

# RISK newsletter

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## SRA Welcomes New Officers

The year 2001 Society for Risk Analysis (SRA) officers announced at the Annual Meeting held in Arlington, Virginia, 3-6 December 2000 are President-elect Robin Cantor, Treasurer Richard Belzer, and Councilors Charles Haas, Steven Lewis, and Peter Wiedemann.

### President-Elect Robin Cantor

President-elect Robin Cantor was Councilor of the SRA from 1996 to 1999, during which time she was also Chair of the Grants Management Committee. In 1999 she received the Outstanding Service Award from the Society for her work in organizing and raising funds for the Symposium on Risk and Governance and for highlighting risk education at the annual meetings, convening educators in the risk area which has continued over several meetings, and establishing an education committee in the SRA Council to institutionalize this effort. She currently serves on the editorial boards of the *Journal of Risk Analysis* and the *Journal of Risk Research*.



Dr. Cantor has a B.S. in mathematics from Indiana University of Pennsylvania and a Ph.D. in economics from Duke University. She recently shared information about herself and her job as SRA President-elect.

#### What is your current job title? What does your job entail?

My current title is Principal and Managing Director of LECG, LLC. LECG was formerly called Law and Economics Consulting Group. LECG was founded in 1988 with a vision to bring together highly credentialed experts in economics and finance to help solve real-world problems in both the public and private sectors. Our primary activity involves producing sophisticated economic analyses to solve complex problems, resolve disputes, and develop sound public policy.

LECG has 17 offices located throughout the world. I principally work in the

Washington, D.C., office, but LECG truly functions as a global office place. I work with people in nearly all of the offices, and we use the latest technological tools and management practices to make this happen in a seamless fashion. My projects generally involve about a dozen people and range from years to months in duration. I am responsible for managing and conducting much of the economic research and, in some cases, I have also provided expert testimony.

Some of the areas which I have examined include statistical benchmarking of jury awards, economic benefits from waste management investments, price fixing in industrial and consumer products, measurement and valuation of train derailment risks, and the economic consequences of product disparagement. LECG is the most active and stimulating work environment that I have ever encountered. My colleagues are smart, highly motivated, and committed, and it is truly a pleasure to work with them.

#### What in your background—school, work, and with SRA—has prepared you for the job of SRA President?

First and foremost, I like to be challenged. SRA is a wonderfully diverse professional society, and I enjoy the wide range of perspectives and backgrounds that are reflected in the membership. In my professional life, I have always worked on multi- and interdisciplinary issues, and my involvement with others at SRA is consistent with what is for me a basic intellectual preference.

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

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

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

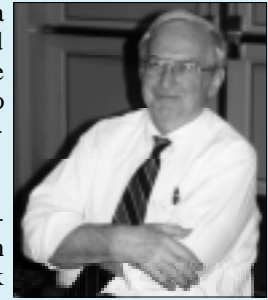
Members of SRA include professionals from a wide range of institutions, including federal, state, and local governments, small and large industries, private and public academic institutions, not-for-profit organizations, law firms, and consulting groups. Those professionals include statisticians, engineers,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

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**Society for Risk Analysis**  
**Web Site**  
**www.sra.org**

## President's Message

I write this as the nation's capital prepares for the inauguration of a new President and the influx of a new administration. Some new and returning members of Congress will bring in new staff members. There will be many opportunities in the coming months for risk analysis to be a part of setting of agendas, establishing positions, and making decisions. A few of the potential opportunities:



- Ballistic Missile Defense (BMD): what are the system failure issues, what are the necessary tests, what can be learned by a rigorous application of probabilistic risk assessment?
- Alaska National Wildlife Refuge (ANWR): what are the ecological risks of exploration and extraction, what can be learned from a cost-benefit analysis of the need for oil, the likelihood of production, and the environmental damages?
- Yucca Mountain High Level Waste (HLW) repository: has the site suitability work been done in a way that meets SRA standards, are realistic options considered?
- Reviewing EPA, OSHA, and FDA regulations that were published for comment at the end of the current administration.

These and other issues will be opportunities for SRA to help—not by taking positions, but by assisting in clarifying the issues.

The SRA has been discussing for several years whether to take positions on issues. Past President Gail Chamley has led the effort to reach closure on this issue. The Third Quarter 2000 issue of the *RISK newsletter* presented a proposal, which was discussed at a session at the Annual Meeting. The results of that session will be used for the next steps on this issue (see page 3 of this *newsletter*).

However, we need not take positions to be helpful in the upcoming government discussions. In her plenary talk at the 2000 Annual Meeting, Elisabeth Paté-Cornell described several instances in which applying the techniques of risk analysis was of great help in addressing important real-world problems. The new administration, along with the Congress, will be grappling with real-world problems, which tend to be messy, lack complete information, and are controversial. It is in these situations that our methodologies can be of substantial help—so long as we avoid becoming partisans.

What will be necessary is to establish a list of SRA members who will be willing to volunteer time to assist, when called upon, in providing expert commentary to Congress or the administration—pro bono. If you would be interested, please send a note, giving a short summary of your area of expertise (and why you are an expert), to me c/o Rburk@BurkInc.com.

As I indicated in my statement as a candidate for SRA President, I believe we can and should become more involved in the risk issues which are addressed in Congress and within the administration. A new administration provides an excellent opportunity. Let us seize that opportunity.

John F. Ahearne

## Shared Principles of Risk Analysis Special Session at 2000 Annual Meeting

Gail Charnley, Past President

As part of Society for Risk Analysis (SRA) efforts to develop a set of shared principles of risk analysis, a special session focused on the principles was held at the 2000 Annual Meeting. The purpose of the session, ably chaired by Caron Chess, was to provide the SRA membership with an opportunity to comment generally on the idea of developing principles and specifically on the draft principles that had been available for review on the SRA Web site and in an earlier edition of the *RISK newsletter*.

The principles arose as a result of the confluence of two phenomena. The first was an ongoing discussion among the Society membership of the advisability of taking official Society positions on policy issues. The second was the effort of Dale Hattis, in collaboration with a diverse group of Society members, to develop risk analysis ideals. Dale's draft ideals were distilled into draft principles. Some members thought that if the Society could agree on a shared set of principles, those principles could serve as a basis for developing policy positions should we decide to do so in the future. If we continue to refrain from taking positions, we could use the principles at least to clarify how risk analysis might be useful in decision making about policy issues.

Those members in attendance at the Annual Meeting special session overwhelmingly concurred that having a set of SRA principles was a good idea. One member pointed out that the first of Steven Covey's seven habits of effective people is to write down what we believe in. Members agreed that the principles would be useful for guiding SRA's forward progress and for our outreach efforts. The devil was in the details, however, as might have been predicted. Most of the discussion focused on how we define risk analysis versus risk assessment, how best to reflect the tension between risk assessment and risk management, and how to cast the principles as aspirational, not conclusive. Members also believed that articulating a context for the principles was needed.

With the suggestions and advice received at the special session in mind, this author has sought once again to draft a set of SRA principles for the membership's review and comment. The revised principles, including a contextual statement and definition of risk analysis, are shown below. What you see below will be considered by the SRA Council at its spring meeting. If two-thirds of the Council votes to accept the principles, they will become official SRA principles. If you wish to express further views on the principles, please do so directly to a Council member (listed on page 24 of this *newsletter*), with a copy to me if possible ([healthrisk@aol.com](mailto:healthrisk@aol.com)). Thank you again for your interest and support.

### Society for Risk Analysis Principles for Risk Analysis

Risk analysis applies methods of analysis to matters of risk. Its aim is to increase understanding of the substantive qualities, seriousness, likelihood, and conditions of a hazard or risk and of the options for managing it. Risk analysis is both a profession and an intellectual discipline. These principles are meant to guide both the practice and uses of risk analysis.

- (1) Risk analysis uses observations about what we know to make predictions about what we don't know. Risk analysis is a fundamentally science-based process that strives to reflect the realities of Nature in order to provide useful information for decisions about managing risks. Risk analysis seeks to inform, not to dictate, the complex and difficult choices among possible measures to mitigate risks. Risk analysis enriches fair and transparent deliberative decision-making processes in a democratic society.
- (2) Risk analysis seeks to integrate knowledge about the fundamental physical, biological, social, cultural, and economic processes that determine human, environmental, and technological responses to a diverse set of circumstances. Because decisions about risks are usually needed when knowledge is incomplete, risk analysts rely on informed judgment and on models reflecting plausible interpretations of the realities of Nature. We do this with a commitment to assess and disclose the basis of our judgments and the uncertainties in our knowledge.
- (3) Risk analysis relies on both basic and applied research, often integrating information, theories, and analytic tools from a variety of disciplines. As we apply information and tools from diverse disciplines, we seek to give due respect and acknowledgment to the intellectual contributions of those fields while using information standards and criteria appropriate to the policy choices that are at issue.
- (4) Risk analysts are committed to maintaining and building our professional community as we contribute to advances in our field. We review the work of our peers and help students develop their skills and values. Unless prohibited, we share the data underlying our published analyses in order to facilitate independent reassessment of our own conclusions.
- (5) The relationship of risk analysts to the sponsors of our efforts is subordinate to our commitment to fairly assess and discuss the risks that are the subjects of our analyses. Risk analysts openly acknowledge our sponsors and our sources of data and support.

*(Officers, continued from page 1)*

I think a number of things have prepared me for the job as President. Actually, I would like to focus first on the job of President-elect. In graduate school, I was nicknamed "the duck-herder." I believe my fellow graduate students found me to be disciplined, especially when I was pursuing a specific objective. Because I was also blessed with good organizational skills and a good memory, I tended to have my "ducks in a row" more than most. I also think my New York upbringing made me more assertive than most of the other students, and so when the ducks attempted to stray, I was never shy about nudging them back in line.

These skills have always served me well, especially when I decided to join Oak Ridge National Laboratory (ORNL), one of the Department of Energy's national laboratories. To be sure, ORNL was not a typical place for an economist, but it was a terrific opportunity for me to work in an environment that struggled with research questions involving both the natural and social sciences every day. Success at ORNL meant that you had to reach across disciplinary boundaries and be willing to listen to widely divergent points of view.

Importantly, I joined SRA while still a relatively junior researcher at ORNL. I found then, and continue to find, that the Society offers its members lively interactions that cannot be found in less diverse professional associations. My experience with SRA has continually reinforced for me the importance and value of bringing together people who share a common interest in issues, but approach the analysis in diverse ways. In addition, I learned from the Society that no single area of the sciences had the final word on the scientific facts. My interactions with physicists, chemists, and, just as importantly, social scientists who examined the social and cultural dimensions of risk analysis helped me appreciate why risk is so controversial and worthwhile as an area of study.

Later, when I accepted the Program Director position at the National Science Foundation (NSF), my ORNL and SRA "training" was very helpful. At NSF, I found myself in many situations where preconceived notions about what was "good science," and whether the social and behavioral sciences fit that definition, were regularly invoked in funding and initiative development. To be sure, I have experienced controversy as only the Congress of the United States can create it. I think that might be useful for sorting through the abstracts for the annual meeting!

### **What will you be doing as President-elect to further prepare yourself for the SRA Presidency?**

I hope to use this year as President-elect to build a more intimate relationship with some of the chapters, specialty groups, and sections so that I can better incorporate their views and needs as President. This will help me become quickly informed about the key concerns and objectives of the members, as well as assist me in developing an agenda well grounded in the current and future interests of the membership.

I also hope that the current plan for a World Congress (see page 20) provides a stimulating opportunity for the membership to get involved and actively reach out to others who share our enthusiasm for risk analysis. We have such great potential as the society of choice for risk professionals. Getting members to share their ideas, become actively involved, and help convey our value to outside interested parties will be critically important to making the World Congress a success.

### **What are your preliminary plans for the SRA 2001 Annual Meeting?**

My preliminary plans, in part because the meeting is in Seattle, are to focus on "Risk Analysis in an Interconnected World." I believe that there are a number of important areas of study where the expanding social network and globalization of human interactions is fundamentally changing our views in risk analysis. I would like to highlight some of these areas at the meeting, including possibly the emergence of computer viruses, bio-terrorism, climate variability, AIDS, and systemic risks in air transportation. I will be asking a number of SRA members to assist me with creating an exciting program around these themes.

I also want to hear from members, chapters, specialty groups, and sections about what can be done differently at the annual meeting. I have already received some very valuable suggestions. For example, an exciting idea received from the editorial staff of the Journal is to have the Program Committee select best papers to receive recognition during the annual meeting. Authors of the papers could be recognized in the annual meeting and also be invited to submit the papers for Journal publication. I have also received a suggestion from the Council that, given the Seattle location, we should consider a special solicitation of papers addressing risk communication with diverse communities, especially in the context of land use.

