

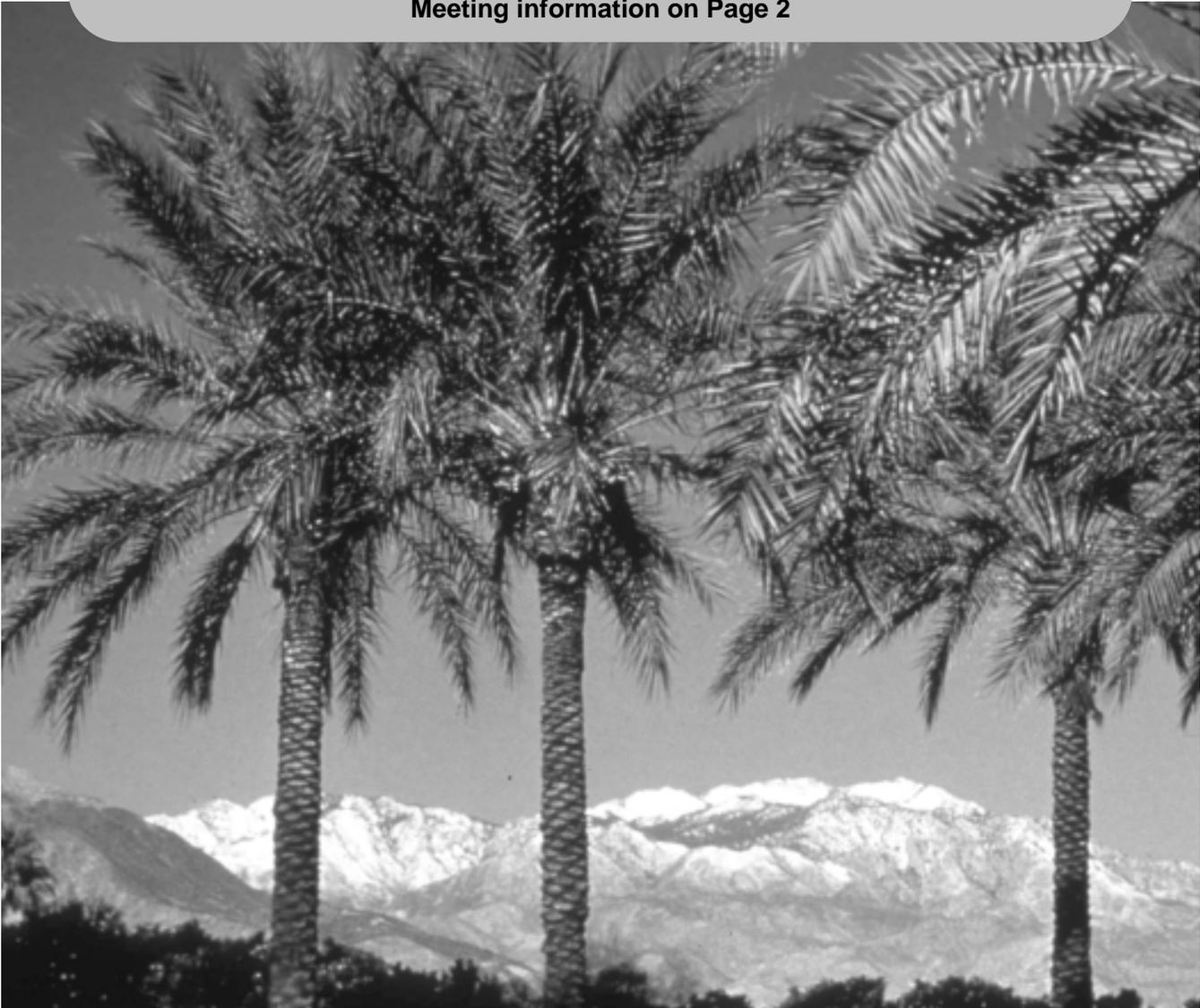


# RISK *newsletter*

Volume 24, Number 3  
Third Quarter 2004

*Published by the SOCIETY for RISK ANALYSIS*

**Society for Risk Analysis 2004 Annual Meeting**  
**“Risk Analysis: The Profession and the Future”**  
**Palm Springs, 5-8 December**  
**Meeting information on Page 2**



## Inside RISK

2004 Annual Meeting ..... 2  
Specialty Groups ..... 4  
Regulatory Risk Review ..... 5

Chapter News ..... 6  
News and Announcements ..... 7

Committees ..... 10  
SRA-Europe ..... 10  
Advertisements ..... 11

## “Risk Analysis: The Profession and the Future”

The Society for Risk Analysis 2004 Annual Meeting will be held in Palm Springs, California, 5-8 December.

The theme of this year’s meeting is “Risk Analysis: The Profession and the Future.”

“We had nearly 500 abstracts submitted, between one-third and one-half of which were embedded in proposed symposia,” said Program Committee Co-chairs Gail Charnley and Steve Lewis. “We have good international representation and will cover the usual range of fascinating topics—terrorism, dose-response issues, risk communication, risk policy, economics, exposure, engineering risk, ecological risk, etc. Based on years of urging by SRA members, this year’s meeting will feature computer-projected visual aids (that is, PowerPoint). We hope that this change helps to augment the quality—and the impact—of the platform and platform-poster sessions. Also, there will be an official SRA golf outing on Sunday afternoon prior to the meeting.”

The continuing education program for the annual meeting is still under development, but so far the following workshops are being lined up:

- Intermediate Topics on Health Risk Assessment of Chemical Mixtures

- Recommended Practice Regarding Selection, Application and Interpretation of Sensitivity Analysis Methods Applied to Exposure or Risk Assessment Models

- Ecological Risk Assessment Methods for Arid Environments

- Beyond Point Estimates: Risk Assessment Using Interval and Possibilistic Arithmetic

- Beyond Monte Carlo: An Introduction to Imprecise Probabilities

- SRA Reference House Workshop: Residential Exposure Assessment - A Primer

- Risk Assessment and Multi-Criteria Decision Analysis: A Framework for Managing Complex Environmental Challenges

- Risk Assessment for Microbial Hazards: An Introduction and Case Studies in Food and Water Safety and Animal and Plant Health

There are other workshops under consideration and many more activities being planned. Be sure to check for more information on the Society Web site (<http://www.sra.org/events.php>), in the next issue of the *RISK newsletter*, and in the preliminary program which will be mailed to members soon.

