one of the best destinations for children and families her new home. She looks forward to bringing the concepts of risk analysis into the "amazing community of innovative and inquisitive scholars at one of the nation's newest medical schools and one of the largest universities." Professor Thompson is continuing with her existing research grants and collaborations that she created and expanded as the president of Kid Risk, Inc.

Her new contact information at the UCF is:

Kimberly M. Thompson

Professor of Preventive Medicine and Global Health

University of Central Florida College of Medicine

6850 Lake Nona Blvd.

Orlando, FL 32827-7408

Phone: 407-266-7037

Web: <http://med.ucf.edu/directory/profile/kimberly-m-thompson-sc-d-2/>

New contact information for Kid Risk, Inc., is:

Kimberly M. Thompson, President

Kid Risk, Inc.

10524 Moss Park Rd.

Ste. 204-364

Orlando, FL 32827

Phone: 617-680-2836

Email: kimt@kidrisk.org

Web: <http://www.kidrisk.org>

Kim also said that she very much enjoyed reading many great manuscripts while serving as the *Risk Analysis* area editor for engineering and working with Michael Greenberg, Karen Lowrie, and the other area editors. She is sorry that she will not have the opportunity to reconnect with SRA colleagues at this year's annual meeting due to a schedule conflict, but looks forward to the 2013 meeting.

For photos of Society for Risk Analysis activities, visit the SRA Flickr page at http://www.flickr.com/photos/society_for_risk_analysis/collections



2012 SRA Contacts

2012 SRA Officers

President: Ann Bostrom, phone: 206-685-8198, email: abostrom@uw.edu

President-elect: George Gray, phone: 202-994-7993, email: gmgray@gwu.edu

Secretary: Cristina McLaughlin, phone: 240-420-1978, email: Cristina.McLaughlin@fda.hhs.gov

Treasurer: Jeffrey Lewis, phone: 908-730-1107, email: r.jeffrey.lewis@exxonmobil.com

Treasurer-elect: Trina von Stackelberg, phone: 508-596-4209, email: kvon@erisksciences.com

Past President: Rachel Davidson, phone: 302-831-4952, email: rdavidso@udel.edu

Executive Secretary: David A. Drupa, phone: 703-790-1745, email: ddrupa@burkinc.com

Councilor, 2014: Seth Guikema, phone: 410-516-6042, email: sguikema@jhu.edu

Councilor, 2012: Igor Linkov, phone: 617-233-9869, email: igor.linkov@usace.army.mil

Councilor, 2013: Margaret MacDonell, phone: 630-252-3243, email: macdonell@anl.gov

Councilor, 2013: Ortwin Renn, phone: (Germany) 49-711-6858-3970, email: ortwin.renn@sowi.uni-stuttgart.de

Councilor, 2013: Lisa Robinson, phone: 617-965-0644, email: lisa.a.robinson@comcast.net

Councilor, 2014: Jo Anne Shatkin, phone: 617-850-1715, email: JAShatkin@clf.org

Councilor, 2012: Michael Siegrist, phone: (Switzerland) 044 632 6321, email: msiegrist@ethz.ch

Councilor, 2012: Felicia Wu, phone: 412-624-1306, email: few8@pitt.edu

Councilor, 2014: Marcelo Wolansky, phone: (Argentina) 541145763413, 541148547576,
email: mjwolansky@gmail.com

2012 Committee Chairs

Annual Meeting: George Gray, phone: 202-994-7993, email: gmgray@gwu.edu

Audit: Michael Dourson, phone: 513-542-7475, ext. 14, email: dourson@tera.org

Awards: Alison Cullen, phone: 206-616-1654, email: alison@uw.edu

Communications: Lisa Robinson, phone: 617-965-0644, email: lisa.a.robinson@comcast.net
Felicia Wu, phone: 412-624-1306, email: few8@pitt.edu

Conferences and Workshops: Margaret MacDonell, phone: 630-252-3243, email: macdonell@anl.gov

Education: Michael Siegrist, phone: (Switzerland) 044 632 6321, email: msiegrist@ethz.ch

Executive: Ann Bostrom, phone: 206-685-8198, email: abostrom@uw.edu

Finance: Jeffrey Lewis, phone: 908-730-1107, email: r.jeffrey.lewis@exxonmobil.com

Membership: Seth Guikema, phone: 410-516-6042, email: sguikema@jhu.edu

Marcelo Wolansky, phone: (Argentina) 541145763413, 541148547576, email: mjwolansky@gmail.com

Nominations: Rick Reiss, phone: 571-227-7228, email: rreiss@exponent.com

Publications: Rachel Davidson, phone: 302-831-4952, email: rdavidso@udel.edu

Regions: Ortwin Renn, phone: (Germany) 49-711-6858-3970, email: ortwin.renn@sowi.uni-stuttgart.de
Jo Anne Shatkin, phone: 617-850-1715, email: JAShatkin@clf.org