In addition to planning the topical components of the meeting, I plan to spend some time learning a lot more about Seattle! A recent article in the Travel Section of *The Washington Post* discussed Seattle's rich history and suggested numerous interesting excursions in and around the city that should interest our members.

### **Tell us about your interests, hobbies, and family.**

I would like to think that I have many interests, but I have never seen my life compartmentalized into work, hobbies, and family. Those who know me best will tell you that I live all three and love all three. I was raised in a very active and productive family, including a very feisty 95-year-old grandmother. Both of my parents and my two brothers are entrepreneurial and, in my own way, I have always looked to make things happen as well. As a result, I have thrived at LECG which encourages initiative and creativity. My husband, Mark Mason, and my son, Derek, have always tolerated my active life style and without their support, my schedule would not be possible.

### **Treasurer Richard B. Belzer**

Dr. Richard Belzer is Visiting Professor of Public Policy and Regulatory Program Manager at the Center for the Study of American Business at Washington University. He received his Ph.D. in public policy from Harvard University and has earned master's degrees in public policy from the John F. Kennedy School of Government and in agricultural economics from the University of California at Davis.



From 1988-98, Belzer served as staff economist in the Office of Information and Regulatory Affairs, U.S. Office of Management and Budget (OMB), reviewing major federal regulations intended to manage environmental, health, and safety risks. He focused primarily on the linkage between risk analysis and the social benefits and costs of government intervention. In this capacity, Belzer worked on a wide

variety of risk problems, including microbial and other food-safety risks, threats posed by the importation of foreign pests, transportation hazards, and insurance, as well as myriad environmental and occupational risks. This experience provided an unusually broad perspective on the utility of risk analysis as a tool for rational decision making.

Serving three different presidential administrations holding highly contrasting policy views, Belzer was responsible for synthesizing complex and controversial issues for senior policy officials throughout the Executive Office of the President. He is accustomed to controversy but can manage it by turning off his hearing aids.

While risk analysis may be the tie that binds all members of the SRA, Belzer also is highly skilled with the advanced mathematical tools necessary to serve as Society Treasurer—namely, addition, subtraction, multiplication, and division. As SRA Treasurer during 1998-2000, he learned to depart from the

Budgetary Policy Default assumption learned at OMB that all such numbers may be rounded to the nearest \$100 million. He also worked to improve the Society's financial position rather than merely allow it to drift just above the edge of red ink. He was instrumental in the decision to change publishers for *Risk Analysis* and to redirect the Journal's profits from the previous publisher to the Society. He has transformed the annual meeting workshops into a reliable source of funds for SRA. He completed in December 2000 a financial plan for SRA aimed at achieving world domination before 2002, but admitted this date could slip.

Belzer has been married to the former Judi Nall since 1974. Two of his three children are now consumers of higher education at the hands of other absent-minded professors. He lives on George Washington's Muddy Hole Farm near Mt. Vernon, Virginia, a place used most profitably in those days for hunting ducks and geese.

### Councilors Charles N. Haas, Steven C. Lewis, and Peter M. Wiedemann

Dr. **Charles Haas** is the L.D. Betz Professor of Environmental Engineering at Drexel University, where he has been on the faculty since 1991. He previously was on the faculty of Rensselaer Polytechnic Institute and Illinois Institute of Technology. Professor Haas received his B.S. in biology and M.S. in environmental engineering at Illinois Institute of Technology and his Ph.D. in environmental engineering in Civil Engineering from the University of Illinois at Urbana-Champaign.

Haas has served on three committees of the National Research Council Water Science and Technology Board, including the Committee on the New York City Watershed and the Committee on Drinking Water. He has been a participant in two World Health Organization workshops on microbial risk assessment. He is a fellow of the American Academy of Microbiology and has received the Octave Chanute and Charles Ellet awards of the Western Society of Engineers.

Haas has been active in electronic media, operating a list server on environmental engineering, a list server on risk science, and a Web site focusing on drinking water outbreaks of disease.

Haas is an active member of SRA, has presented papers at the annual meeting, and has published articles in *Risk Analysis*. His areas of interest in the field of risk analysis are in microbial risk assessment, dose-response modeling, and food and water risk assessment.

Dr. **Steven Lewis** is a Senior Toxicology Associate and science policy advisor to ExxonMobil. With degrees in Chemistry (B.A.) and toxicology (Ph.D.) from Indiana University, he joined ExxonMobil in 1975 and has held a wide variety of technical, consulting, and management positions. His research and safety assessment focus is on assessment of health risks from chemical carcinogens, nervous system toxicants, and hazards to reproductive health, culminating in his having received ExxonMobil's Exceptional Achievement Award in 1993.

Lewis is a Consultant to the Science Advisory Board of the U.S. Environmental Protection Agency and a frequent commentator on scientific and regulatory issues before U.S. and

international agencies, including testimony before the U.S. Senate.

He is active in the SRA, the International Society for Regulatory Toxicology and Pharmacology, and the Society of Toxicology. Lewis has served SRA in several capacities since joining in 1992: as organizer of continuing education in risk communication, Chair of the Publicity Committee, Chair of the Risk Communication Specialty Group, a founding member of the Risk Science and Law Specialty Group, a member of the Public Policy Committee, and currently Chair of the Conferences and Workshops Committee. Under Lewis' leadership, ExxonMobil provides funding for an annual SRA award for the best student paper (or poster) in the area of risk communication.



Councilors (left to right) Steven C. Lewis, Peter M. Wiedemann, and Charles N. Haas

Dr. **Peter Wiedemann** is the Director of the Program Group MUT (Humans, Environment, and Technology) at the Research Center Jülich, Germany. Wiedemann has held academic teaching appointments at the Technical University Berlin, Department of Psychology, and is currently teaching at the University of Innsbruck, Austria.

Wiedemann was educated at the Humboldt University in Berlin, where he received his Diploma in psychology. He received his Ph.D. at the Technical University in Berlin, where he was an Assistant Professor in Community Psychology in the Psychology Department until 1988. Since then he has been with the Research Center Jülich.

Wiedemann's research focuses on bridging the gap between risk perception research and risk communication on the one side and risk analysis and management on the other side. He is currently performing research in comparative risk assessment, uncertainty analysis, and evidence assessment to provide a basis of sound science for the application of the precautionary principle. His studies are, at the moment, mainly directed to the fields of biotechnology and mobile communications. He is also conducting applied research in issues and crisis management.

Wiedemann is a member of the editorial boards of *Risk Research* and *Risk, Decision, and Policy* and of the board of the European Section of the Society for Risk Analysis. ♦♦♦

## Society for Risk Analysis Awards Presented at 2000 Annual Meeting Distinguished Achievement Award

**Yacov Y. Haimes**

The Distinguished Achievement Award honors any person for extraordinary achievement in science or public policy relating to risk analysis. This year's award was presented to Yacov Y. Haimes for his distinctive work in the field of extreme values and its incorporation into risk analysis. His work has been used at the forefront of public policy, in particular for the President's Commission on Critical Infrastructure. Professor Haimes comes highly recommended for this award, not only from his profession of engineering, but from health science and social science as well, indicating the breadth of his work and its applications.



Haimes earned his Ph.D. in systems engineering from the University of California, Los Angeles. He is a Charter Member and Past President of the Society for Risk Analysis (SRA). He is the Founding Director of the Center for Risk Management of Engineering Systems, holds the Lawrence R. Quarles professorship in the School of Engineering and Applied Science, and is a member of the Systems Engineering and Civil Engineering faculties at the University of Virginia. On the faculty of Case Western Reserve University for 17 years, he was Chair of the Systems Engineering Department and Director of the Center for Large-Scale Systems and Policy Analysis. During his 1977-78 sabbatical year, he was an AAAS/AGU Congressional Science Fellow, joining the staff of the Executive Office of President Carter and later the staff of the House Science and Technology Committee. He contributes to the planning, design, management, and operation of engineering-based systems such as water resources, transportation, and other infrastructure systems through his work on the theory and methodology of systems engineering and risk analysis. He is the recipient of the Hall Medal and several other prestigious awards and is a Fellow of seven professional societies, including SRA. He has published over 230 articles and technical papers and has edited or coedited 19 volumes and authored or coauthored six books. His most recent book, *Risk Modeling, Assessment, and Management*, was published by Wiley & Sons in 1998.

### **“Risk Analysis, Systems Analysis, and Covey’s Seven Habits”**

Dedicating his award to his past and current students, Haimes presented his talk “Risk Analysis, Systems Analysis, and Covey’s Seven Habits.” He asked whether risk analysis and engineering systems analysis are grounded on similar principles or represent two distinct fields or disciplines. “Or in reality do they reinforce and add synergy to each other and constitute a unified approach to problem solving?” Haimes questioned. “On the one hand, the two entities have a common philosophical approach to problem solving, but on the other, they differ in their historical evolution and technical maturity. Both groups aspire to the gestalt-holistic philosophy in their problem-solving approaches.”

“One way to gain a greater understanding of the commonality and synergy between systems and risk analysis,” according

to Haimes, “is to build on the sound and well-publicized ideas of Stephen Covey in his best-selling book *The Seven Habits of Highly Effective People*. We can relate these seven habits to the basic principles upon which the philosophies of systems and risk analysis are based.” He said that viewed in parallel the three philosophies—Covey’s, systems analysis, and risk analysis—have a lot in common. “Each of them is driven by philosophical underpinnings which are translated into universal guiding principles,” he explained. “They serve as a critical bridge between the philosophies of systems and risk analysis and their associated methodological frameworks.”

Saying that systems analysis is distinguished by its practical philosophy that advocates holistic cognition and decision making, Haimes explained, “This philosophy is grounded on the arts, natural and behavioral sciences, and engineering; it is supported by a complement of modeling methodologies, optimization and simulation techniques, data management procedures, and decision-making approaches. The ultimate purpose is to (i) build understanding of the system’s nature, functional behavior, and interaction with its environment, (ii) improve the decision-making process (for example, in planning, design, development, operation, management), and (iii) identify, quantify, and evaluate risks, uncertainties, and variability within the decision-making process.”

“Risk analysis is also distinguished by its practical philosophy that advocates holism in assessing and managing risk,” Haimes continued. “Similar to systems analysis, this philosophy is also grounded on the arts, natural and behavioral sciences, and engineering and is supported by a complement of modeling methodologies, optimization and simulation techniques, data-management procedures, and decision-making approaches. Indeed, the same principles that guide systems analysis also guide risk analysis.”

Haimes pointed out that both systems analysis and risk analysis are distinguished by practical philosophies advocating holism. He then discussed Covey’s seven habits, explaining that just as Covey’s stress on understanding paradigms—the lenses through which we see the universe—enables the adoption of his seven habits, “the shift to holistic thinking enables the success of systems analysis and risk analysis. Indeed, at their core, the three entities—systems analysis, risk analysis, and Covey’s seven habits—are unified by their common holistic vision and philosophy of the world and of human and organizational behavior.”

“The gestalt-psychology/holistic philosophy common to seemingly two separate cross-disciplinary fields—risk and systems analysis—serves as a dominant common denominator that imbues synergy to both,” Haimes concluded. “It is hard to find two other disciplines that share the distinction of spanning the arts, the humanities, the natural, social, behavioral, and organizational sciences, law, medicine, and engineering. Finding common ground among these diverse professions does not happen by chance. Rather, it has become obvious that our large-scale and complex technological and societal systems, and their associated problems, must be addressed by considering all of their relevant dimensions and perspectives.”



## Outstanding Service Awards

### Vicki Bier

#### Detlof von Winterfeldt

The Outstanding Service Award honors SRA members for extraordinary service to the Society. This year two awards were presented for service to *Risk Analysis*, the Society's Journal, at a critical transition time in its editorship and structure.

#### Vicki Bier

Vicki Bier has provided the Society with long-term service in a number of areas. She has been the engineering editor for the Society's Journal and has contributed to numerous events, including SRA's recent International Symposium on Risk and Governance.

Dr. Bier is an Associate Professor in the Department of Industrial Engineering and Engineering Physics at the University of Wisconsin-Madison and the Director of the Center for Human Performance in Complex Systems. Prior to joining the University of Wisconsin in 1990, she was a visiting professor in the Department of Chemical and Nuclear Engineering at the University of Maryland and a consultant with PLG, Inc. She received her Ph.D. in operations research from the Massachusetts Institute of Technology. Bier's areas of expertise include risk analysis, decision analysis, and operations research. A partial listing of the research topics she has investigated includes Bayesian and classical methods for use of accident precursor data, judgment and decision making under uncertainty, risk analysis of nuclear power plants, and the treatment of uncertainty in estimation and decision making.