### Program Committee

Gail Charnley and Steve Lewis, cochairs, Cristina McLaughlin, Rick Belzer, Curtis Haymore, Cliff Scherer, Bob O’Connor, Bob Fares, Ann Fisher, Ron Brown, Annie Jarabek, John Keller, Steve Olin, Cynthia Mann, Linda Abbott, Stanley Levinson, Susan Flack, Rick Reiss, Margaret MacDonell, Igor Linkov, Randy Ryt, Felicia Wu, Mark Powell, Paul Locke, and Charlie Menzie



Downtown Palm Springs features a blend of Spanish-Mediterranean architecture and food.



Windmill Farms generate clean and renewable electricity from winds in the Banning Pass. Tours are available.

## Palm Springs: “America’s Premier Desert Resort”

The Wyndham Palm Springs is part of the Palm Springs Desert Resorts, eight distinctively charming desert resort cities in Riverside County—Cathedral City, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage. Year-round sunshine and world-class hotel and resort amenities entertain 3 million visitors each year, including families, newlyweds, seniors, and singles.

The Palm Springs Desert Resorts is a mecca for golf, tennis, and sunbathing, and the recreational opportunities are endless. Travel by Jeep, by covered wagon, or on foot through historic Palm Springs Indian Canyons. Picnic by a peaceful running stream. Watch a polo match or see the valley, part of the Colorado Desert, from a hot-air balloon.

Plan a trip to attend the many world-class events such as jazz, arts, and film festivals. Rejuvenate with a spa treatment or soak in natural mineral waters. Visit the desert museums and art galleries. Sample a date shake and learn about the desert’s second largest industry, agriculture, at a local date garden.

Spend a day shopping trendy boutiques on historic Palm Canyon Drive or exclusive El Paseo or in air-conditioned malls such as Westfield Shoppingtown Center Palm Desert, Desert Crossing Shopping Center, or the Palm Springs Mall.

Restaurants vary from formal and elegant to casual or poolside, with cuisine ranging from French, Mexican, and Italian to seafood and California Bistro. Vibrant nightlife in-

cludes professional theater, piano bars, coffee house jazz, and dance clubs.



**Palm Springs Aerial Tramway takes its passengers from 2,000 to 8,500 feet up Mt. San Jacinto with awe-inspiring views, hiking, and dining on top.**



**The Indian Canyons**

World famous as “America’s Premier Desert Resort,” Palm Springs is home to many popular desert attractions including the Palm Springs Aerial Tramway and Knott’s Soak City USA waterpark. Palm Springs Desert Museum is a showcase of Western and contemporary art, natural science, and performing arts in the Annenberg Theater. Palm Springs Air Museum showcases flying aircraft from World War II. The Indian Canyons, owned and operated by the Agua Caliente Band of Cahuilla Indians, is North America’s largest palm oasis.

The Palm Springs Desert Resorts is easily accessible by car, only two hours from Los Angeles and San Diego. Palm Springs International Airport services travelers from anywhere in the world, connecting many visitors from Los Angeles International Airport or the Ontario International Airport.

For a free Ultimate Guide, call 800/41-RELAX or write Palm Springs Desert Resorts Convention and Visitors Authority, 69-930 Highway 111, Suite 201, Rancho Mirage, CA 92270. Take a look at the Palm Springs Desert Resorts on the Internet at [www.palmspringsusa.com](http://www.palmspringsusa.com).

*Information provided by the Palm Springs Desert Resorts Web site, [www.palmspringsusa.com](http://www.palmspringsusa.com)*

*Photos of Palm Springs on pages 1, 2, and 3 courtesy of Palm Springs Bureau of Tourism*



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.



## Specialty Groups

### Risk Communication Specialty Group

*Joseph Arvai, Chair*

It's not too early to begin thinking about the upcoming annual meeting in Palm Springs. At the time of this writing, members of the Risk Communication Specialty Group (RCSG) Executive Committee are working hard on the review of abstracts submitted for oral and poster presentations (see last year's Third Quarter issue of the *RISK newsletter* for an excellent description of how the Executive Committee and our representatives at the Planning Committee Meeting go about this task). As always, we're excited by the high quality of the submissions and we look forward to seeing you in December.

As in other years, we will be holding an annual business meeting at which we discuss the state of our specialty group, announce the winners of the Student Paper Competition (sponsored again by ExxonMobil), and hold elections for open positions on the Executive Committee. With respect to the latter point, we seek nominations for the positions of vice-chair, secretary, and student representative. In addition to these positions, there are also openings on the at-large Executive Committee. Our specialty group has many exceptional people with great ideas; I'm hoping they'll step forward and serve our discipline. Please forward the names of nominees to Joe Arvai, current chair of the RCSG (arvai.7@osu.edu).

Finally, a typical feature of the annual meeting is an informal RCSG breakfast. In the past we've met to discuss new research ideas, emerging issues, curriculum, and students' interests. I'd be delighted if we continue with this trend and meet again over morning coffee and pastries (preferably outside, in the sun—or better yet, over golf). If you have any suggestions regarding a topic or format for this meeting, please pass them on to me.

Until then—in the words of Garrison Keillor—be well, do good work, and keep in touch.

### Dose Response Specialty Group

*Gary L. Foureman, President*

The second of the Dose Response Specialty Group's (DRSG) teleseminars for 2004 was delivered during the 1 June meeting time by Dr. Dave Gaylor of Gaylor and Associates, LLC. His title was "Dose-Dependent Transitions in Toxic Mechanisms: Implications for Risk Assessment." Dave discussed his recent work with Rory Conolly and Werner Lutz on testing for J-shaped curves. He used cell proliferation data on formaldehyde to illustrate the calculation of a zero-equivalent dose (ZED) to use as a point of departure for establishing a reference dose. The seminar was well attended, with 20 vocal participants. Several general issues were raised regarding the use of a ZED in risk/safety assessment, and several specific questions were raised regarding the use and interpretation of the formaldehyde data.

The next teleseminar is scheduled for 7 September, when Dr. Walter Piegorsch of the University of South Carolina will present on "Benchmark-Dose Shopping with Proper Confidence." All are encouraged to participate by responding to the electronic seminar notification and calling 202-275-0166 and entering code 0577# when prompted.

The DRSG has continued in its coordinated development of scientific sessions for the national meeting in December. DRSG's Student Award for Meritorious Research has been advertised.

