

# RISK *newsletter*

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## Lester Lave Receives SRA Distinguished Achievement Award Award Winners Announced at 1998 Annual Meeting

“Never do absolute risk analysis; do relative risk analysis,” cautioned Dr. Lester Lave, recipient of the 1998 Society for Risk Analysis Distinguished Achievement Award. Lave gave the talk “New Frontiers for Risk Assessment: Life Cycle Risk Assessment” at the 1998 SRA Annual Meeting held 6-9 December in Phoenix, Arizona.



Lave, Higgins Professor of Economics and Professor of Engineering and Public Policy at Carnegie Mellon University, is one of the founding members of the SRA, an SRA Fellow, and a Past President. He was elected to the Institute of Medicine of the National Academy of Sciences. His work has included his first research paper, “Value of Weather Information to the Raisin Industry,” and his most recent work on why electric cars are bad for the environment.

During his acceptance speech Lave stated, “Always consider the risk of having versus the risk of not having (i.e., relative risk).” As an example he used the ALAR-on-apples scare. He told of a young boy who threw out all of his apples and said he would never eat apples again because of the ALAR risk, giving no consideration of the risk of not having fruit in his diet.

He gave several other examples of using the risk-versus-risk approach all familiar to risk analysts, such as the use of estrogen and the increased risk of breast cancer versus the decreased risk of osteoporosis.

Lave stated that Life Cycle Assessment (LCA), which estimates the implications for a product service from materials extraction to the manufacture, use, and end of life, has three phases:

- Phase I—Inventory Analysis, where you quantify all environmental discharges, energy use, and materials use.
- Phase II—Impact Analysis, which estimates health and other implications of these discharges.
- Phase III—Improvement Analysis, which searches for actions to improve outcomes.

He said many Phase I LCAs are completed but few Phase IIs are attempted. “A crucial question,” he continued, “is in getting from Phase I (the inventory) to Phase II (the health and environmental implications).” He emphasized that risk analysts (RAs) “need realistic data, not worst-case assumptions for exposure and health effects.” He added that quantitative risk assessments are needed for acute responses and for endpoints in addition to cancer.

Saying that taking the steps from Phase I to Phases II and III is a major challenge for RAs, Lave concluded, “This is a major opportunity to protect people and advance environmental performance.”

*(Awards, continued on page 3)*

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## President's Message

One of my responsibilities as Society for Risk Analysis (SRA) President is to work to maintain and to improve, where possible, the Society's public and professional profiles. This responsibility is receiving much membership support through a variety of efforts, which have taken several forms.

*Capitol Hill.* This winter, SRA sponsored two luncheon briefings on Capitol Hill for Congressional and Executive Branch staff. One covered efforts underway to include considerations of children's health in risk-based decision making and the other focused on the new multistakeholder initiative to perform toxicity screens of high production volume chemicals (see accompanying stories, page 8). The briefings are consistent with SRA's mission statement to foster and promote the dissemination of knowledge about risk and risk analysis and its applications.

*Education.* Members of SRA are proposing the establishment of a new specialty group that would focus on risk education (see accompanying story, page 13). The proposed specialty group grew out of a very successful symposium at the 1998 Annual Meeting that addressed a variety of educational needs such as those related to understanding risk at the primary, secondary, and university levels. The group would focus on curricula, pedagogy, learning objectives, instructional methods, and risk literacy. Establishment of this new specialty group will further SRA's mission to promote the advancement of the state-of-the-art in education about risk analysis.

*Professional Societies.* In the past, SRA has had informal, ad hoc associations with other professional societies. We have decided to implement more formal arrangements and are currently identifying other societies with whom SRA might have some synergy. We will identify official SRA liaisons to those societies and establish means of cooperation. Cooperative activities could include sponsoring sessions at their annual meetings, inviting them to sponsor sessions at ours, and holding jointly sponsored workshops and symposia. This effort is consistent with SRA's mission statement to foster professional collaboration for the purpose of contributing to risk analysis and risk problem-solving.

*International.* We continue to develop the program and solicit support for our Year 2000 World Symposium on Risk Analysis to be held in June of 2000. The symposium will lay the groundwork for a series of world congresses on risk analysis in the 21<sup>st</sup> century. The goals of the world congresses will be to foster the creation and communication of integrated and interdisciplinary knowledge for risk analysis in developed and developing countries and to provide visions on the role of risk analysis in meeting future challenges.