#### Detlof von Winterfeldt

Detlof von Winterfeldt has provided service to the Society as social sciences editor of the Journal. In addition, von Winterfeldt brings to the Society the decision analysis discipline in which he has been active for many years.



Dr. von Winterfeldt is Professor of Public Policy and Management at the School of Policy, Planning, and Development of the University of Southern California. He is also the Director of the School's Institute for Civic Enterprise. For the past 25 years, he has been active in teaching, research, university administration, and consulting. His research interests

are in the foundation and practice of decision and risk analysis as applied to technology and environmental management problems. Von Winterfeldt is the coauthor of two books, including *Decision Analysis and Behavioral Research* (with Ward Edwards), and author or coauthor of over 100 articles and reports. As a consultant, he has applied decision and risk analysis to many management problems of government and private industry. He has served on several committees and panels of the National Science Foundation and the National Research Council. Von Winterfeldt received his B.A. and M.A. in psychology from the University of Hamburg, Germany, and his Ph.D. in mathematical psychology from the University of Michigan.

## Chauncey Starr Award

### Ragnar Löfstedt

The Chauncey Starr Award honors individuals under the age of 40 who have made exceptional contributions to the field of risk analysis.

This year's award went to Ragnar Löfstedt, who holds the position of Reader in Social Geography at the Centre for Environmental Strategy at the University of Surrey (Guildford, Surrey) and is a Visiting Associate Professor at the Harvard School of Public Health's Center for Risk Analysis and at the University of Gothenburg Centre for Public Sector Studies. Many Society members remember Löfstedt's leadership in organizing the SRA-Europe Conference at his home base.

Dr. Löfstedt's areas of expertise include risk communication and management, energy, and environmental policy (with a specific emphasis on Scandinavia). A partial listing of the various studies that he has conducted includes public perceptions to the threats posed by global warming, evaluation of Sweden's environmental aid to Eastern Europe, evaluation of Sweden's risk communication efforts vis-à-vis Danish policy makers, stakeholders, and the public with regard to the 1992 Ines 2 incident at the Barseback nuclear power plant, stakeholders' perceptions toward new environmental legislations in Sweden, evaluation of the Swedish Railway's risk management program associated with the siting and building of the west coast trunk railway, long-term strategic environmental risk management initiatives for industry, best practices with regard to incinerator siting in Europe, and evaluation of Shell Oil's handling of the proposed dumping of the Brent Spar oil-storage buoy.

Löfstedt spoke to SRA members at the Awards Luncheon:

I am very honoured and surprised to have received this year's Chauncey Starr award. I am surprised as I am a so-called "case study" person. This is a research area that I feel has been unrecognized by the academic peer community. To be more specific, most of my research has been on evaluating risk communication projects from a wide array of areas ranging from



transboundary energy risks to waste incinerators and mobile phone base stations, testing theories and ideas developed by some of you in this room, and seeing how these projects have affected national and international policy. This is needed. For example, Roger Kaspersen and Ingar Palmund recognized as long ago as 1987 that more funding was necessary for evaluating risk communication projects. These evaluations provide useful information for designing future such projects, which in turn saves time and money, plus provides useful insight to see if the conceptual ideas developed by some of you work in practice. In closing I would like to thank Professor Rae Zimmerman and the SRA awards board for honouring me with this year's Chauncey Starr award, and I would like to express my gratitude to three individuals who have been my academic mentors over the past years: Baruch Fischhoff, John Graham, and Ortwin Renn.

## Outstanding Risk Practitioner Award Christopher J. Portier

The Outstanding Risk Practitioner Award honors individuals who have made substantial contributions to the field of risk analysis through work in the public or private sectors. The 2000 award was for the public sector and was presented to Dr. Christopher J. Portier.



Portier is Acting Associate Director of the National Toxicology Program and Acting Director of the Environmental Toxicology Program at the National Institute of Environmental Health Sciences (NIEHS) in Research Triangle Park, North Carolina. He has been with NIEHS for close to two decades. This institution has been at the leading edge of public sector institutions in risk analysis in environmental health. Portier has over 100 peer-reviewed publications in risk assessment and risk-related areas and is the recipient of numerous awards from societies in these areas.

Portier was unable to attend the Annual Meeting because he was on assignment from Congress to negotiate an important agreement with Vietnamese scientists in Singapore on Agent Orange exposures in Vietnam. Michael Kohn of NIEHS accepted the award for Portier.

## Fellows of the Society for Risk Analysis

**Ortwin Renn**

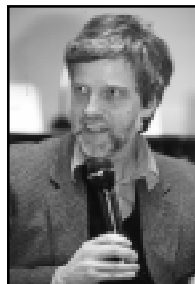
**Jeryl L. Mumpower**

**Dale Hattis**

The SRA Fellows Award recognizes and honors up to one percent of the Society's membership whose professional records are marked by significant contributions to any disciplines served by the Society and may be evidenced by one or more of the following: (1) recognized, original research, application, or invention, (2) technical, scientific, or policy analysis leadership in an enterprise of significant scope that involves risk analysis in a substantial way, (3) superior teaching or contributions to improve education and to promote the use of risk analysis that are widely recognized by peers and students, or (4) service to or constructive activity within the Society of such a quality, nature, or duration as to be a visible contributor to the advancement of the Society.

**Ortwin Renn**

Ortwin Renn is well known for his groundbreaking work at the intersection of technology and risk, as well as risk communication, public participation, and the social sciences generally as applied to risk problems. From 1996-97, Renn served as President of SRA-Europe and was an active participant in the Risk and Governance Symposium from SRA-Europe.



Dr. Renn is Director of the Center of Technology Assessment in Baden Wurttemberg, a public foundation devoted to the study of the societal impacts of technological and social change. Since 1993, Renn has directed the Center's Technology, Society, and Environmental Economics department. He also serves as Chair of Environmental Sociology at the University of Stuttgart. Renn is well known for his work in risk perception and risk manage-

ment, risk communication, environmental concepts of sustainable development, citizen participation in risk management, attitudes toward technology, and social movements. He is a coeditor of *Environmental Standards: Scientific Foundations and Rational Procedures of Regulation with Emphasis on Radiological Risk Management* (Kluwer 1998). He serves on several editorial boards of scientific journals such as the *Journal of Risk Research*. Renn received an M.A. degree in sociology and economics (European Diploma) and a doctorate degree in social psychology from the University of Cologne.

**Jeryl L. Mumpower**

Jeryl L. Mumpower is the Interim Dean of the School of Public Health at the University at Albany, State University of New York. He also serves as Associate Provost and holds appointments as a Professor of Public Administrations, Public Policy, and Information Science. Previously, he has served as Director of the Center for Policy Research and as the Assistant Director at the Rockefeller Institute of Government. A faculty member of the University at Albany since 1984, he recently returned to the campus from a two-year appointment as director of the Decision, Risk, and Management Science program at the National Science Foundation.



Professor Mumpower received his B.A. from the College of William and Mary and his Ph.D. in social and quantitative psychology from the University of Colorado, Boulder. He is author or editor of nine books and more than fifty book chapters and articles. His research has addressed basic and applied topics in risk analysis and management, environmental policy, negotiation, individual and group decision making processes, and the use of scientific expertise in public policy making.

He is a charter member of SRA and coauthored a key article on the history of risk analysis and management in one of the early issues of the Society's Journal, *Risk Analysis*. He is best known for his work in risk communication. Mumpower has recently assumed the social science editorship of *Risk Analysis*.

**Dale Hattis**

Since receiving his Ph.D. in genetics from Stanford, Dale Hattis has been active in the development of methodology for assessing the health and other effects of alternative regulatory actions for over 22 years. He has specialized in clarifying the variability and uncertainty of parameters related to health risks from chemical and physical hazards. Currently, his principal research is directed to quantifying human interindividual variability in susceptibility for a wide variety of noncancer effects. He has served on two National Academy of Sciences/National Research Council committees (on seafood safety and neurotoxicity).



In the 1980s Dr. Hattis was a cofounder and convener for many years of the Boston Risk Assessment Group seminar series and was responsible for merging that organization with the New England Chapter of the Society for Risk Analysis. Recently (1996-97) he has served another term as President of the New England SRA Chapter, organizing a monthly meeting of two seminar presentations per session for the academic year. He has been a member of the national SRA since 1983 and is a frequent contributor to the SRA Journal, *Risk Analysis*.





### Student Award Winners at Society for Risk Analysis 2000 Annual Meeting

Back row, left to right: Joseph Arvai (University of British Columbia), Arvind Susarla (Clark University), William Price (Wright State University, NHRC/TD at WPFAB), Patricia Lee (Yang-ming University, Taiwan)

Front row, left to right: Amy Kim (University of North Carolina), Susan Fossey (University of Alberta), Guoyi Han (Clark University), Mukhtasor (University of Newfoundland), Minako Kusafuka (Clark University), Chunling Liu (Clark University)

Not present for photo: Matthew Lydon (North Carolina State University), Margaret Anders (North Carolina State University), Brian Gray (University of South Carolina), Micaela Reddy (Colorado State University)

#### SRA Call for Award Nominations

The Society for Risk Analysis (SRA) Awards Committee invites nominations for the following 2001 awards:

The **SRA Distinguished Achievement Award** honors any person for extraordinary achievement in science or public policy relating to risk analysis.

The **SRA Outstanding Service Award** honors SRA members for extraordinary service to the Society.

The **Outstanding Risk Practitioner Award** honors individuals who have made substantial contributions to the field of risk analysis through work in the public or private sectors. The 2001 award will be for the private sector.

The **Chauncey Starr Award** honors individuals under the age of 40 who have made exceptional contributions to the field of risk analysis.

The **Fellow of the Society for Risk Analysis Award** recognizes and honors up to one percent of the Society's membership whose professional records are marked by significant contributions to any disciplines served by the Society and may be evidenced by one or more of the following: (1) Recognized, original research, application, or invention, (2) Technical, scientific, or policy analysis leadership in an enterprise of significant scope that involves risk analysis in a substantial way, (3) Superior teaching or contributions to improve education and to promote the use of risk analysis that are widely recognized by peers and students, or (4) Service to or constructive activity within the Society of such a quality, nature, or duration as to be a visible contributor to the advancement of the Society.

Nominees for Fellow must have been SRA members for at least five years and must now be members in good standing.

Please submit nominations and a brief paragraph supporting each by **15 June 2001** to Ann Landis at the SRA Secretariat (1313 Dolley Madison Blvd., Suite 402, McLean, VA 22101; fax: 703-790-2672; e-mail: ALandis@BurkInc.com) and to Yacov Y. Haimes, Awards Committee Chair (Center for Risk Management of Engineering Systems, 112 Olsson Hall, Charlottesville, VA 22903; fax: 804-924-3803; e-mail: haimes@virginia.edu).

# “Applications of Risk Analysis in Industry and Government”

## Society for Risk Analysis 2000 Annual Meeting Plenary Speakers

Three speakers made presentations on the theme “Applications of Risk Analysis in Industry and Government” at the plenary sessions during the Society for Risk Analysis (SRA) Annual Meeting held 3-6 December 2000 in Arlington, Virginia. Dr. Terry F. Yosie, Vice President of Strategic Communications at the American Chemistry Council, delivered the talk “Science-Based Decision Making at the Crossroads: Science, Values, and Choices”; Elisabeth Paté-Cornell, Chair of the Department of Management, Science, and Engineering at Stanford University, presented “Finding and Fixing Systems Weaknesses: Probabilistic Methods and Applications of Engineering Risk Analysis”; and John A. Moore, Principal Investigator of the NTP Center for Evaluating Risks to Human Reproduction, spoke on “Use and Misuse of Risk Analysis in Government.”

### “Science-Based Decision Making at the Crossroads”

*Terry F. Yosie*

“Science-based decision making is at a series of strategic crossroads,” said Dr. Terry F. Yosie, Vice President of Strategic Communications at the American Chemistry Council, in his talk “Science-Based Decision Making at the Crossroads: Science, Values, and Choices.” Yosie stressed that the scientific community faces growing challenges to traditional science-based decision making and needs to embrace new approaches to developing, managing, and communicating scientific information that yields better decisions.

Yosie identified three challenges that have brought science-based decision making to these crossroads. First, new approaches to research planning and management are needed that include multiple disciplines and organizations, involve external stakeholders, leverage resources among various institutions, provide full disclosure and easy access to research results, and have a commitment to independent peer review.