Longtime and valued member Margaret (Peg) Coleman and immediate Past President John Lipscomb have developed a DRSG poster describing our functions, listing principal DRSG activities, and presenting photographs of the current Executive Committee. It's colorful and catches one's eye from quite a distance. Peg and John have developed it in an electronic format, so it is available to any DRSG members who would care to have it with them for display at meetings or wherever scientists interested in dose response may gather. Please contact John (lipscomb.john@epamail.epa.gov) for further specifics.

### Economics and Benefits Analysis Specialty Group

*Cristina McLaughlin, Chair, and Curtis Haymore, Vice-chair*

The purpose of the Economics and Benefits Analysis Specialty Group (EBASG) is to provide a forum for economists, risk assessors, scientists, and policy makers to discuss economics and risk assessment issues.

While the focus of the specialty group is to examine integrating economics and risk assessment, the group also hopes to promote a better understanding between economics and other disciplines.

The EBASG is having a busy year planning events for the upcoming Society for Risk Analysis meeting in Palm Springs. The group will be sponsoring several symposia, including one on the state of the art of economics in risk analysis and one on risk-based allocation of counter-terrorism resources.

If you are interested in getting more involved this year, or have any ideas or suggestions for the group, contact either Cristina McLaughlin (cristina.mclaughlin@cfsan.fda.gov) or Curtis Haymore (chaymore@cadmusgroup.com).

### Ecological Risk Assessment Specialty Group

*Randy Ryti, Chair, and Igor Linkov, Past Chair*

Charlie Menzie and Randy Ryti participated in the program committee for the 2004 Annual Meeting and there are several interesting ecological risk assessment submissions. Topics planned include papers with an arid theme or a landscape/regional scale and a series of papers on approaches for spatially explicit ecological risk assessment. There is also a continuing education class on "Ecological Risk Assessment of Arid and Semiarid Environments" organized by Randy Ryti, Jim Markwiese, Bruce Hope, Richard Myerhoff, and Bob Gensemer.

The Ecological Risk Assessment Specialty Group (ERASG) started to have conference calls to dialog on issues relating to the group. The next conference call is scheduled for 8 July and the agenda is tentatively to include continued discussions on the annual meeting program, ERASG student travel award submittals, nominations for chair-elect, and corporate sponsors. Society for Risk Analysis (SRA) members interested in participating in these conference calls should contact Randy Ryti (rryti1@neptuneinc.org). Members are also encouraged to provide nominations (including self nominations) to Randy Ryti.

SRA members might also be interested in a NATO workshop on “Ecotoxicology, Ecological Risk Assessment and Multiple Stressors.” The workshop will include four days of sessions on pertinent themes, with presentations on geographically and culturally diverse respondent panels, and adequate opportunity for small-group dialogue and working sessions. Themes of the workshop include Ecotoxicology; Ecological Risk Assessment and Multiple Stressors and Defining Acceptable Risks and Habitat Alteration to Accommodate Critical Infrastructure; and Environmental Security and Sustainable Development. One day will be devoted to working group discussions. The participants will be organized into three working groups:

- W.G. 1. Methods and Tools in Ecotoxicology and Ecological Risk Assessment,

- W.G. 2. Role of Ecological Risk Assessment in Addressing Environmental Security Needs,
- W.G. 3. Environmental Security and Sustainable Development.

Each working group will be cochaired by two scientists. Prior to the workshop, cochairs will develop the agenda for the working groups, which could include oral presentations and discussions on the relevant issues. Cochairs will present interim summaries during the conference and will report group findings and recommendations on the last day of the workshop. Cochairs and reporters will be responsible for writing summaries of the group discussions for potential publication.

For more information please go to <http://www.iseu.by/eng/conf/nato2004> or contact Igor Linkov (Linkov@CambridgeEnvironmental.com). 



## Regulatory Risk Review

### Let's Talk Risk

David P. Clarke

On 25 March 2004, the US Environmental Protection Agency (EPA) announced in the *Federal Register* (F.R.) that a Staff Paper titled “An Examination of EPA Risk Assessment Principles and Practices” was available for public comment. In essence, EPA wanted to know which of the many risk issues discussed in the Staff Paper are ripe for further discussion and action. Comments were due 23 June, but that’s not the end of the discussion. Rather, it’s the beginning. And, as the F.R. notice suggested, “As the dialog proceeds, newer and better approaches for risk assessment may emerge.” Certainly one can hope so.

With its Staff Paper, EPA has given the risk community a remarkable opportunity to consider some of the key questions that have dogged regulatory risk debates for decades. EPA’s paper—probably the most intensive scrutiny of its risk assessment policies and practices that the Agency has ever undertaken, involving some 80 EPA risk specialists and many months of work—raises the question of whether some of these risk debates are now sufficiently mature to resolve. More broadly, as the journal *Human & Ecological Risk Assessment* asked in a recent special edition commemorating the 20<sup>th</sup> anniversary of the National Research Council’s “Red Book” (the 1983 volume that defined the four-step paradigm upon which the United States has built its risk assessment system)—Is it time for a “Red Book II”?

A sampling of EPA’s Staff Paper provides some sense of issues that bear closer watching and discussion. For instance, the paper tells us: “One of the major comments on EPA risk assessment practices is that they do not characterize uncertainty and variability transparently enough. This is an issue EPA is attempting to address.” The Agency notes, for instance, that “as methods and supporting data continue to be developed” it will move toward building uncertainty analysis into study designs.

In a move that may advance this discussion, EPA’s Science

Advisory Board at a 3 June meeting adopted a self-initiated project to study how the Agency might improve its use of probabilistic risk analysis.

EPA’s Staff Paper also notes that many of its risk assessments conclude with risk values that have several significant digits. “This implies a certain level of precision that probably is not justified,” and, consequently, “EPA is currently addressing this

**With its Staff Paper, EPA has given the risk community a remarkable opportunity to consider some of the key questions that have dogged regulatory risk debates for decades.**

practice of characterizing the values.” Because this issue has been a long-standing concern among critics of EPA risk assessments, how the Agency addresses the practice will be well worth tracking.

In discussing the use of probabilistic analysis at EPA,

the Agency concludes: “There is still more work to be done, particularly in the hazard assessment area and in combining the hazard assessment and exposure assessment results.” While EPA has taken steps to promote the use of probabilistic analysis—for instance, with the publication of its 1997 *Policy for Use of Probabilistic Analysis in Risk Assessment*—the Staff Paper comments that such assessments “could probably be used more frequently.” Especially helpful would be probabilistic risk assessments “incorporating the entire process, including the toxicity part of the risk assessment and not only the exposure component,” as is currently the practice. Critics asked for expanded use of probabilistic analysis; EPA’s Task Force agreed with this suggestion. That’s noteworthy.