*Outreach.* Through personal meetings with representatives of organizations perceived as risk-averse, such as the Natural Resources Defense Council, we are trying to find ways to address some of the "baggage" associated with risk analysis that often serves as a source of opposition to risk-based initiatives. If we gain a better understanding of the misperceptions about risk analysis, we will be in a better position to remedy them. As another dimension of outreach, I am working with the membership committee to develop ways to improve the Society's diversity. Finally, SRA member Dave Clarke has agreed to advise us on ways to make the Society's profile more appealing through our journal and other communications media.

Improving SRA's public and professional profiles is the responsibility of all our members. Keep this in mind in your own personal and professional activities and contact me or SRA's Advisory Board (see page 9) if there are issues you believe the Society should address. We look forward to hearing from you!



Gail Charnley

## SRA Call for Award Nominations

The Society for Risk Analysis (SRA) Awards Committee invites nominations for the following 1999 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 1999 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 1 June 1999 to Ann Landis at the SRA Secretariat (1313 Dolley Madison Blvd., Suite 402, McLean, VA 22101) and to John Graham, Awards Committee Chair (Center for Risk Analysis, Harvard School of Public Health, Boston, MA 02115).

(Awards, continued from page 1)

### **Peter Preuss** **Outstanding Risk Practitioner Award**

Peter Preuss, Director of the National Center for Environmental Research and Quality Assurance in the Office of Research and Development of the U.S. Environmental Protection Agency (EPA), has a long history of work related to risk assessment and public policy. He is committed to good, strong science in support of risk assessment as a practitioner, as a user in public policy, and as a decision maker in funding innovative work in support of regulatory issues.



Preuss formerly held positions directing the Office of Health and Environmental Assessment at EPA, on the Consumer Product Safety Commission, with the Department of Environmental Protection for the state of New Jersey, and with the Environmental Protection Agency in Israel.

### **Paul F. Deisler, Jr.** **Outstanding Service Award**

Paul F. Deisler, Jr., an SRA member since 1981, has served the Society and the field of risk analysis in many ways. An SRA Past President and Fellow, Deisler was the first Chairman of the Advisory Board and has worked on many SRA committees. He is also a Past Area Editor for the Health and Environmental/Ecological Risk Assessment area of Risk Analysis.

Retiring as Vice President of Health, Safety and the Environment, Deisler worked for Shell Oil Company for 34 years. He has worked as an EPA Science Advisory Board consultant and pro bono for several organizations. He is author of many publications and is editor of a book on cancer risks.



### **David Okrent** **Fellow of the SRA**

David Okrent, Professor Emeritus and Research Professor at the University of California, Los Angeles (UCLA), worked at Argonne National Laboratory from 1951 to 1971 and was a Professor at the UCLA School of Engineering and Applied Science from 1971 to 1991.



Okrent was a U.S. Delegate to all four "Atoms for Peace" conferences in Geneva and was a member of the U.S. Atomic Energy Commission/U.S. Nuclear Regulatory Commission (AEC/NRC) and was its chair in 1966. He was on the Advisory Committee on Reactor Safeguards for 24 years, is a Fellow of the American Physical Society and a member of the American Nuclear Society (ANS), and was elected to the National Academy of Engineering in 1974. Okrent received the first Tommy Thompson Award from ANS, the first Glenn Seaborg Medal from ANS, an Argonne University Association

Distinguished Appointment, the Distinguished Service Award from the NRC, and two Guggenheim Fellowships. He has written five books and over 200 papers.

### **Adam Finkel** **Chauncey Starr Award**

Adam Finkel, Director of Health Standards at the Occupational Safety and Health Administration since 1994, is responsible for reducing exposures to chemical, biological, and ergonomic hazards in the workplace.



Finkel, who turns 40 next year, was a Fellow of Resources for the Future from 1987 to 1994, is a member of several National Academy of Sciences committees, and has written over 35 articles on risk assessment and cost-benefit analysis. He has made scientific contributions to uncertainty analysis, human susceptibility, comparative risk, and values and ethics in regulations. He is also a professional singer and choral conductor.