Second, science-based and stakeholder-based decision making currently represent competing approaches for making policies. “The heart of this competition . . . is that policymakers are striving to attain legitimacy and air cover for their policy choices,” said Yosie. Participation and influence of scientists in decision making is even further challenged by proponents

of the expanded use of the precautionary principle. Yosie provided examples where he explained such advocates represent “not a commitment to ‘Better safe than sorry’ but, rather, an

opposition to balancing a range of factors that must be considered in decision making and an antipathy to the free exchange of ideas, especially the diverse views of the scientific community.”

Finally, Yosie concluded that scientific debates related to public health and the environment are moving from a principal focus on regulatory policy to one of increasing emphasis on health, environmental, and safety issues from products in commerce. “As a result, information on product benefits and risks provided by product developers and nongovernmental organizations and purchasing decisions made by consumers will assume increasing importance,” said Yosie.

Yosie also explained that despite the recent challenges, the public continues to have a high level of confidence in scientists’ standards of ethics and honesty, and members of the consuming public want access to scientific information in order to make their own choices about products.

Yosie challenged the scientific community to evaluate the process of change “in ways that yield better decisions—and a better, healthier, and safer life—for tomorrow.”



### “Finding and Fixing Systems Weaknesses: Probabilistic Methods and Applications of Engineering Risk Analysis”

*Elisabeth Paté-Cornell*

Methods of engineering risk analysis are based on a functional analysis of engineered systems and on probabilities, most of the time Bayesian, according to Elisabeth Paté-Cornell in her talk “Finding and Fixing Systems Weaknesses: Probabilistic Methods and Applications of Engineering Risk Analysis.” These methods allow identification of the system’s failure modes and of the contribution of each element to the overall probability of failure. The model can then be extended to include human decisions and actions and the management factors that might be root causes of systems’ failures. Because this approach allows considering rare events—even some that have never occurred yet—it can be particularly beneficial when trying in a proactive mode to identify systems’ weaknesses and the least expensive way of fixing them. This is particularly critical in situations

when decisions and policies need to be made before full information is available, when many other human needs are competing for the same resources, and therefore when priorities need to be set. In her talk, Paté-Cornell presented three applications of this approach.

The first concerns the heat shield of the space shuttle orbiter. After the Challenger accident, she helped design for NASA a risk analysis model that allowed ranking the tiles by order of risk criticality according to their location in different zones of the orbiter’s surface. Compounding the effects of heat loads, debris hits density, aerodynamic forces, and criticality of subsystems under the aluminum skin, it was computed that the risk of loss of a shuttle attributable to the tiles was 10 percent of the overall risk of an accident, and that 85 percent of the risk was attributable to 15 percent of the tiles. In addition, after



studying the maintenance process, a number of recommendations were made. The model was later used to set priorities in risk management.

The second application is to patient risk in anesthesia, showing how the engineering risk analysis method, extended to include human and organizational factors, can be used in the medical domain. That study, based on probability, involved first a dynamic analysis of accident risks. The model was then extended by relating the basic events of accident scenarios to the state of the practitioner in terms of competence and alertness. Potential problems, in turn, were linked (by probabilistic relations) to the way the system is managed. This extension of the analytical framework allowed assessment of the effect of particular types of practitioner problems—therefore, of corresponding risk mitigation measures—on the probability of the different accident scenarios. The risk analysis model could then be used as a management tool that permits setting priorities

among patient safety measures, based either on the sole benefits of the corresponding decrease of patient risk or on a cost-benefit ratio.

Finally, the third application is to the mitigation of seismic risks. A probabilistic model was developed and applied to the San Francisco Bay area. It involved two components: the seismic hazard analysis represented by a set of iso-seismic maps characterized by annual probabilities of exceeding different levels of seismic loads and the response of different types of buildings (classified by structure and occupation). The model allowed computation of the costs and benefits of different seismic provisions of building codes.

In conclusion, Paté-Cornell stated that the engineering risk analysis method, especially when extended to include human and organizational factors, allows assessing risks associated with rare events for which there is not much data at the system performance level, but information exists about the different components.

### “Use and Misuse of Risk Analysis in Government”

John A. Moore

“There is no question that the country has adverse consequences to health risks; however, we expect the government to control these risks which include those to the air, clothing, soil, and to home products to name a few,” John Moore said in his talk “Use and Misuse of Risk Analysis in Government.”

Focusing on issues related to human health, Moore began by outlining the attention given to safe food and chemicals in the early 20<sup>th</sup> century. He reminded the audience that it was learned early in the century that more than half of the chemical tests in laboratory rodents revealed an increased incidence of cancers. He said that finding plus the release of Rachel Carson’s *Silent Spring*, the cranberry scare (amitrole), the recall of children’s sleepwear treated with mutagens, etc., put chemicals in a love/hate relationship with the public. These and other less-dramatic events which occurred in 1983 spawned risk assessment as we currently think we know it.

Uniformity in government with regard to guidelines and how it has or has not been implemented was Moore’s theme for most of his talk. “My point is,” he stated “that the public is ill served when it gets conflicting advice depending upon which agency of the government it chances to ask.” He added that this “demeans the perceived credibility of a ‘science’ based process called risk assessment in the eyes of the public and that there seems to be no effective process within government for reconciling such issues.”

Moore pointed out the Department of Energy’s \$200 billion effort to “stabilize, characterize, and remediate the massive radioactive and hazardous chemical contaminations present at

our nuclear weapons production sites” as a prime example of the need for risk assessment. He emphasized that there were



many failures in this effort but that the risk assessment approach and the involvement of the public (stakeholders) in every step of the way led to a classic success story at the Fernald (Ohio) site. “Citizen involvement in the Fernald site altered the original cleanup strategy, resulting in a faster cleanup with a savings of \$2 billion,” he said. “Meaningful public input empowered the Department [DOE] to make decisions it never could have made unilaterally.”

“The goal of risk assessment is simple: to identify chemicals/agents that may present a human hazard and to estimate doses that lead to such effects—with great certainty,” Moore continued. However, he then presented examples of the “tortured path and extended debate” within agencies such as the U.S. Environmental Protection Agency over the appropriateness of how this is accomplished and suggested that more than ethics and scientific merit constitute that agenda.

Moore said there is a need for risk assessment and analysis by the government and that there are instances where the government efforts are exemplary, but that the government performance has been very uneven. He added that there “remains a need for a mechanism for advancing the scientific aspect of risk assessment that is government wide, is sensitive to the needs of processes where it is used, and yet is free from parochial political tampering.” He concluded that academia is the place where everyone goes for solutions in spite of its ponderous pace. ◇◇◇

The Society for Risk Analysis will hold its next three annual meetings in Seattle, Washington (2001), New Orleans, Louisiana (2002), and Baltimore, Maryland (2003).



## Committees

### Chapters and Sections Committee

*Jo Anne Shatkin, Chair*

#### December 2000 Committee Meeting Report

The Chapters and Sections Committee met in December during the Society for Risk Analysis (SRA) 2000 Annual Meeting—my appreciation to attendees for their meaningful participation at such an early hour. Chapter representatives discussed activities and concerns and expressed an interest in communicating between annual meetings via Webcasting and/or teleconferencing.

One activity the committee is pursuing is the broadcasting of a chapter-sponsored speaker or workshop via the World Wide Web or teleconference call. This activity would expand the outreach of SRA and provide service to SRA chapters that have difficulty meeting, due to geographical or other financial restrictions, who may wish to participate in meetings held by other chapters. Webcasting is preferable for cost and time zone considerations. If you have expertise or can help to organize this type of networking, please contact me!

Three chapters have invited SRA Council members as speakers to meetings or workshops in the coming year. Contact me if your chapter wishes to request travel funds for this activity ([jshat@menziecura.com](mailto:jshat@menziecura.com)).

#### 2001 Chapters and Sections Committee Goals

The 2001 goals for the Chapters and Sections Committee include expanding our outreach to other organizations, increasing the number of chapters in the United States and internationally, and providing support to existing chapters, particularly those that are currently inactive. A handbook is available for those wishing to organize a local chapter. We also hope to encourage national membership from our chapter members.

### History Committee

*Paul Deisler, Cochair*

#### New History Committee Member

Committee Cochairs Paul Deisler and Dick Schwing welcome Jeanne X. Kasperon as a new member of the History Committee.

#### Your Recollections Needed to Compile a History of the SRA

Past Presidents Deisler and Schwing have been appointed by the SRA Council to prepare a history of the Society. In addition to material from various records, they hope to collect information from as many members as have information to give. Personal memories of events, turning points and how they came about—including pre-SRA events leading to the Society's formation—or other historically significant matters that each member recalls will greatly enrich the written history.

Significant matters need not include only successes; other matters—e.g., policy initiatives, organizational efforts, etc.—which may not have moved forward can also shed light on the development of the Society. Please, therefore, if you have memories to share, send them to Paul Deisler at e-mail: [sinprisa@earthlink.net](mailto:sinprisa@earthlink.net), fax: 512-480-9810, or regular mail: 2001 Mountain View Road, Austin, TX 78703.

### Conferences and Workshops Committee

*Scott Ferson, Chair*

#### Annual Meeting Workshop Program Roundup

The Conferences and Workshops Committee of the SRA is pleased to report a very successful program of workshops held in conjunction with the Annual Meeting in Arlington last December. There were 89 participants in the workshop program. The six workshops focused on a variety of topics, including health risk assessment for chemical mixtures (organized by L.K. Teuschler, R.C. Hertzberg, and G.E. Rice), risk of extreme and rare events (Y. Haimes and J. Lambert), the Search Conference method for convening stakeholders (C.W. Scherer), intervals and probabilistic bounding (S. Ferson, J.A. Cooper, and D. Myers), ecological risk assessment (B.K. Hope and R. Fares), and ecological risk management (A. Sargeant). The workshops program is intended to be self-supporting, and each workshop yielded a profit for the Society.

#### Have an Idea for a Workshop?

The Conferences and Workshops Committee seeks input from SRA members about what topics should be the focus of special conferences beyond what can conveniently be addressed within the structure of the annual meeting. We are developing a questionnaire that will be circulated by electronic mail. But, in the meantime, if you have an idea for a workshop or forum that you'd like the Society to organize, please let us know. Please send an e-mail to Scott Ferson ([scott@ramas.com](mailto:scott@ramas.com)), who will be the new chair of the committee, replacing Steve Lewis who is stepping down to serve on the SRA Council.

#### June Forum to Address Current Issues in Risk Analysis

The annual forum on current issues in risk analysis is planned for June near Washington, D.C. The dates and venue for the two-day forum will be available soon on the SRA Web site (<http://www.sra.org/events.htm>). The forum will address the risk analysis issues arising from recent and future legislation about risks. It will involve a combination of lectures, panel discussions, and open discussion. The agenda is currently being finalized, but the topics are expected to include benefit valuation and cost-benefit analysis, concerns about "residual risk," the issues raised by the Food Quality Protection Act, mad cow disease and its ramifications, and other topics.

#### 2000 Aerospace Workshop an SRA Success

The SRA workshop "Better, Faster, Cheaper, and How Risky: Some Lessons from Aerospace Risk Analysis" held on 13-14 November in Washington, D.C., was a smash success, with 30 participants from industry, academia, and government. The aim of the workshop was to discuss lessons from aerospace risk analysis among the broader audiences of the Society, including risk assessors, risk managers, and risk communicators. The instructor, Joe Fragola, a vice-president of SAIC Corporation, related diverse experiences from the Space Shuttle, Space Station, and European space agencies with case studies addressing from technical to programmatic risks. Topics included mission and project selection (costs, benefits, and risks), maintenance scheduling, cost overrun and time delay, modeling extreme events, environmental impacts, probabilistic risk assess-

ment, reliability and quality assurance, human health and safety, and human reliability. The workshop was also financially successful, yielding several thousand dollars in profit for the Society. The workshop was conceived and planned by Professor Jim Lambert. A follow-on workshop is being developed, and Jim will appreciate learning your ideas for it by e-mail at [lambert@virginia.edu](mailto:lambert@virginia.edu).

#### Workshop on Risk Communication

The U.S. Environmental Protection Agency and the Minnesota Department of Health are jointly sponsoring a national conference on the topic of communicating health risks from contaminated fish to hard-to-reach, at-risk populations. The conference, "Effectively Communicating Health Risks from Fish Contaminants," will take place in Chicago, Illinois, on 7 and 8 May 2001.

The purpose of the conference is to examine, discuss, and

evaluate risk communication methods designed for populations that are exposed and susceptible to contaminants in fish and that are hard to reach because they may not hear, understand, or be receptive of risk information about fish contaminants. The conference will result in recommendations for best practices and research needs in this area of risk communication.