Also noteworthy is EPA’s announcement that “overarching guidance is needed to improve the ease and consistency of risk assessment for susceptible populations and life-stages.” When EPA proposed revisions to its carcinogen risk assessment guidelines, how the Agency handled the issue of children as a susceptible subpopulation proved to be among the most contentious in the entire revision process. New overarching guidance will certainly prompt a lot of talk.

Now that a dialog has begun on EPA’s risk practices, and possibly on the next phase of “The Red Book,” we should listen for voices from the risk community to chime in. 



## Chapter News

### Chicago Regional Chapter

*Margaret MacDonell, President*

Dr. Charlie Menzie (recipient of the Society for Risk Analysis 2003 Outstanding Risk Practitioner Award) presented a seminar to the Chicago Regional Chapter at Argonne National Laboratory on 17 June. The audience included several members of US Environmental Protection Agency (EPA) Region 5, environmental companies, and Argonne. Charlie spoke on "A Spatial Exposure Model: Assessing Cumulative Risks to Habitats and Ecological Receptors and the Link to Human Health." He discussed the importance of evaluating key contributors to uncertainty and variability as well as differences among deterministic, microenvironment, and population incidence models. He illustrated the usefulness of combining visualization tools such as grid maps with contaminant overlays and assigned habitat suitability indices. Habitat equivalency approaches, with habitat as the common denominator and an emphasis on preservation and environmental benefit, are currently being implemented by various agencies, for example, at sediment dredging/disposal sites. In extended lively discussion with the audience, Charlie addressed questions ranging from the bases of various bioaccumulation factors (indicating that in certain cases regression and biokinetic models have been applied) to seasonal differences in contaminant levels within the water column (noting biological activity in the sediment and nonparticle flux can play a role).

At the 29 June meeting Dr. Colleen Olsberg discussed the EPA Toxicity and Exposure Assessment for Children's Health (TEACH) database that summarizes toxicity and exposure information for key environmental contaminants. New officer elections were held at the beginning of this meeting, and results of a recent chapter survey soliciting input on speakers/topics and meeting times and locations was be discussed.

### National Capital Area Chapter

*Cathy St. Hilaire, Secretary*

Approximately 25 people attended a seminar cosponsored by the National Capital Area Chapter (NCAC) and the George Washington University Department of Environmental and Occupational Health on 17 March 2004. Former Society for Risk Analysis president and current editor of *Risk Analysis*, Dr. Elizabeth Anderson, was the featured speaker and presented a talk on "Risk Assessment - A Historical Perspective from Policy to Public Health." An abstract of the presentation is available from the NCAC secretary, Cathy St. Hilaire at [csthilaire@sciences.com](mailto:csthilaire@sciences.com). Amy Wilkins, a graduate student at George Washington University, won the student SRA membership raffle held after the presentation and has agreed to serve as student representative for the chapter. NCAC officers, the speaker, and other interested seminar attendees met for dinner at a nearby restaurant after the seminar to continue the discussion.

Although the next seminar has not been scheduled as yet, the chapter is exploring the idea of doing a seminar on peer review and is also planning to cosponsor a meeting with the DC chapter of the Society for Toxicology on 2 and 3 November, with details to follow.

Please check the NCAC Web site for more information (<http://groups.msn.com/NationalCapitolAreaChapterSRA>).

### Rocky Mountain Chapter

*Yvette Lowney, President*

The Rocky Mountain Chapter has completed a survey of area SRA members and is in the process of scheduling a lunch meeting. The meeting will include a technical presentation. One of the goals of this meeting will be to assess attendance and interest in maintaining an active local chapter. To ensure that you are included in any meeting announcements, please send your email contact information to Yvette Lowney at [lowneyy@exponent.com](mailto:lowneyy@exponent.com).

### New England Chapter

*Susan Matkoski, Newsletter Coordinator*

The first presentation at the January New England Chapter meeting featured two speakers who work on reducing the use of toxic chemicals by Boston neighborhood residents. Don Rivard, President of Rivard Associates, Boston, Massachusetts, and Bryan Glascock, Esq., of the Environmental Department, City of Boston, spoke about the Integrated Pest Management (IPM) approach and efforts with Harvard School of Public Health (HSPH) to implement a project to educate and empower urban residents to deter the indiscriminate use of commercial pesticides. Many of these pesticides are known asthma triggers in populations that experience the effects of asthma in epidemic proportions. Brad Mitchell of the State of Massachusetts Pesticide Board followed with an excellent regulatory overview of the Child and Family Protection Act and a discussion of IPM and other state efforts to reduce risks from pesticides that may affect families in the commonwealth.

In February the topic was risk management methods. Presentations featured Cheryl Montgomery, President of Montgomery Associates, followed by Thomas P. Seager of Environmental Research Group, University of New Hampshire. Cheryl led a discourse on endpoint considerations with implications for characterizing risk by describing a case study. Tom used an estuarine sediment case to present the multi-criteria decision-analysis management methods developed in his work at The Center for Contaminated Sediments.

In March, David Ropeik, Director of Risk Communication at the Harvard Center for Risk Analysis, presented a dynamic talk on "The Need for Better Risk Communication" at a well-attended annual joint meeting of our local SRA chapter and Licensed Site Professional Association (an organization of professionals involved in cleanup of contaminated sites in Massachusetts).

In April, the topic was on risk management issues in managing Brownfield sites. Michael Long, Vice President of Willis Environmental Practice, Willis North America, Boston, Massachusetts, presented a case study to highlight risk and liability issues as they arise in dealing with contamination at Brownfield sites. Catherine Finneran, Brownfields Coordinator of the Massachusetts Department of Environmental Protection, described the status of the state and federal Brownfield initiative and discussed some interesting aspects of the program.

Our May meeting featured two speakers: Lisa Campe, Vice President of Woodard & Curran, presented her work on vapor intrusion and risks to residents from contaminated groundwater; Jonathan Willwerding of Abt Associates, Cambridge, followed with a talk about the application of risk models to save lives. Specifically, Jon explored whether it is feasible to apply probabilistic risk assessment models to predict medical errors

caused when trauma patients are transferred from the emergency room to the intensive care unit.

Information/slides from many of the talks are posted on our Web site: [www.sra-ne.org](http://www.sra-ne.org).