Specialty Groups: Igor Linkov, phone: 617-233-9869, email: igor.linkov@usace.army.mil



2012 SRA Contacts

Regional Organization Contacts

Australia/New Zealand: Rochelle Christian, President, email: rochelle.christian@bigpond.com
Jean Chesson, Secretary, email: jean.chesson@daff.gov.au
website: <http://www.acera.unimelb.edu.au/sra/index.html>

Chapitre Saint-Laurent (Canada): Gaelle Triffault-Bouchet, President,
email: Gaelle.triffaultbouchet@mddep.gouv.qc.ca,
website: <http://chapitre-saint-laurent.qc.ca>

Chicago Regional: Carole Braverman, President, email: braverman.carole@epa.gov,
website: <http://www.sra.org/chicago>

China: Chongfu Huang, President, email: hchongfu@bnu.edu.cn

Columbia-Cascades: (currently inactive) James S. Dukelow, President, email: jdukelow@owt.com

East Tennessee: (currently inactive)

Egypt: Shady Noureldin, President, email: shady@egyptsra.org, website: <http://www.egyptsra.org>

Europe: Margot Kuttschreuter, President, email: M.W.M.Kuttschreuter@utwente.nl
Mathew White, Secretary, email: mathew.white@pcmd.ac.uk, website: <http://www.sraeurope.org>

Greater Pittsburgh: (currently inactive)

Japan: Michiaki Kai, President, email: kai@oita-nhs.ac.jp
Secretariat, email: sra-japan@bunken.co.jp, website: <http://www.sra-japan.jp/english>

Kiev: Naum Borodyanskiy, President, email: naumb@list.ru

Korea: Dong-Chun Shin, President, email: dshin5@yuhs.ac
Dr. Yong-Jin Lee, Secretary, email: YJLEE75@yuhs.ac

Latin America: Marcelo Wolansky, President, email: presidencia.srala@gmail.com,
website: <http://www.srala.org>

Lone Star-Texas: (currently inactive)

Metro (NY-NJ-CT): Rao V. Kolluru, President, email: raokollur@aol.com

Michigan: (currently inactive)

National Capital Area: Sally Kane, President, email: smkane55@verizon.net;
Genya Dana, Secretary and Program Development Officer,
email: gvdana@gmail.com, website: <http://www.sra.org/ncac>

New England: Eric Ruder, President, email: ERuder@indecon.com,
website: <http://www.sra-ne.org>

Northern California: Kay Johnson, Past President, email: Kay.Johnson@tetrattech.com,
website: <http://www.sra.org/ncc>

Philadelphia: Eileen Mahoney, Co-chair, email: Eileen.m.mahoney@gmail.com



2012 SRA Contacts

Puget Sound: (currently inactive) Elaine M. Faustman, email: faustman@u.washington.edu

Research Triangle: Audrey Turley, Chair, email: Audrey.Turley@icfi.com, <http://www.rtc-sra.org>

Rocky Mountain: Susan Flack, Regional Organization Contact, email: sflack@ccg-llc.net

Russia: Valery Lesnykh, Vice President, email: vvlesnykh@gmail.com, website: <http://www.sra-russia.ru>

Southern California: Mary McDaniel, President, email: mfmcdaniel@mclam.com,
website: <http://www.sra.org/scc>

Southwestern and Central Ohio, Northern Kentucky: (currently inactive)

Taiwan: Kuen-Yuh Wu, Secretary General, email: kuenyuhwu@ntu.edu.tw

UK: Julie Barnett, President, email: julie.barnett@brunel.ac.uk

Upstate New York: JiYoung Park, President, email: jp292@buffalo.edu
website: <http://www.sra.org/upstateny>

Specialty Group Contacts

Decision Analysis and Risk: Jim Lambert, President, email: lambert@virginia.edu,
website: <http://www.sra.org/darsg>

Dose Response: George Woodall, Chair, email: woodall.george@epa.gov,
website: <http://www.sra.org/drsg>

Ecological Risk Assessment: Greg McDermott, Chair, email: gregmc@neptuneinc.org

Economics and Benefits Analysis: Aylin Sertkaya, Chair, email: Aylin.Sertkaya@erg.com,
website: <http://www.sra.org/ebasg>

Emerging Nanoscale Materials: Lori Sheremeta, Chair, email: lsheremeta@gmail.com,
website: <http://www.sranano.org>

Engineering and Infrastructure: Royce Francis, Chair, email: seed@gwu.edu;
Cameron MacKenzie, Vice-Chair, cmackenzie@ou.edu
website: <http://sites.google.com/site/sraeisg>

Exposure Assessment: Robert Scofield, Chair, email: rscofield@exponent.com,
website: <http://www.sra.org/easg>

Microbial Risk Analysis: Aamir Fazil, Chair, email: Aamir.Fazil@phac-aspc.gc.ca,
website: www.MRASG.org

Risk and Development: Alison Cullen, Co-chair, email: alison@uw.edu,
Garrick Louis, Co-chair, email: gel7f@cms.mail.virginia.edu