This conference is intended for anyone interested in effectively communicating risks associated with contaminated fish. The agenda will interest state, tribal, and local governments, community groups (including environmental and children's health advocates), health care providers, industry representatives, and academic researchers. Speakers include experienced risk communicators. Community, tribal, and state government spokespersons with various outlooks on health risks from fish contaminants will participate in the conference.

Additional information is available online at [www.fishrisk.com](http://www.fishrisk.com). ◆◆◆



## Journal Notes

Elizabeth L. Anderson, Ph.D., Editor-in-Chief

### Focus: Book Reviews

The literature is rich with the publication of new books on every facet of risk assessment. While many of these publications do not deserve a book review in *Risk Analysis: An International Journal*, many of them do. The editorial staff needs your help to identify those books that the membership feels should be reviewed in the Journal. Many of the new issues come to our attention from publishing houses or through our publisher, Blackwell. Many others may escape our attention altogether. I am asking for the help of the membership in identifying those new publications that you feel should be brought to the attention of the editorial staff. If we already know about particular publications, your notes to us will give an indication of those that should receive our highest attention. If we do not know about the publications, you will help us close a gap for the benefit of our subscribers.

An even more difficult job is to find people who are interested in providing book reviews on a timely basis. Your editorial staff is currently assembling a list of individuals from all of the disciplines in risk analysis to be available as reviewers. Improving our coverage of newly published books is a task that we would like to share with the membership.

To notify the Journal of your availability to provide book

reviews and to identify those books that you feel deserve Journal attention, please send your e-mails to me at [elanderson@sciences.com](mailto:elanderson@sciences.com).

### Manuscript Submission and Review Process

In the last Journal Notes, I described the new electronic process that is being installed for submission and peer review of manuscripts.

We are currently in the process of working with Blackwell and its consultant to install the electronic system for our central files. We believe the system will be operational by the middle of February. We will notify the membership that manuscripts can be submitted electronically both through the Society for Risk Analysis Web site and

by information in the back cover of the next Journal issue. Should a manuscript be submitted by mail after the electronic system is installed, we will immediately inform the authors of the new electronic process. For a more detailed description of how this system will work, please see Journal Notes in the *RISK newsletter*, Fourth Quarter 2000.

As always, our goal is to continue to enhance and expand the Journal's contributions to the risk analysis communities. I look forward to your support for enhancing the Journal's coverage of newly published books and to the contributions our new electronic system will make to the submission and review of manuscripts. ◆◆◆

Improving our coverage of newly published books is a task that we would like to share with the membership.

Back issues of the *RISK newsletter* can be found on the Web—1997-2000 on the Society for Risk Analysis Web site ([www.sra.org](http://www.sra.org)) and 1995-1996 on a site maintained by RiskWorld ([www.riskworld.com/Abstract/AB9ME001.HTM](http://www.riskworld.com/Abstract/AB9ME001.HTM)).





## Chapter News

### Chicago Regional Chapter

*Margaret MacDonell, President*

The Chicago Regional Chapter of the Society for Risk Analysis (SRA) hosted three German visitors for a seminar meeting 16 November 2000 at Argonne National Laboratory.

Dr. Kristina Voigt, environmental chemist/computer scientist at GSF National Research Center for Environment and Health Institute for Biomathematics and Biometry, Neuherberg, discussed informatics initiatives and described how environmental information is being shared and evaluated via the Internet.

She presented information on a metadatabase of Internet resources for environmental chemicals, described search and evaluation methods and their selection, and illustrated with a single organic chemical the usefulness of different multicriteria decision analysis tools using 21 search engines and 15 evaluation criteria. The effectiveness of various searches was evaluated using methods such as the Hasse diagram, which produced a hierarchical view of the preferred search engines for this case study. Surprisingly, some common general search engines performed better than those aiming to serve the scientific community.

Also, while results considered were truncated at a short first set, the most useful information can often be found in the middle of the selection of "hits" (and thus may be missed by less patient seekers). Voigt cautioned against broad generalization, explaining that searches targeted for something other than this example chemical could produce much different "preferred engine" results.

Dr. Otto Hutzinger, environmental chemistry professor emeritus at the University of Bayreuth and founder of the Eco-Informa Foundation, discussed environmental risk analysis from the perspective of one who has been involved in its evolution over several decades. He described the early days of environmental science as individuals working independently within their own disciplines, such as wastewater treatment, air pollution control, occupational hygiene, nuclear science, chemical releases, and food. This evolved into a matrix—for example with "water, air, soil, and biota" across the top and "analysis, technology, effect, and waste" down the side. In this structure, scientists began to at least link elements together but still tended to think in little squares, as although interactions

were occurring they were incomplete. The elements were integrated much more closely when pesticides became of concern, as the issue of fate and effect brought multiple disciplines together. That is, while surface concentrations appeared to decrease over time, scientists sought to understand whether the chemicals were disappearing because of degradation, volatilization, leaching, bioaccumulation, or other fate factors.

Today, Hutzinger describes the field as clearly reflecting the linkages among multiple elements, from environmental chemistry through risk analysis. The fate determines the environmental concentrations of chemicals, which together with toxicity-ecotoxicity testing and exposure considerations are used to predict risk.

Almut Heinrich, editor and publisher, previously at Springer-

Verlag and now at ecomed publishers, Landsberg/Bavaria, discussed the role of scientific publications in environmental communication.

She introduced her presentation by stating that the question is not "To be or not to be?" but rather "Is there actually a way to share information?" In the Middle Ages, the role of monasteries was to disseminate knowledge and this

was restricted to a few centers. In the 19<sup>th</sup>-20<sup>th</sup> centuries, the role of publishers was to disseminate information. In fact, information can be viewed as an overflowing good, available everywhere (such as via the Internet), and people want it free. And it appears that information is wanted not to improve the environment, quality of life, or cultural heritage—but to make money.

While both the offering of and demand for information are immense, there has been a disconcerting decline in scientific culture and literature. Libraries are cutting back on scientific publications, and today it seems the dominant aim is not to make knowledge but to turn a profit. So for many it is sufficient to get information, not knowledge, especially when that

information will somehow financially benefit the recipient. As for the future of scientific publications, Heinrich believes that neither paper nor online approaches alone will suffice, but rather that they will continue to complement each other. And she encourages today's scientists to maintain the integrity of scientific culture—serving in a new role as environmental "monks" to

sustain the importance of knowledge into the future.

Our distinguished colleagues from Germany were visiting Argonne National Laboratory to participate in a program planning meeting for "Eco-Informa 2001: Environmental Risks





and the Global Community—Strategies for Meeting the Challenge to the 21st Century.”

To be held 14-18 May 2001 at Argonne, this will be the sixth in the series of international Eco-Informa conferences; four have been held in Germany, and one at Epcot. Information can be found at <http://eco-informa.ead.anl.gov>.

## Ohio Chapter

*Femi Adeshina, President*

### Technical Workshop—Noncancer Risk Assessment

The Ohio Chapter of SRA sponsored a technical workshop on “Noncancer Risk Assessment” on 13 July 2000 at the U.S. Environmental Protection Agency (EPA) W. Briedenbach Environmental Research Center in Cincinnati.

The workshop was very successful, with more than 50 participants from academia, government, industry, and the consulting sector. The featured speakers included scientists from Toxicology Excellence for Risk Assessment (TERA), the National Institute of Occupational Safety and Health, the Indiana Department of Environmental Management, Procter & Gamble Corp., EPA, and Ohio EPA.

The workshop provided a synopsis of the historical assessment tools for noncancer endpoints. It also discussed the approaches for quantifying noncancer effects, including in vitro, modeled, and epidemiological studies.

In addition, an overview of the application of noncancer toxicity criteria to real-world situations and risk management was presented.

### Annual Fall Dinner Meeting and Presentation on “Hormesis: A Real Phenomenon or Wistful Artifact?”

The Ohio SRA Annual Fall Dinner Meeting was held at Beavercreek, Ohio, on 2 November 2000. The meeting included a brief discussion of the Chapter’s annual business report and a featured presentation by Dr. Ken Poirier on “Hormesis: A Real Phenomenon or Wistful Artifact?”

Hormesis is particularly related to the potential risk assessment of essential human nutrients and micronutrients, which may also occur as contaminants in the environment, food, cosmetics, drugs, and other consumer items.

The presentation, which gave an overview of the history of hormesis, described it as the nonmonotonic dose-response behavior of a compound for any adverse response. In simpler terms, this means that at very low—but still measurable—doses, putative toxicological agents exhibit a positive, beneficial effect.

A number of examples of hormesis was presented to the audience to aid in making decisions about the relevancy of this phenomenon to toxicology.

## New England Chapter

*Karen Vetrano*

The 10 January 2001 meeting of the New England Chapter of the SRA included talks by Jo Anne Shatkin, Senior Scientist with Menzie-Cura Associates, Inc., and Ruthann Rudel, Senior Environmental Toxicologist with Silent Spring Institute.

Shatkin presented “A Semi-Quantitative Comparative Risk Assessment of Portuguese Hazardous Industrial Waste Streams.”

A comparative risk assessment methodology for ranking environmental hazards with very little analytical data was developed, according to Shatkin. Alternatives can be compared for public health, environmental, and other societal impacts, providing managers with a transparent decision criteria and semiquantitative risk-based foundation for decision making. The methodology developed requires limited analytical effort and is an inexpensive alternative for setting priorities based on risk over large detailed studies in the early stages of environmental planning.

A key feature is the use of quantitative uncertainty analysis to understand the limits of the assessment. The methodology was recently applied to industries in Portugal that report disposal of hazardous wastes. Industries were ranked on up to ten scales for exposure and toxicity potential impact.

Rudel spoke on “Residential Exposure to Hormonally Active Chemicals and Animal Mammary Carcinogens: Preliminary Results for Air and Dust Samples.”

In order to characterize typical indoor exposures to chemicals of interest for research on breast cancer and other hormonally mediated health outcomes, according to Rudel, methods were developed to analyze air and dust for target compounds that (1) have been identified as animal mammary carcinogens or hormonally active agents and (2) are used in commercial or consumer products or building materials.

These methods are being applied to a set of homes on Cape Cod to begin to characterize the extent of exposure to these classes of compounds. The compounds detected, including phthalates, alkylphenols, and pesticides, are toxicologically important chemicals that are widespread in indoor environments, making them priorities for future research and regulatory evaluation.

## Southern California Chapter

*Mohan Balagopalan, Secretary*

The Southern California Chapter of the Society for Risk Analysis held a dinner meeting 15 November 2000 with David Kimbrough speaking on “The Environmental Chemistry, Toxicology, and Epidemiology of Chromium: Implications for Risk Assessment.”

David Kimbrough currently works as the Water Quality and Laboratory Supervisor at the Castaic Lake Water Agency. He is involved in public hearings regarding the recently discovered chromium VI in drinking water supplies in the San Fernando Valley.

Kimbrough has worked in a variety of laboratory settings, including clinical and industrial toxicology, industrial hygiene, food chemistry and microbiology, air chemistry, hazardous waste characterizations, and drinking and wastewater chemistry and microbiology. He has worked for Coca-Cola USA, the South Coast Air Quality Management District, California Department of Health Services, and the California Department of Toxic Substances Control.

Kimbrough is the author of many papers on the environmental analysis of air, water, and solids, drinking water disinfection and microbiology, source identification of environmental contaminants, and environmental policy. ♦ ♦ ♦



## Specialty Groups

### Food and Water Risk Specialty Group

*Greg Paoli, Chair*

The Society for Risk Analysis (SRA) 2000 Annual Meeting in December was a focal point of activity related to food and water risk analysis. The activities included symposia sponsored by the Food and Water Risk Specialty Group (FWRS), many presentations and posters related to food and water risk, the business meeting of the FWRS, a public meeting of the Risk Analysis Clearinghouse, and a variety of concurrent meetings in and around Washington.

The FWRS business meeting yielded new group leaders, membership dues, and some proposed symposia for next year's meeting. The new group leaders include Greg Paoli (Chair), Sue Ferenc (Vice-Chair), and Isabel Walls (Secretary). Thanks go out to Sue Ferenc, Don Schaffner, and Roberta Morales for filling these roles in the past year.

The FWRS voted to collect voluntary dues to support future activities, including perhaps student travel awards or other activities to be decided at the next business meeting. The dues will be payable on your next membership renewal.