### Membership and Communication

We draw attendees to our meetings (and speakers) from New England generally, not just the Boston area. Membership is not necessary for attendance at meetings and activities; however, those interested in becoming members or in reading our electronically distributed monthly newsletter should communicate with Secretary Karen Vetrano ([kvetrano@trcsolutions.com](mailto:kvetrano@trcsolutions.com)) or with either copresident, Jennifer Charles ([jenEnviro@aol.com](mailto:jenEnviro@aol.com)) or Rob Goble ([rgoble@clarku.edu](mailto:rgoble@clarku.edu)). We also have a Web site which is linked to the national SRA site and stands alone at [www.sra-ne.org](http://www.sra-ne.org).



## News and Announcements

### Dimensions of Environmental Security in the Mediterranean Region

*Igor Linkov, Benoit Morel, Abou Ramadan, Alon Tal, Jacques Ganoulis, Antonio Marquina, Eugene Levner, and David Letnik*

Dimensions of environmental security in the Mediterranean region were discussed at the NATO (North Atlantic Treaty Organization) Advanced Workshop titled "The Role of Risk Assessment in Environmental Security and Emergency Preparedness in the Mediterranean Region." The workshop started with a one-day meeting in Egypt where organizers met with Egyptian scientists and diplomats from the Ministry of Foreign Affairs to discuss environmental security and emergency preparedness in the region as well as to promote the catalytic role of NATO in bringing scientists and government officials together.

The message that countries in the Mediterranean region are located in areas sensitive to rapid changes in the demand for water and food and that they may also be among the first victims of global climate change was taken by the group to the meeting in Eilat. There were about 40 participants from 13 countries discussing environmental challenges and hazards that are likely to increase in the whole region and may lead to future violent conflicts if the causes of these environmental problems are not recognized. The meeting discussed potential countermeasures and emergency plans that should be launched within the framework of cooperative strategies of conflict avoidance. Multilateral cooperation with input from scientific, political, and community organizations will need to occur in the political, economic, and social sectors in order to have the broadest impacts. Regulatory policies will need to address a broad range of environmental risks that

include human health and welfare. The members of the discussion group were optimistic that states within this region would be working together by 2015-2020.



**Meeting in Al-Azar University, Cairo, Egypt: Drs. M. Emara (ARW Codirector), A. Jubier (NATO), I. Linkov (ARW Cochairman), and R. Aly (Vice-Chairman, Environment and Hazardous Waste Center)**

The workshop participants set up a network of scientists to work together on regional risk and security issues. The participants dubbed the network MEERA-NET—the Middle Eastern Environmental Risk Assessment Network. MEERA-NET will increase international cooperation through the proposal of new institutions for effective environmental management. It will promote peace through the harmonization of legislation, guidelines, and methodologies. With its lofty goals, MEERA-NET should attract international funding.

The workshop culminated at the Arava Institute for Environmental Studies (AIES). The Institute is situated on Kibbutz Ketura near the Jordanian and Egyptian borders and the Gulf of Aqaba/Eilat. It attracts students and faculty from the region and abroad. Workshop participants reported major findings and proposed future directions of research to a group of international students. There was consensus that future conflicts in the region will have to be addressed through international intervention as little informal cooperation is occurring between Israel and her neighbors.



**B. Morel, ARW Director, and E. Levner, Organizing Committee member**

The meeting was an event supported by the NATO Programme for Security through Science. Additional support was provided by the Society for Risk Analysis and Isrotel.

## National Science Foundation Workshop on Reliable Engineering Computing

The National Science Foundation Workshop on Reliable Engineering Computing will be held 15-17 September 2004 at Georgia Institute of Technology in Savannah, Georgia. Across all branches of engineering, computational methods share the need for reliable results. Reliability can be achieved only if all sources of errors, approximations, and uncertainty are accounted for.

This workshop is unique in combining computer science, mathematics, and engineering analysis to discuss the reliability of engineering computations, providing a common forum by which to continue cross-disciplinary advisements in the field. It is hosted by the Center for Reliable Engineering Computing, Georgia Tech Savannah, and sponsored by the Computer & Systems Technology Division of the American Institute of Chemical Engineers, the National Science Foundation, the Society for Risk Analysis, Sun Microsystems, and the Georgia Institute of Technology. More information on the workshop can be found at [www.gtsav.gatech.edu/rec/recworkshop](http://www.gtsav.gatech.edu/rec/recworkshop).

Honorary cochairmen are Ramon E. Moore and Eldon R. Hansen; chairman is Rafi L. Muhanna, Georgia Institute of Technology; and cochairman is Robert L. Mullen, Case Western Reserve University. The Scientific Committee includes Götz Alefeld, University of Karlsruhe, Germany; B. Ross Barmish, University of Wisconsin-Madison; Daniel Berleant, Iowa State University; David Bogle, University College London; Kyung Choi, The University of Iowa; George Corliss, Marquette University; William Edmonson, University of Hampton; Scott Ferson, Applied Biomathematics; Roger Ghanem, Johns Hopkins University; Raphael Haftka, University of Florida; Baker Kearfott, University of Louisiana at Lafayette; Vladik Kreinovich, University of Texas at El Paso; Zissimos Mourelatos, Oakland University; PSV Nataraj, Indian Institute of Technology, India; Arnold Neumaier, University of Vienna, Austria; Efstratios Nikolaidis, University of Toledo; Steve Wojtkiewicz, Sandia National Laboratories; Mark Stadtherr, University of Notre Dame; and William Walster, Sun Microsystems.

### First Announcement

#### *Risk Assessment and Antimicrobial Resistance: Past, Present, and Future*

**28-29 September 2004, Washington, DC**

Antimicrobial resistance is a global public health concern. The most important mechanisms influencing the emergence of resistant infections in humans remain a matter of intense debate. The tools of risk assessment are increasingly applied to support risk management decisions, particularly for antimicrobials used in animal production.

This two-day symposium, sponsored by the Society for Risk Analysis (SRA), will explore the past, current, and future use of risk assessment in developing antimicrobial resistance policy.

#### **The symposium will:**

- Consider the state of the art of risk assessment for antimicrobial resistance
- Review and discuss current guidance documents related to the role of risk assessment in developing antimicrobial-resistance related policy
- Explore future directions in antimicrobial risk assessment

The symposium features invited speakers from international organizations, including the Food and Drug Administration-Center for Veterinary Medicine (USA), Health Canada (Canada), Cox Associates (USA), International Federation for Animal Health, OIE (World Organization for Animal Health), and Vose Consulting (France).