Risk Communication: Craig Trumbo, Chair, email: ctrumbo@mac.com

Risk Policy and Law: Jennifer Kuzma, Chair, email: kuzma007@umn.edu,
website: <http://www.sra.org/rplsg>

Security and Defense: Heather Rosoff, President, email: rosoff@usc.edu; Henry Willis, President-elect, email: hwillis@rand.org; Bob Ross, Past President, email: Bob.Ross@dhs.gov



Society for Risk Analysis

Risk Newsletter

November/December 2012



Risk Newsletter is published by
the Society for Risk Analysis

Mary A. Walchuk, Editor, newseditor@sra.org
Genevieve S. Roessler, Consulting Editor,
gnrsslr@frontiernet.net
Sharon R. Hebl, Editorial Associate

Society Officers:

President: Ann Bostrom, abostrom@uw.edu
President-elect: George Gray, ggray@gwu.edu
Secretary: Cristina McLaughlin,
Cristina.McLaughlin@fda.hhs.gov
Treasurer: Jeffrey Lewis,
r.jeffrey.lewis@exxonmobil.com
Treasurer-elect: Trina von Stackelberg,
kvon@erisksciences.com
Past President: Rachel Davidson,
rdavidso@udel.edu

Members of SRA Council:

Seth Guikema, sguikema@jhu.edu
Igor Linkov, igor.linkov@usace.army.mil
Margaret MacDonell, macdonell@anl.gov
Ortwin Renn, ortwin.renn@sowi.uni-stuttgart.de
Lisa Robinson, lisa.a.robinson@comcast.net
Jo Anne Shatkin, JAShatkin@clf.org
Michael Siegrist, msiegrist@ethz.ch
Felicia Wu, few8@pitt.edu
Marcelo Wolansky, mjwolansky@gmail.com

Secretariat:

David Drupa, Executive Secretary
Society for Risk Analysis
1313 Dolley Madison Blvd.
Suite 402, McLean, VA 22101
phone: 703-790-1745; fax: 703-790-2672
email: SRA@BurkInc.com

Communications Committee Chairs:

Felicia Wu, few8@pitt.edu
Lisa Robinson, lisa.a.robinson@comcast.net

SRA Website: www.sra.org

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.

SRA Disclaimer: Statements and opinions expressed in publications of the Society for Risk Analysis or in presentations given during its regular meetings are those of the author(s) and do not necessarily reflect the official position of the Society for Risk Analysis, the editors, or the organizations with which the authors are affiliated. The editors, publisher, and Society disclaim any responsibility or liability for such material and do not guarantee, warrant, or endorse any product or service mentioned.

Future Society for Risk Analysis Annual Meetings

**9–12 December 2012,
San Francisco, California**

http://www.sra.org/events_2012_meeting.php

8–11 December 2013, Baltimore, Maryland

7–10 December 2014, Denver, Colorado



The 5th National Risk Annual Meeting

By Guofang Zhai, Secretary of SRA-China

As SRA-China executing entity in China with a license issued by the government, RAC (Risk Analysis Council of China Association for Disaster Prevention) held the 5th National Risk Annual Meeting (RAC-2012) during October 27-28, 2012 at Nanjing University in Nanjing, China. The theme of RAC-2012 was "Innovative Theories and Methods for Risk Analysis and Crisis Response", including 9 keynote speeches, twenty parallel sessions, two workshops and one working meeting. More than 200 participants attended the conference. 123 papers are included in the proceedings published by Atlantis Press, Paris, France.

The two highlights in RAC-2012 will affect RAC and SRA-China development: 1. The establishment of "China Risk Analysis and Management Elite Cup Award"; 2. Prof. Chongfu Huang has again been elected as the president of RAC.

Jiangsu Province Branch of China Life Insurance (Group) Company provided a considerable sponsorship to set up the award to outstanding papers published in the proceedings. We invited alien members of the program committee to nominate outstanding papers according to the English abstracts. The First Prize, Second Prize and Third Prize are awarded of 5000 RMB (about 802 USD), 3000 RMB and 1000 RMB, respectively. China Life is the largest insurance company in China.

According to an amendment on term limits, the founding president of RAC, Prof. Chongfu Huang (working in Beijing Normal University) has again been elected as the president of RAC. The meeting elected 56 fellows and 15 senior fellows. Prof. Zongfang Zhou (University of Electronic Science) and Dr. Qiang Xu (Willis Insurance Brokers Co., Ltd) were elected as the vice-presidents of RAC. RAC has settled on Prof. Hongbin Cao (Beijing Normal University) as secretary-general. All of them will serve for RAC in next four years.

During the conference, all participants also took part in the excursion to Confucius Temple area in Nanjing as one of the most famous world cultural heritage in China organized by the host and were greatly impressed.

Gathering photo of participants of RAC-2012 in Nanjing

Gathering photo of fellows of RAC.