The Specialty Group decided that the following areas are important topics that may be developed into symposia at the 2001 Annual Meeting in Seattle: (1) Microbial risk assessment for fruits and vegetables, (2) Risk assessment for unfiltered surface water supplies, (3) Microbial risk assessment for meat and poultry, (4) Integrating risk assessment and cost-benefit analysis for foods, (5) Use of uncertainty analysis to identify critical control points in food safety process risk models, (6) Predictive microbiology, (7) Risk assessment for pharmaceutically active compounds in water, (8) Use of food consumption databases in risk assessment, and (9) WHO/FAO activities in microbial risk assessment.

If you have an interest in risk analysis matters related to food or water, but were unable to attend the 2000 Specialty Group meeting in Washington or know of others who would be interested in joining, please be sure to contact the Specialty Group leaders (Greg, Sue, or Isabel) to ensure that you continue to receive Specialty Group communications. Members should also be sure to stop by the Web site of the FWRS to see "what's new," sign up for automatic updates, and check their contact information. The site can be reached via the Society's Web site under the "Chapters and Sections" link. See you in Seattle.

### Ecological Risk Assessment Specialty Group

*Bruce Hope, Chairperson*

At this year's SRA Annual Meeting in Washington, D.C., the Ecological Risk Assessment Specialty Group (ERASG) sponsored three symposia, seven platform sessions, a poster session, and two workshops—a nice increase over the offerings we had in 1999. My thanks to Jessica Glicken, Randy Wentzel, Randall Ryti, Christine Papageorgis, Scott Ferson, Ralph Stahl, Kristin Lawrence, Taku Fuji, Bob Fares, Charlie Menzie, Catriona Rogers, and Bill van der Schalie for serving as symposium or session chairs and to Anne Sergeant and Bob Fares for their efforts in organizing the workshops. Our business meeting and Group mixer was also a success, thanks in large part to contributions from this year's corporate sponsors:

Hart Crowser (Seattle, Washington), Neptune & Company (Los Alamos, New Mexico), QEA, LLC (Montvale, New Jersey), and Menzie-Cura & Associates (Chelmsford, Massachusetts). Thanks also to Charlie Pittinger (Procter & Gamble) for cross-publishing ERASG information in the newsletter of the Society for Environmental Toxicology & Chemistry.

A question that keeps coming up is: How do I get involved with the Group? Well, there are a number of ways: (1) Join the Group by checking the \$10 box on your dues renewal form—we currently have 52 paid members and these funds can go toward Group activities—such as the mixer or possibly (some day) something like a student travel award, (2) Volunteer as a session or symposium chair—be instrumental in bringing good work and new ideas to the forefront of the risk community, (3) Submit good-quality, ERA-related papers for consideration by our journal, *Risk Analysis*, (4) Make contributions to the RISK newsletter, either directly to "Member News" (mwalchuk@hickorytech.net) or through me for inclusion in the Specialty Group area (bkhope@hotmail.com), (5) Help recruit more corporate sponsors, again with the funds going toward the mixer or to travel or other awards, (6) Submit more posters; there's always room for more, quality posters, and (7) Simply spread the word that SRA welcomes the presentation and discussion of risk analysis-related work, whether theoretical or applied, across a range of disciplines.

There are also recurring questions about deliverables and due dates, so here's a synopsis of the time line leading to the SRA 2001 Annual Meeting. In late January or early February, the search for platform session topics and/or chairs will begin. It is hoped topics and chairs (preferably volunteers!) will be settled on by mid-March so that there are places to direct both solicited and unsolicited abstracts—which are due to the SRA Program Committee in mid-May (this is a firm date). Workshop proposals are due to the Workshop Committee about the same time. The Program Committee then meets in early June to judge, select, and assign abstracts to appropriate platform and poster sessions; platform sessions are also scheduled at this time. A preliminary agenda should appear on the SRA Web site (www.sra.org) by midsummer. Then all is quiet (except for SRA staff!) until the annual meeting . . .

The 2001 SRA Annual Meeting will take place in Seattle, Washington. The goal for 2001 is to hold steady at ten quality sessions/symposia, with possibly two workshops and a poster session. This will be an excellent opportunity for increased participation by West Coast ecological risk assessors and for some sessions focused on ecological risk issues of particular interest to the Northwest. And topics outside the mainstream of chemical risk will continue to be strongly encouraged. So feel free to flood me with suggestions. Those who would like to join the Group and become more involved in our plans for Seattle 2001 are encouraged to contact me by phone (503-799-9662) or via e-mail (bkhope@hotmail.com).

### Risk Science and Law Specialty Group

*Wendy Wagner, Chair*

The Risk Science and Law Specialty Group (RSL) sponsored three symposia at the Society for Risk Analysis (SRA) 2000 Annual Meeting, all of which were very well received.

The first panel was titled "Judicial Review and Risk Assessment—Chlorine and Beyond" and showcased five speakers who discussed the recent *Chlorine Chemistry Council v. EPA* case and the courts' review of risk assessments more generally. The second symposium, "Risk Analysis and Food Regulation in the U.S. and the European Union," brought in speakers from the U.S. Department of Agriculture, the European Commission, academia, and industry to discuss current regulatory and liability approaches to food safety in the United States and Europe. In the third and final symposium, "Improving Inputs for Risk Decisions—Better Experts and Better Public Access," three speakers from nonprofit, consulting, and industry organizations explored a variety of path-breaking issues arising with respect to the use of risk science in the courts and regulatory agencies. For those who missed the live performances at one or more of these panels, take cheer—the *Journal of Risk Decision and Policy* (Cambridge University Press) is running a symposium issue, expected in 2001, that will publish several papers from each of the three panels.

At the Annual Meeting, the Group also presented a "new and improved" poster session on "Risk Science and the Courts." RSL is posting its revised, 2000 version of the full casebook at its Web site (available at <http://www.riskworld.com/risksciencelaw/> [click "Online Casebook"]).

At the RSL's business meeting, a number of plans were made for the 2001 year, including cosponsoring a conference on "Comparing Precautions" to be hosted by Duke University School of Law (under the capable direction of RSL officer Jonathan Wiener), collaborating with the Risk Communication Specialty Group on a mixer at the 2001 Annual Meeting in Seattle, and sponsoring at least three symposia panels for the 2001 Annual Meeting. RSL officers will be contacting members via e-mail later in the spring to solicit abstracts and update them on each of these projects. If you would like to join the Specialty Group, or if you have ideas or questions, please contact Wendy Wagner at [wagner9@attglobal.net](mailto:wagner9@attglobal.net) or by phone at 212-854-5332.

## Dose Response Specialty Group

*Paul M. Schlosser, President*

The Dose Response Specialty Group (DRSG) of the Society for Risk Analysis (SRA) welcomes our new officers starting in 2001: President-elect Ron Brown, U.S. Food and Drug Administration ([rpb@cdrh.fda.gov](mailto:rpb@cdrh.fda.gov)), Secretary/Treasurer Marc Rigas, U.S. Environmental Protection Agency ([rigas.marc@epa.gov](mailto:rigas.marc@epa.gov)), Trustee Ken Bogen, Lawrence Livermore National Laboratory Health and Ecological Assessment Division ([bogen@llnl.gov](mailto:bogen@llnl.gov)), and Trustee Resha Putzrath, Georgetown Risk Group ([rmputzrath@mindspring.com](mailto:rmputzrath@mindspring.com)).

### Activities at the 2000 Annual Meeting

The DRSG sponsored the following symposia at the SRA 2000 Annual Meeting in Crystal City, Virginia: "Mechanistic Considerations from Toxicology to Infectious Disease" (Peg Coleman and Paul Schlosser, Chairs), "Validation: Biologically Based Mathematical Models for Use in Risk Assessment" (Paul Schlosser, Chair), and "Mode of Action Motivated Dosimetry: An Interagency Proposal to Develop Models for Inhalation, Oral, and Dermal Exposure" (two sessions, Annie Jarabek, Chair). We also held our annual DRSG business meeting at which the new officers were announced and some changes to the bylaws were finalized. And last but not least, we cospon-

sored a mixer with the Risk Communication Specialty Group at which our guest speaker was Gail Charnley, SRA Past President, on the topic "Risk Communication and Dose Response: Paracelsus vs. Precaution."

### Monthly Teleconferences

The DRSG holds teleconference meetings on the first Tuesday of every month (3:30-4:30 p.m. Eastern standard time) to discuss and plan symposia, proposed workshops, open forums, and other DRSG-sponsored activities on dose-response issues. In addition, tele-forums will be held the first Tuesday of March, June, and October, with two likely topics being data-derived uncertainty factors and dealing with exposures above the RfD. New members and guests are welcome to join our meetings. To join a DRSG teleconference meeting, simply call 202-260-7280. When asked for the 4-digit code number, enter 0577#. The discussions are always provocative and interesting! For notices of upcoming meetings, sign up for the DRSG e-mail list on eGroups—see following info under "DRSG Contacts."

### 2000 DRSG Student Merit Award Winner

The winner of the 2000 Student Merit Award in Dose-Response Assessment is Thomas Lewandowski at the University of Washington, working under the guidance of Elaine Faustman. The title of his abstract is "Comparison of Developmental Toxicity of Methylmercury In Vitro and In Vivo: Potential Value of In Vitro-Derived Data for Dose-Response Assessment." Thomas presented his paper at the 2000 Annual Meeting with three other student papers in dose response presented by Cammey Cole, North Carolina State University; Amy Kim, University of North Carolina at Chapel Hill; and Andrew Wilson, Harvard School of Public Health.

For information about applying for the Year 2001 DRSG Student Merit Award, see the announcement on the next page.



**Thomas Lewandowski, recipient of the 2000 Student Merit Award in Dose-Response Assessment, with DRSG Vice President Lynne Haber (on left) and his mentor, Elaine Faustman.**

### DRSG Contacts

For more information on the DRSG or to become a member, please contact Paul Schlosser, CIIT Centers for Health Research, P.O. Box 12137 (6 Davis Drive), Research Triangle Park, NC 27709; phone: 919-558-1243; e-mail: [schlosser@ciit.org](mailto:schlosser@ciit.org). You can also sign up to be on our e-mail list by registering on eGroups at <http://www.eGroups.com/group/DRSG>. (If you haven't done so previously, you must register with eGroups first and *then* sign up with the DRSG. Contact Paul Schlosser at the e-mail address above if you have difficulties or concerns regarding the list.)

**Notice to All Students and Graduate Student Programs  
Student Merit Award in Dose-Response Assessment**

The Dose Response Specialty Group of the Society for Risk Analysis (SRA) is pleased to offer a merit award to a student conducting graduate research in dose-response assessment. The research may be on any topic broadly related to dose-response assessment, including but not limited to laboratory investigation, methods development, comparative analyses, mathematical analyses, studies on strengthening the role of dose-response assessment in risk assessment, uncertainty analysis, harmonization, cancer and health effects other than cancer, dosimetry, pharmacokinetics, genetics, and molecular biology. The award amount may vary from year to year, but will be on the order of several hundred dollars. In addition, the SRA annual meeting registration fee will be waived for the winner. Some additional support for travel may be available to the top applicants. *All* authors should plan to present their work at the annual meeting. If circumstances prevent attendance, the author should arrange for the paper to be presented by a substitute.

The award is merit based and intended to be competitive. The Executive Committee of the Dose Response Specialty Group will rely on seven criteria to evaluate submissions:

1. Relevance of the topic to dose response
2. Originality of the research (e.g., a reproduced experiment, a modification of an existing study, a whole new line of investigation)
3. Significance of the conclusions toward advancement of a principle, line of research, or the field as a whole
4. Degree of complexity of procedures and analyses (development of new, modified, or specialized methods and analytical tools)
5. Breadth of the inquiry (multiple phases in a single line of inquiry, sequential outcomes, how much work was done, amount of result)
6. Quality of the write-up (clarity, logic, organization)
7. Submitted to or published in a peer-review journal

Submissions should be made in the form of 1-2 page extended abstracts. The exact format is at the **discretion of submitters**. The deadline for submission is 30 May 2001, but the normal procedures for abstract submittal to SRA should also be followed. **Please submit two copies** of abstracts to Lynne Haber, Toxicology Excellence for Risk Assessment, 1757 Chase Avenue, Cincinnati, OH 45223, USA; phone: 513-542-7475, ext. 17; fax: 513-542-7487; e-mail: Haber@TERA.org.



## SRA-Europe

### 11<sup>th</sup> Annual Society for Risk Analysis-Europe Conference

The 11<sup>th</sup> Annual Society for Risk Analysis-Europe Conference will be held 23-27 May 2001 in Lisbon, Portugal. The SRA-Europe Conference attains the largest concentration of risk researchers and practitioners in Europe.