#### **Registration Fee:**

Before 1 September— \$375 (SRA member), \$425 (nonmember)

After 1 September—\$425 (SRA member), \$475 (nonmember)

If you would like more information, or would like to be added to the symposium mailing list, please contact [amr@decisionanalysis.com](mailto:amr@decisionanalysis.com).

## Comparative Risk Assessment and Multi-Criteria Decision Analysis: A Framework for Managing Contaminated Sediments

Todd Bridges, Igor Linkov, Greg Kiker, Tom Seager, and Kevin Gardner

The Society for Risk Analysis workshop “Comparative Risk Assessment and Multi-Criteria Decision Analysis: A Framework for Managing Contaminated Sediments,” organized by Drs. Todd Bridges and Igor Linkov, was held 22-24 June 2004.

Decision making in environmental projects is typically a complex and confusing exercise characterized by trade-offs between sociopolitical, environmental, and economic impacts. Cost-benefit analyses (CBAs) are often used, occasionally in concert with comparative risk assessment, to choose between competing alternatives. However, assessment of remedial, abatement, and land-use policies for contaminated sites involves multiple criteria such as cost, benefit, environmental impact, safety, and risk that may not be easily condensed into a single monetary value. Consequently, alternatives or trade-offs may be difficult to compare using cost-benefit analyses. In cases where it is possible to convert multiple criteria into a single, common unit, cost-benefit analysis may still be an insufficient decision-making tool, as traditional cost-benefit analyses often do not consider the preferences of all stakeholder groups. As a result of the deficiencies in current decision-making methodology, both government agencies and private firms may be slow to adopt or test new environmental technologies such as beneficial reuse of contaminated sediments or in-situ treatments. As an alternative to CBA, multi-criteria decision analysis (MCDA) and comparative risk assessment (CRA) offer scientific and theoretically sound analytical decision methods, but they have not been formalized in a framework readily applicable to environmental projects dealing with contaminated and disturbed sites where risk assessment and stakeholder participation are of crucial concern.

This workshop brought together an interdisciplinary group of some 50 experts to synthesize state-of-the-art research in the CRA and MCDA methods for the assessment of novel contaminated sediment management technologies in the context of public stakeholder values.

The workshop consisted of several plenary sessions, a panel discussion, and sessions in small workgroups. The introductory plenary session was designed to assess the decision makers’ needs as well as to highlight the deficiencies in the current decision process used in government and industry. The panel discussion included representatives of the US Environmental Protection Agency (EPA), the Department of Energy, the Navy, the Army Corps of Engineers, the Department of Transportation, and industry. The panel discussion was followed by additional plenary sessions that provided theoretical foundations for managing contaminated sediments using MCDA and CRA methods as well as examples of practical applications of MCDA and CRA tools in sediment management and related areas.

The small workgroups focused on specifically tailoring CRA and MCDA methods to deal with contaminated sediment management projects and identifying gaps in knowledge that may impede development or implementation of economical, environmentally protective technologies. The participants were organized into three workgroups, one on multicriteria decision analysis, and one on technological challenges in sediment management. Each workgroup was cochaired by two scientific experts. Prior to the workshop, the cochairs developed agendas for the workgroups and prepared white papers summarizing state-of-the-art developments in their respective workgroup focus topics. The white papers were discussed during the workshop and will be revised and prepared for publication as peer-reviewed papers within the next two months. The workshop was sponsored by the US Army Corps of Engineers, Dredging Operations Environmental Research program, and the University of New Hampshire Cooperative Institute for Coastal and Estuarine Environmental Technology. Additional support was provided by EPA, Sediment Management Working Group, International Lead Zinc Research Organization, British Petroleum, Cambridge Environmental Inc., ICF Consulting, and the National Oceanic and Atmospheric Administration.



David Charters, Igor Linkov, David Belluck, and Greg Kiker



Todd Bridges and Jerry Cura

### The *ITER* Database Joins the National Library of Medicine’s TOXNET System

Toxicology Excellence for Risk Assessment (*TERA*) announces the recent addition of its International Toxicity Estimates for Risk (*ITER*) Database (<http://www.TERA.org/ITER>) to the National Library of Medicine’s (NLM) TOXNET system (<http://toxnet.nlm.nih.gov>).

*ITER* is a free Internet database of human health risk values for over 600 chemicals of environmental concern. The addition of *ITER* to TOXNET is a benefit to both organizations and results in an enhanced risk resource. As part of TOXNET, *ITER* can now be searched by chemical synonym and via free text. In addition, a multifile searching function will soon be added

and will allow a single query to be run against multiple toxicological databases, including *ITER*.

*TERA* also announces the addition of new data from a number of additional organizations. These new data will strengthen *ITER* by providing additional risk values for existing chemicals, as well as expanding the coverage of chemicals with unique assessments from these organizations.

For *ITER* updates and announcements about new additions, see the *ITER* “What’s New” page at <http://www.TERA.org/ITER/what's%20new.htm>. Also see the 21 April 2004 press release on that Web site.





## Committees

### Finance Committee

#### Glacial Pace of SRA Financial Management Improvements Picks Up Speed

*Leslie Hushka, Treasurer*

Glaciers normally grow and recede so slowly that change is hard to recognize—hence the term “glacial pace” used to describe progress that is painfully slow or perhaps imperceptible. Some have used this term to describe progress in improving the Society for Risk Analysis (SRA) financial management systems and oversight capabilities. However, I can report significant movement on SRA’s financial management glacier.

At SRA’s December Meeting, we reported our success in crafting a new program-based accounting system for the Society. The system, now in the final stages of automation at the SRA Secretariat, identifies each major SRA program as a distinct entity. This will allow us to more accurately track revenue and expenses and enable Society leaders to provide informed management of these programs. We are now able to allocate the indirect costs of SRA management to individual programs and better assess the costs of proposed programmatic changes. We have learned, for example, that the average cost of serving each member is almost double our membership fee. Also, SRA specialty group leaders now have greater capacity to manage the funds budgeted by Council for specialty group activities associated with the annual meeting (\$500 per group). Specialty groups can now consider redirecting these funds from hotel food and coffee to other value-added activities, such as granting additional student awards or offsetting some costs for speakers to travel to the meeting. Using our new system, SRA’s Council has also set aside funds to begin dialogues with SRA members, and future members, across the globe on the future role and organizational structure for SRA.

In June, SRA’s Council acted on other products “glacially emerging” from the Finance Committee. We’ve formalized re-

duced member fees for students and two-member households who elect not to receive *Risk Analysis* and altered SRA’s fiscal year to allow better financial reporting to Council and the membership. These changes require minor changes to our by-laws, so please look for this when you see the annual ballot for officers and councilors this summer. The first place you can contribute to SRA is to become informed and vote.

Assuming that these proposed bylaws changes are approved, under the new schedule each committee and specialty group will be asked to identify Fiscal Year 2005 goals and objectives, including, as possible budget, requests by 21 September. The Executive Committee will review these plans in the fall to prioritize activities and programs to provide increased member services.

The Council also approved an investment and reserve policy, another significant step forward for the Society. This policy includes an emergency fund, reserves against financial downturns, and funds to be placed in short-term investments to grow and finance bold (!) new SRA initiatives. Similar to other professional societies, SRA will hire a professional financial advisor to develop a sound plan and manage these funds.

This newsletter article is the first in a series of updates that will detail the progress that we are making on the financial front, answer frequently asked questions, and provide a preview of upcoming items. In the next newsletter, we will provide a summary of the Society’s audited finances for 2003.

Yes, our progress on the financial front has been glacial, but similar to glacier movement, our landscape is forever changed. One small cheer for new land areas to explore and new vistas to behold!



## SRA-Europe

### Emergent Risks and Risk Management in Europe, 13<sup>th</sup> Annual Conference 2004 of SRA-E

*Andrea T. Thalmann, Information Officer*

The 13<sup>th</sup> annual Society for Risk Analysis-Europe (SRA-E) Conference will be held 15-17 November 2004 in Paris, France, and will be hosted by Olivier Salvi (INERIS, Executive Committee member of SRA-E), National Institute for Environment and Industrial Risks, France (INERIS, [www.ineris.fr](http://www.ineris.fr)), and the Department of Industrial Risks Management, France (EDF R&D, [www.edf.com](http://www.edf.com)).

The focus will be put on “Emergent Risks and Risk Management in Europe.” The preliminary list of topics includes low signals and emerging risks, developing a risk culture, risks in urban environment, integrated approaches and global risk management, research in the training for risk manager, and evolution of policies and regulation: prescription towards objective-oriented. Presently, more than 140 abstracts are registered, which signals the broad attention of a risk-related conference among scientists and practitioners in Europe. All planning activities are in process and the management board of the conference is looking forward to creating an open platform,

facilitating interesting discussions among the attendees about current risk-related topics.

Further information on the programme, annual meeting registration, and hotel booking can be found at the SRA-E Web site ([www.sraeurope.org](http://www.sraeurope.org)).

#### **The Management Board of the SRA-E Conference 2004**

**Chairmen of the Organizing Committee:** Olivier Salvi (INERIS, France) and Yves Dien (EDF R&D, France)

**Chairman of the Scientific Committee:** Jean-François Raffoux (INERIS, France)

**SRA-E Executive Committee:** Peter T. Allen (President), Peter M. Wiedemann (Past President), Jan M. Gutteling (Treasurer), Olivier Salvi (Chair of Nominations Committee), Scira Menoni (President-elect), Walter R. Stahel (Committee Member), and Andrea T. Thalmann (Information Officer)

**Conference Secretariat:** SRA-Europe, c/o In Conference Ltd, 10b Broughton Street Lane, Edinburgh EH1 3LY, Scotland, UK; phone: +44 (0)131 556 9245; fax: +44 (0)131 556 9638; email: [sra-e@in-conference.org.uk](mailto:sra-e@in-conference.org.uk)





## Advertisements

### The University of Michigan School of Public Health

#### *Faculty Position in Risk Science—Open Rank*

The Department of Environmental Health Sciences is seeking a tenure-track faculty member in the area of risk science. The successful candidate will play a central role in the development and operation of the new Center for Risk Science and Communication (CRSC). The mission of the CRSC is to provide graduate education in risk science and communication; conduct research in risk assessment analysis management and communication; and draw together the resources of the University of Michigan to address scientific, economic, and social issues associated with chemical, biological, and physical risks in the environment. A primary focus of the CRSC is risk related to chemical exposures.

Applicants should have a doctoral degree and a strong interest and experience in research that is directly related to risk science. Demonstrated expertise and experience in exposure assessment, hazard characterization, dose response characterization, risk assessment, and risk communication are appropriate. Preferred qualifications include (1) PhD or MD with an MPH in a field related to risk science, (2) background in quantitative methods in risk assessment, (3) relevant publications in peer-reviewed journals, (4) a track record of funded research, and (5) university-level teaching experience in the risk sciences. The primary criteria for evaluating candidates will be relevant research experience, scholarly publications, and university-level teaching experience. The rank of the appointment will depend on the level of accomplishment in these areas.

Responsibilities include (1) functioning as Principal Investigator or Co-Investigator in the conduct of research in risk science and related areas, (2) collaboration with scientists in disciplines related to risk science and communication, (3) authoring scholarly manuscripts for publication in the peer-reviewed literature, (4) developing and teaching courses in risk science at the master's and doctoral level, (5) advising and mentoring master's, doctoral, and post-doctoral trainees, (6) participating in the development and administration of the CRSC, and (7) involvement in the general affairs and governance of the Department of Environmental Health Sciences and the School of Public Health.

The Department of Environmental Health Sciences is also conducting a search for Department Chair. For further information, please contact Professor Thomas Robins, MD, MPH, at [trobins@umich.edu](mailto:trobins@umich.edu) or David Garabrant, MD, MPH, at [dhg@umich.edu](mailto:dhg@umich.edu).

The University of Michigan is an AA/EO employer that is responsive to the needs of dual-career couples. Minorities and women are particularly encouraged to apply.

Interested individuals should submit a cover letter before 1 October 2004 indicating their research interests and experience relevant to this position, curriculum vitae, list of publications, and references to **David H. Garabrant**, MD, MPH, Professor and Search Committee Chair, Department of Environmental Health Sciences, The University of Michigan School of Public Health, 1420 Washington Heights, Ann Arbor, Michigan 48109-2029.

### Scientist Position

ChemRisk is a consulting firm providing state-of-the-art toxicology, industrial hygiene, epidemiology, and risk assessment services to organizations that confront public health, occupational health, and environmental challenges. ChemRisk is seeking applicants with training in toxicology, pharmacology, the environmental sciences, risk assessment, biomedical engineering, industrial hygiene, medicine, or health physics.

This position requires a bachelor's degree in environmental or toxicological sciences. Candidates with a master's degree are preferred. Candidates with a background in consulting are especially desired. Positions are available in the San Francisco, California, Boulder, Colorado, and Pittsburgh, Pennsylvania, offices.