#### Preliminary Program

The program for the Conference will include the following special topics: Precautionary Principle and Risk Analysis, Risk and Insurance, Transport-Related Risks, Food-Related Risks, Health-Related Risks, EMF (Electro Magnetic Fields), Integrated Risk Management (Environmental aspects, Industry risk taking, and Technological innovation), Ecological Risk Assessment, Climate-Related Risks, Risk Assessment: Case Studies, Hazardous Facilities, Nuclear Risks, Risk Cultures in Organisations, and Risk Perception.

#### Special Advanced Courses

For the first time at an SRA-Europe meeting, a special package of advanced and introductory courses on risk-related issues and methodologies is being offered, both before and after the Conference. Topics for these courses include Ecological Risk Assessment: New Approaches and Methodologies, New Frontiers in Risk Assessment (including advanced probabilistic methods), and Integrated Risk Management.

#### About Lisbon

Lisbon is a city in western Portugal, on the northern side of the Tagus river estuary, near the Atlantic Ocean. Known as "Lisboa" in Portuguese, Lisbon dates from the pre-Roman times and has served as the national capital since the 13<sup>th</sup> century. Considered one of the most impressive cities in Europe, Lisbon spreads northward from the bustling port area over a series of low-lying hills and is a city noted for its broad plazas, tree-lined streets, and many gaily colored buildings.

The months of April and May, in the height of spring, are probably the best months for a visit to Portugal.

#### Registration

Please contact our Conference official travel agency for registration and hotel reservations: Expansão Viagens, Av. Alexandre Herculano, 92, 2900-206 Setúbal, PORTUGAL; phone: +351 265528800; fax: +351 265528809; e-mail: expansao.viagens@esoterica.pt; Web site: www.expansao-viagens.pt.

For more information see the SRA-Europe Web site: [www.sraeurope.com](http://www.sraeurope.com).

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## SRA-Japan

### Call for Papers

### Second Asian Symposium on Risk Assessment and Management

*Saburo Ikeda, Secretary-General*

The Second Asian Symposium on Risk Assessment and Management (SASRAM 2001) will be held 23-25 November 2001 at Kobe University in Kobe, Japan. Kobe is a beautiful port city in western Japan, but was hard hit by one of the largest-scale earthquakes in Japan on 17 January 1995. We will see and learn how Kobe has been managing the catastrophic disaster since then. Registration, seminars, and social activities will be held 23 November. Plenary and individual sessions are scheduled for 24 and 25 November.

SASRAM 2001 is being organized by the Society for Risk Analysis, Japan Section (Tsukuba, Japan), Beijing Normal University (Beijing, China), and, tentatively, Korea Society of Environmental Toxicology (Seoul, Korea).

The main objective of SASRAM 2001 is to bring together risk researchers, analysts, and managers who are working in the fields of risk problems in health, safety, and the environment in Asian countries. The exchanging and reviewing of our recent experiences and case studies involved in risk analysis and research will serve for us to understand risk phenomena associated with traditional and modern complex systems in Asian societies. Researchers and managers from universities, research institutions, enterprises, and public and governmental agencies are invited to participate in the symposium to evaluate the existing body of knowledge, to clarify the research directions, and to improve risk management practices. Senior risk researchers and risk managers from all over the world are also welcome to the symposium.

Special conference topics include (1) Risk Theory and Uncertainty Models, (2) Risk Perception and Risk Communication, (3) Risk and Insurance, (4) Natural Disaster and Risk Management, (5) Health and Safety Risks in Public and Private Sectors, (6) Environmental and Ecological Risk Assessment, and (7) Sustainable Development and Risk Issues.

The official language of the symposium will be English. There will be no interpretation served in the symposium.

Call for Papers and Information for Authors: Abstract deadline is 15 May 2001. Authors are invited to submit extended abstracts in English to the organizing committee for either oral or poster presentation. These should be one or two pages long (300-500 words) and include the paper title; the author's name, postal address, telephone number, fax number, and e-mail address; and a list of a maximum of six keywords. Abstracts

should be sent to the conference secretariat before 15 May 2001. This can be done by postal mail or by either e-mail or online Internet submission via the SRA-Japan Web site (<http://ecopolis.sk.tsukuba.ac.jp/~srajapan/>). E-mail or online submission is particularly encouraged. The organizing committee will select the papers based on the submitted extended abstracts for oral or poster presentation at the symposium. Notification of acceptance of the papers will be sent to the authors by 15 June. Authors of accepted contributions will then be invited to prepare a final version of their paper (6-8 pages long) in English. The final version should be sent to the symposium secretariat before 1 October 2001. All accepted papers, together with the invited papers, will be included in the symposium proceedings.

All correspondence relating to the conference program, abstract, and paper submissions and any further information should be directed to the secretary-general of SRA Japan: Saburo Ikeda, Secretary-General, Society for Risk Analysis, Japan Section, c/o Institute of Policy and Planning Sciences, University of Tsukuba, Tsukuba 305-8573, Japan; phone: +(81)-298-53-5380; fax: +(81)-298-55-3849; e-mail: [srajapan@ecopolis.sk.tsukuba.ac.jp](mailto:srajapan@ecopolis.sk.tsukuba.ac.jp); Web site: <http://ecopolis.sk.tsukuba.ac.jp/~srajapan>.

The International Organizing Committee for SASRAM 2001 includes Yasuhiro Sakai (Chair, University of Tsukuba, President of SRA-Japan), Atsushi Takao (Kobe University, Faculty of Business Administration, Japan), Teruo Ohshima (Chemical Risk Research Institute, Japan), Saburo Ikeda (University of Tsukuba, Institute of Policy and Planning Sciences, Japan), Shi Peijun (Beijing Normal University, Institute of Resource Sciences, China), and Dong Chun Shin (Environmental Pollution Research Center, Yonsei University, Korea). Members from Asian countries are to be announced later.

The National Organizing Committee for SASRAM 2001 includes Atsushi Takao (Chair, Kobe University, Faculty of Business Administration, Japan), Yasuhiro Sakai (University of Tsukuba, President of SRA-Japan), Kaoru Imai (Kyoto University of Industry, Faculty of Law, Japan), Norio Okada (Kyoto University, Institute of Disaster Prevention, Japan), Katsuhiko Kuroda (Kobe University, Faculty of Engineering, Japan), Shinsuke Morisawa (Kyoto University, Department of Global Environment Engineering, Japan), and Shoji Tsuchida (Kansai University, Faculty of Sociology, Japan). ♦♦♦

### Call for Nominations for SRA Officers

The Society for Risk Analysis Nominating Committee invites nominations for the following offices in the Society's 2001 elections:

#### President-elect Secretary Three Councilors

The Secretary serves for two years. Councilors serve for three years and are ineligible for reelection until one year has elapsed following the completion of their terms.

Please submit nominations with a brief paragraph supporting each by **2 July 2001** to the Chair of the Nominating Committee: Gail Charnley, HealthRisk Strategies, 826 A St. SE, Washington, D.C. 20003; phone: 202-543-2408; fax: 202-543-3019; e-mail: [healthrisk@aol.com](mailto:healthrisk@aol.com).





## News and Announcements

### Risk and Governance: An International Symposium

*Rae Zimmerman and Robin Cantor*

Risk research and analysis has advanced to a point where regular international assessments of the state of the field and future directions are timely. Such assessments will be beneficial for several constituencies, including the research community, practitioners, and decision makers. To begin this process, the Society for Risk Analysis (SRA) held an international Symposium on Risk and Governance 21-25 June 2000 at the Airlie Conference Center in Warrenton, Virginia, to provide the intellectual and procedural foundation for future congresses as well as to begin to gather constituencies for those events. The Symposium objectives were to address the state of the field of risk analysis—where consensus, controversy, and uncertainties exist—and to identify major cornerstones of the current state of the field and important new directions for future efforts. The Symposium was supported through the generosity of the Dow Chemical Company, Exxon Corporation, Philip Morris Europe, Procter & Gamble, the National Science Foundation, the Society for Risk Analysis (North America and Japan), and the Chemical Manufacturers Association.

The Symposium also served to begin the very important process of assembling contacts for a world congress or series of world congresses.

Over 50 people attended from about a dozen countries in Asia, Europe, and North America. A third of the participants were from non-U.S. countries, compared to about a fifth of the SRA membership in this category.

The symposium was organized into plenaries and a series of sessions aimed at discussing (1) draft papers, (2) risk and governance issues involving equity, efficiency, and analysis and deliberation, and (3) questions about process, such as institutional arrangements and education.

The opening plenary session focused on the nature and future of risk analysis from the perspectives of the different disciplines of engineering, environmental protection, social science, and health. In several sessions, the observation was made that the risk analysis field will have to adapt its capacity to address changing risk portfolios.

Two sessions were held on the future institutional needs of and capabilities for risk analysis. One such session was on institutions and focused on current and potential institutions for risk assessment and management, with an emphasis on national risk policy questions. There was an in-depth and lively discussion in this session of institutional arrangements for meeting future needs. The other session focused on education and training and addressed the supply of individuals in the profession trained in risk analysis, decision making, and modeling. Approaches currently being used to provide this expertise around the world were discussed, as was how individuals drawn from traditionally disciplinary areas can adapt to meet the interdisciplinary needs of risk analysis.

Three sessions addressed fundamental risk and governance issues. The session on equity addressed a number of challenging questions, including what processes should be used to define and measure equity, principles guiding deliberations about equity, who should judge its acceptability, and who should mitigate problems of equity when they arise and how. For example, the considerable breadth of the primary scope of equity went beyond traditional concepts of how risks affect individuals and populations to effects on firms, investors, industries, disciplines, stakeholders, and nations, as well as the natural environment (ecological equity). The cultural context was argued to be important in how equity is defined and implemented and which principles are used to determine equity.

A major focus of the issue session on efficiency was how questions of efficiency could be incorporated into risk assessment. Considerations discussed included:

- Efficiency is typically the domain of economists.
- Risk assessments often do not produce the right kind of information for an efficiency analysis.
- Efficiency and risk assessment involve different principles.
- Can and how should efficiency issues incorporate ethical issues such as trust and justice?
- Should different rules apply to products and environmental protection?
- What is the role of and assumptions for discounting if it is used in risk analysis?

The session on integrating analysis and deliberation focused on what minimal conditions strongly support public deliberation and analysis, what are some examples of successes for their integration, and how such integration can be achieved in highly contentious situations. Several case examples were presented as foundations for the discussion. One involved multiple stakeholder interactions and the balancing of economic and environmental needs of an estuary. Another case study addressed nuclear power in an international setting and the conditions that challenge integration of analysis and deliberation.

The symposium concluded with observations for future congresses regarding:

- Fundamental, overarching, and longstanding issues pertaining to the definition and relationship between facts and values and how to integrate facts and values from different sources and different constituencies.
- Integration of assessment with the existing body of scientific knowledge in light of changing information, quality problems with data bases, uncertainty, and variability.
- Integration of different national and constituency views in light of the many questions of ethics and justice that emerge when exporting risks to other areas, time periods, and people.
- Integration of risk assessment and societal decision making and the applicability of various decision-making approaches

### World Congress on Risk Analysis

Planning for the first World Congress on Risk Analysis, tentatively scheduled in Europe for the summer of 2002, has been authorized by the Society for Risk Analysis (SRA) Council. Berlin, London, and Stockholm are being evaluated as possible locations for the first Congress. SRA members interested in playing a role in the planning process should submit their suggestions to Dr. John D. Graham at e-mail: [jgraham@hsph.harvard.edu](mailto:jgraham@hsph.harvard.edu).



to this problem.

- Integration of fragmented management systems and approaches, including the consideration of what risk problems are best handled at what scales and how and when to intervene.

Members of the Symposium Organizing Committee included John Graham (Cochair), Harvard School of Public Health; Rae Zimmerman (Cochair), New York University; Robin Cantor, LECG, LLC; Gail Charnley, HealthRisk Strategies; Yacov Haimés, University of Virginia; Saburo Ikeda, University of Tsukuba (Japan); Roger Kasperson, Clark University (CENTED); Joanne Linnerooth-Bayer, IIASA (Laxenburg, Vienna); Ragnar Löfstedt, University of Surrey; and Timothy L. McDaniels, University of British Columbia.

Coeditors of the Symposium Papers are Timothy L. McDaniels, University of British Columbia, and Mitchell Small, Carnegie Mellon University.