Please send résumés to ChemRisk, 100 Spear Street, Suite 525, San Francisco, CA 94105, or email: [hr@chemrisk.com](mailto:hr@chemrisk.com), phone: 415-896-2400, fax: 415-896-2444, [www.chemrisk.com](http://www.chemrisk.com).

### AAAS Risk Policy Opportunities in Washington, DC, 2005:06

**Po** Work with **policy-makers** on the economic, environmental and human health aspects of risk. Learn about risk analysis at federal agencies that use scientists and engineers in regulatory decision-making. AAAS Public Policy Fellowship Programs provide one-year opportunities for scientists and engineers to apply their scientific and technical input to issues relating to risk, beginning in September 2005. Qualified Fellows serve in the U.S. Department of Agriculture, the Environmental Protection Agency or the Food and Drug Administration. The stipend is \$62,000.

**Fe** The **AAAS Risk Policy Fellows Program** is sponsored by the American Association for the Advancement of Science (AAAS). It is designed to provide each Fellow with a unique public policy learning experience and to bring technical backgrounds and external perspectives to decision-making in the U.S. government. Applicants must have a PhD or an equivalent doctoral-level degree by the application deadline (January 10, 2005). Underrepresented minorities and persons with disabilities are encouraged to apply.

For more information: Phone: 202/326-6700 • E-mail: [fellowships@aaas.org](mailto:fellowships@aaas.org)

**AAAS**  
ADVANCING SCIENCE, SERVING SOCIETY  
[www.fellowships.aaas.org](http://www.fellowships.aaas.org)

### Deadline for RISK newsletter Submissions

Information to be included in the **Fourth Quarter 2004 SRA RISK newsletter**, to be mailed early November, should be sent to Mary Walchuk, RISK newsletter Managing Editor (115 Westwood Dr., Mankato, MN 56001; phone: 507-625-6142; fax: 507-625-1792; email: [mwalchuk@hickorytech.net](mailto:mwalchuk@hickorytech.net)) no later than **20 September**.

See our advertising policy, with deadlines and rates, on page 12.



RISK newsletter is  
published by the Society  
for Risk Analysis

Genevieve S. Roessler, *Editor*, gnrsslr@frontiernet.net  
Mary A. Walchuk, *Managing Editor*, mwalchuk@hickorytech.net  
Sharon R. Hebl, *Editorial Associate*  
Gail Charnley, *Associate Editor*,  
charnley@healthriskstrategies.com  
David Clarke, *Contributing Editor*, tgclarke@erols.com

*Society Officers:*

Caron Chess, *President*, Chess\_C@aesop.Rutgers.edu  
Baruch Fischhoff, *President-elect*, baruch@cmu.edu  
Michael Dourson, *Secretary*, dourson@tera.org  
Leslie J. Hushka, *Treasurer*, leslie.j.hushka@exxonmobil.com  
Pamela R.D. Williams, *Treasurer-elect*,  
pwilliams@chemrisk.com  
Bernard D. Goldstein, *Past President*,  
bdgold@pitt.edu

*Members of SRA Council:*

Ann Bostrom, ann.bostrom@pubpolicy.gatech.edu  
Rachel A. Davidson, rad24@cornell.edu  
Jack Fowle, III, fowle.jack@epa.gov  
George M. Gray, ggray@hsph.harvard.edu  
Jan M. Gutteling, j.m.gutteling@wmw.utwente.nl  
Lorenz Rhomberg, LRhomberg@GradientCorp.com  
Kimberly Thompson, KimT@hsph.Harvard.edu  
Wendy Wagner, Wagner9@attglobal.net  
Jonathan B. Wiener, wiener@law.duke.edu

*Secretariat:* Richard J. Burk Jr., Executive Secretary, Society for Risk Analysis, 1313 Dolley Madison Blvd., Suite 402, McLean, VA 22102; phone: 703-790-1745; fax: 703-790-2672; email: SRA@BurkInc.com

*Publications Chair:* Bernard D. Goldstein, phone: 412-624-3001, fax: 412-624-3309, email: bdgold@pitt.edu

*Newsletter Contributions:* Send to Mary Walchuk, Managing Editor, RISK newsletter, 115 Westwood Dr., Mankato, MN 56001; phone: 507-625-6142; fax: 507-625-1792; email: mwalchuk@hickorytech.net

*Address Changes:* Send to SRA@BurkInc.com

**SOCIETY FOR RISK ANALYSIS**  
**1313 Dolley Madison Blvd., Suite 402**  
**McLean, VA 22101**

## RISK newsletter and SRA Web Site Advertising Policy

Books, software, courses, and events may be advertised in the Society for Risk Analysis (SRA) RISK newsletter or on the SRA Web site at a cost of \$250 for up to 150 words. There is a charge of \$100 for each additional 50 words.

Ads may be placed both in the RISK newsletter and on the Web site for \$375 for 150 words and \$100 for each additional 50 words.

Employment opportunity ads (up to 200 words) are placed free of charge in the RISK newsletter and on the SRA Web site. Members of SRA may place, at no charge, an advertisement seeking employment for themselves as a benefit of SRA membership.

Camera-ready ads for the RISK newsletter are accepted at a cost of \$250 for a 3.25-inch-wide by 3-inch-high box. The height of a camera-ready ad may be increased beyond 3 inches at a cost of \$100 per inch.

The RISK newsletter is published four times a year. Submit advertisements to the Managing Editor, with billing instructions, by 30 December for the First Quarter issue (published early February), 30 March for the Second Quarter issue (early May), 30 June for the Third Quarter issue (early August), and 30 September for the Fourth Quarter issue (early November). Send to Mary Walchuk, Managing Editor, RISK newsletter, 115 Westwood Dr., Mankato, MN 56001; phone: 507-625-6142; fax: 507-625-1792; email: mwalchuk@hickorytech.net.

To place an employment ad on the Web site, fill out the online submittal form at [www.sra.org/opptys.php](http://www.sra.org/opptys.php). To place other ads on the Web site contact the SRA Webmaster at [webmaster@sra.org](mailto:webmaster@sra.org). Ads placed on the Web site will usually appear several days after receipt. For additional information see the Web site at [www.sra.org/policy.htm#events](http://www.sra.org/policy.htm#events).

**Society for Risk Analysis Web Site**  
**[www.sra.org](http://www.sra.org)**

PRESORTED  
STANDARD  
US POSTAGE  
PAID  
ROCHESTER MN  
PERMIT NO 289