Authors (and themes addressed in the papers) were Robin Gregory (Perceptions and Preferences), Dale Hattis (Risk and Variability), Mary English (Risk and Justice), Ortwin Renn (Deliberation: Participatory/Institutional), Alison Cullen and Mitchell Small (Risk and Uncertainty: Quantitative and Precautionary Approaches), Yacov Y. Haimés, James H. Lambert, Vicki Bier, and Scott Ferson (Quantifying Risk of Extreme and Rare Events: Lessons from a Selection of Approaches), Joyce Tait (Global Change and Transboundary Risks), Saburo Ikeda, Michinori Kabuto, Iwao Uchiyama, and Tohru Morioka (Risk and Developing Countries), and John D. Graham, Junko Nakanishi, and Magnus Johannesson (Risk and Efficiency).

### **American Chemistry Council Ecological Risk Assessment Sub Team**

The American Chemistry Council is pleased to announce the formation of a new Ecological Risk Assessment Sub Team (ERAST) in response to the industrial community's need for a nationally coordinated effort in advocating its positions on ecological risk issues. ERAST will develop, coordinate, and advance Council positions on issues relating to new scientific developments of regulatory or legislative importance to the chemical industry in the areas of ecology, ecological toxicity, and ecological risk assessment. These positions will reflect sound scientific principles and proactive Responsible Care® practices. ERAST will identify and evaluate emerging scientific issues within its mission with potential regulatory and/or legislative impacts on the chemical industry and communicate such information to appropriate Teams, panels, and membership. In addition, ERAST will advocate the Council's position on science policy issues with outreach to the regulatory community. ERAST will also provide technical assistance on ecological issues to Council Teams and panels in the areas of ecology, ecological toxicology, ecological risk assessment, and related scientific matters. Contact Elizabeth Boa at 703-741-5234 or via e-mail at [Elizabeth\\_Boa@americanchemistry.com](mailto:Elizabeth_Boa@americanchemistry.com).

### **American Board of Industrial Hygiene Points for SRA Annual Meeting**

The American Board of Industrial Hygiene has awarded points for the Society for Risk Analysis Annual Meeting that was held in Arlington, Virginia, 3-6 December 2000. Please notify the Secretariat to request a certificate ([SRA@BurkInc.com](mailto:SRA@BurkInc.com)).

### **Risk Communications Information and Discussion List**

A new information and discussion list ([risk-com@listserver.itd.umich.edu](mailto:risk-com@listserver.itd.umich.edu)) has been established to promote communication and discussion among those interested in risk communication. The list was started by members of the Risk Communication Specialty Group (RCSG) of the Society for Risk Analysis, but is currently not formally associated with the Society. As such, the list is a place for distributing information related to the RCSG's activities, as well as for material on risk communication in general. Possible contributions to the list include conference announcements and calls for papers; job announcements; requests for information or assistance; book, article, periodical, film, etc., recommendations; and discussions on topics relevant to the list.

By sending an e-mail message to the list address, you will be sending it to everyone who is signed up to the list. In turn, as a subscriber you will receive all postings made by others. For those of you familiar with such lists, ours is an unmoderated list server with all of the usual functions.

To subscribe to the list, simply send an e-mail message to [risk-com-request@umich.edu](mailto:risk-com-request@umich.edu) with the word SUBSCRIBE as the SUBJECT of the message. You will receive confirmation of your subscription.

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### **EPA/ORD Requests for STAR Grant Applications**

The U.S. Environmental Protection Agency's (EPA) Office of Research and Development STAR (Science to Achieve Results) program announces Requests for Applications (RFAs) for its environmental research grants program. EPA operates a competitive, peer-reviewed, extramural research grants program to foster innovative and far-reaching scientific projects that will assist in solving future environmental problems. Research grants, with the exception of EMPACT grants (see below), are available to principal investigators in universities and other not-for-profit research institutions in the United States. Grants are intended to facilitate cooperation between EPA and the scientific community to help forge solutions to environmental problems. All grants are a part of the STAR program designed to provide high-quality science for use in EPA's decision-making process.

This announcement is being made to solicit applications for research projects in environmental statistics, ecological indicators, children's health, pesticide exposure, environmental monitoring, and harmful algal blooms.

All RFAs opened on 30 October 2000; depending on the RFA, closing dates range from 31 January to 21 March 2001.

The RFAs and contacts are (1) Research Program on Statistical Survey Design and Analysis for Aquatic Resources, contact: Barbara Levinson (EPA), 202-564-6911, [levinson.barbara@epa.gov](mailto:levinson.barbara@epa.gov), (2) Environmental Statistics Center, contact: Dr. Chris Saint (EPA), 202-564-6911, [saint.chris@epa.gov](mailto:saint.chris@epa.gov), (3) Ecological Indicators for Gulf of Mexico Estuaries, contacts: Barbara Levinson (EPA), 202-564-6911, [levinson.barbara@epa.gov](mailto:levinson.barbara@epa.gov), and Eric Lindstrom (NASA), 202-358-4540, [elindstr@hq.nasa.gov](mailto:elindstr@hq.nasa.gov), (4) Children's Vulner-

ability to Toxic Substances in the Environment, contact: Dr. Chris Saint (EPA), 202-564-6911, saint.chris@epa.gov, (5) Aggregate Exposure Assessment for Pesticides: Longitudinal Case Studies, contact: Dr. Chris Saint (EPA), 202-564-6911, saint.chris@epa.gov, (6) Ecology and Oceanography of Harmful Algal Blooms (ECOHAB) (joint solicitation with the National Oceanic and Atmospheric Administration, National Science Foundation, Office of Naval Research, and National Aeronautics and Space Administration), contacts: Dr. Kevin Sellner, ECOHAB Coordinator, 301-713-3338, ext. 127, ksellner@cop.noaa.gov (technical information) and Dr. Robert E. Menzer (EPA), 202-564-6849, menzer.robert@epa.gov (administrative information), and (7) Environmental Monitoring for Public Access and Community Tracking (EMPACT), contact: Dr. Barbara Karn (EPA), 202-564-6820, karn.barbara@epa.gov.

For additional information, contact Dr. Robert E. Menzer in EPA's National Center for Environmental Research, 202-564-6849, menzer.robert@epa.gov. Detailed RFA descriptions and grant applications can be obtained online at <http://www.epa.gov/ncercqa/>.

## Report from NATO/SRA Sponsored Workshop

*Jo Anne Shatkin*

In October, I was one representative of the Society for Risk Analysis (SRA) at an international workshop in Lisbon, Portugal, sponsored by the North Atlantic Treaty Organization (NATO), SRA, Menzie-Cura & Associates, Inc., and others, titled "Assessment and Management of Environmental Risks: Methods and Applications in Eastern European and Developing Countries." The proceedings of the workshop will be published in 2001 (see *RISK newsletter*, Fourth Quarter 2000, page 13, for details).

A lot of important work was described, as were the processes for transferring the techniques and lessons of risk assessment to developing nations. At least three things distinguished this meeting from others I have attended: the high caliber of presentations and colleagues organized by Igor Linkov, the focus on discussions and working groups so that productive work was developed while issues were discussed, and our generous host, Professor José Manuel Palma, who, in collaboration with Expansão travel agents ([expansao.viagens@esoterica.pt](mailto:expansao.viagens@esoterica.pt)), provided the best of Portuguese hospitality.

Among the ideas discussed was the understanding that while risk assessment offers a diverse set of tools, they may not be the appropriate ones for a particular situation. Glenn Suter as plenary speaker encouraged us to balance disparate risks, integrate human and ecological risk assessments, and, particularly in developing countries, integrate nonrisk considerations such as economics and the broader benefits of a particular activity.

There was agreement in the workgroup I cochaired on Integrating Science and Policy in Environmental Risk Management that risk analysis is likely to be a valuable tool for developing nations.

Risk assessment can inform the decision, help to set priori-

ties, determine whether to take action, and be a resource for communicating about environmental issues. However, for decisions that are controversial because of differences in beliefs, introducing science is not likely to affect the outcome. The diverse perceptions of risk among the nationalities within the workgroup were a reminder of how difficult productive communication across interests can be in the decision-making process. The workgroup affirmed that risk analysis can be informed by the participatory process and communication and openness are important aspects of this process. However, open communication may be challenging or inappropriate in nations where democratic decision making is untested. While the scientific aspects of risk assessment are universal, the values and judgments in risk assessment are context specific and culturally diverse.

I think we all learned from one another some remarkable aspects of our respective cultures and, more importantly, the necessity of embracing these site-specific characteristics in decisions.

Other meeting highlights included Ruddle Clarkson's talk, in which she instructed us to fasten our seat belts while she led us on a world tour of risk assessment, and the poster presentations, which due to time constraints included two-minute presentations.

Louis Goossens and Igor Linkov led us through an expert elicitation exercise to demonstrate the power of this technique in setting priorities.

In addition, we heard from Ingrid Surova about the ecological risk assessment work of the Risk Assessment Resource

Agency in the Slovakian Environmental Agency and from Ivan Holoubek of the Czech Republic about watershed modeling from 12 years of multimedia monitoring data. Carl Maxwell described the efforts of USAID in creating collaborations between U.S. and eastern European colleagues.

Dorothy Cantor discussed the importance of peer review, and George Apostelakis reminded us we should be discussing risk-informed, not risk-based, policies. Charles Menzie discussed spatial scales for ecological risk assessment.

The reason I bring this to your attention again is that Jim Wilson's comments highlighted an important role for the Society. SRA can provide leadership in newly democratic nations for developing regulations and regulatory bodies, as well as policies that include risk concepts. There is a clear need for professional development and training of risk experts. SRA's outreach activities should keep NATO and other developing nations' needs in mind.

SRA can work with other international professional organizations to expand the horizons of the field in new locations. Education and training on risk concepts and applications at all age levels and for citizens, government officials, decision makers, as well as practitioners was discussed as an important tool for increased reliance on risk assessment in decision making.

I welcome your ideas in thinking about the ways the Society can develop these areas ([jashat@menziecura.com](mailto:jashat@menziecura.com), 978-322-2820).

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**SRA can provide leadership in newly democratic nations for developing regulations and regulatory bodies, as well as policies that include risk concepts.**



## Advertisements



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### Geostatistician/Spatial Statistics

Sandia is one of the country's largest research facilities, employing nearly 7,500 people at major facilities in Albuquerque, New Mexico, and Livermore, California. Please visit our Web site at [www.sandia.gov](http://www.sandia.gov).

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Applicants should submit curriculum vitae, examples of publications, and a reference list to Erik K. Webb, Sandia National Laboratories, P.O. Box 5800 MS: 0735, Albuquerque, NM 87185-0735; fax: 505-844-4426; or e-mail: [ekwebb@sandia.gov](mailto:ekwebb@sandia.gov). Please reference Ad Number: 14605.

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### **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.

The RISK newsletter is published four times a year. Submit advertisements to the Managing Editor, with billing instructions, by 15 January for the First Quarter issue (mid-February), 15 April for the Second Quarter issue (mid-May), 15 July for the Third Quarter issue (mid-August), and 15 October for the Fourth Quarter issue (mid-November). Send to Mary Walchuk, Managing Editor, RISK newsletter, 115 Westwood Dr., Mankato, MN 56001; phone: 507-625-6142; fax: 507-625-1792; e-mail: [mwalchuk@hickorytech.net](mailto:mwalchuk@hickorytech.net).

To place an ad 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](http://www.sra.org/policy.htm).



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## Paper or Electronic?

The Society for Risk Analysis (SRA) Council has been discussing whether the RISK newsletter should be converted to an electronic format, with members receiving an e-mail notice of when the latest issue will appear on the SRA Web site. The membership now has a choice: Paper or Electronic? Please let the Secretariat know if you would prefer to receive your newsletter only on the Internet (contact Brett Burk, SRA@BurkInc.com) and your name will be removed from the snail mailing list. If you would like to continue receiving a paper copy of the newsletter, do nothing and your name will remain on the snail mailing list. For now, all members will receive a notice of when the latest issue is on the Internet.

Should we go to an electronic-only RISK newsletter? If you have an opinion on the subject, please contact Mary Walchuk, RISK newsletter Managing Editor, 115 Westwood Dr., Mankato, MN 56001; fax: 507-625-1792; e-mail: mwalchuk@hickorytech.net, and let us know what you think. ♦♦♦

## Deadline for RISK newsletter Submissions

Information to be included in the **Second Quarter 2001** SRA RISK newsletter, to be mailed mid-May, should be sent to Mary Walchuk, RISK newsletter Managing Editor (115 Westwood Dr., Mankato, MN 56001; phone: 507-625-6142; fax: 507-625-1792; e-mail: mwalchuk@hickorytech.net) no later than **5 April**.

Look for SRA 2000 Annual Meeting photos in the next issue of RISK newsletter.

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