### **Ali Mosleh** **Fellow of the SRA**

Ali Mosleh, Professor and Director of the Reliability Engineering Program and Director of the Center for Technology Risk at the University of Maryland, has made research contributions in many areas of risk analysis: expert judgement modeling, Bayesian techniques, human reliability, space system risk methods, information systems risk, nuclear systems risk, and common cause failure analysis.

The author of 200 publications, Mosleh has won several awards for his research achievements. He is a member of the editorial board of several journals and chair of the SRA Engineering Specialty Group.



The student awards went to (left to right) Lorna Zach, University of Canterbury, New Zealand; Joseph Arvai, University of British Columbia; Samantha Bates, University of Washington; Pamela Williams, Harvard School of Public Health; Katherine von Stackelberg, Harvard School of Public Health; Deborah H. Bennett, University of California, Berkeley; Susan Spalinger, University of Idaho; Mary Fox, Johns Hopkins School of Hygiene and Public Health; and Heejeong K. Latimer, University of North Carolina, and Douglas Mercer, University of Washington (not pictured).

## 1998 Society for Risk Analysis Annual Meeting Plenary Session Speakers

At the Plenary Sessions of the 1998 Annual Society for Risk Analysis (SRA) meeting held 6-9 December in Phoenix, Arizona, six speakers presented talks supporting the theme "Assessing and Managing Risks in a Democratic Society." The talks, given by Stuart Harris, E. Donald Elliott, James P. Lester, Robert F. Kennedy, Jr., John D. Graham, and Jason F. Shogren, covered a wide range of topics, from public perceptions and misperceptions of risk to environmental racism.

### Stuart Harris

Stuart Harris, the Natural and Cultural Resources Coordinator for the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) in Oregon, led the Monday Plenary Session. Harris analyzes risk to the CTUIR from pollution impacts, and his primary work effort stems from addressing nuclear pollution and associated cleanup at the Hanford site near Richland, Washington.

Harris provided background on the sovereign government status of the CTUIR and explained that the CTUIR culture "has coevolved with nature and through thousands of years of ecological education has provided its people with their unique and valid version of holistic environmental management."

"Within the decision making context of CERCLA and NEPA, risk assessment as it stands is woefully inadequate for addressing Native American concerns," he said, emphasizing that "restructuring of the risk assessment process must occur in order to address the overwhelming problems including but not limited to:

1. Lack of breadth of coverage,
2. Lack of integration and deficiencies related to but not addressing the CTUIR traditional American Indians' quality of life, and
3. The interrelated ecoculture and their unique exposure parameters and pathways."

"Unfortunately the processes, the approach, and even the necessity to account for traditional American Indian life styles have gone unnoticed in classical risk assessments that typically focus on suburban life styles," Harris continued. Giving examples of the difference in mean exposures between an average traditional subsistence person and the average suburban person, Harris said, "The difference between the means of the two types of life

styles ranges from 2- to 100-fold. The magnitude of the difference is due to the fact that the traditional way of life as it is currently practiced is more than just a suburban life style with extra fish consumption."

Harris then discussed a number of reasons why certain exposures may be underestimated for a broad cross-section of

tribal members. These include the use of animal parts for nonfood uses (for example, skin made into clothing) and plants used for more than nutrition (for example, stalks made into baskets). He also listed a number of corisk factors that can modify both exposure and sensitivity, such as underlying health problems and nutritional status. In an effort to heed the importance of all of these factors, Harris has developed the first subsistence scenario to include more rigorous consideration of environmental impacts on cultural practices.

### E. Donald Elliott

"How Environmental Justice Will Change Risk Assessment" was the topic addressed by E. Donald Elliott, a professor of environmental law at Yale Law School since 1981. From 1989 to 1991, Elliott served as Assistant Administrator and General Counsel of the Environmental Protection Agency (EPA). He is currently a partner in the Washington office of the 600-lawyer international law firm, Paul, Hastings, Janofsky & Walker, as well as continuing to teach half time at Yale.

He has a long-standing interest in risk assessment, having served on the Carnegie Commission task force of Risk and Environmental Decision Making, which recommended broader use of risk assessment to set priorities throughout the regulatory process, among other advisory groups.

Elliott reviewed the underlying legal basis for "environmental justice (E.J.," claims, both in the administrative process and in court cases. "In addition to the recent Executive Order and EPA guidance, there is a strong statutory and even constitutional basis for the fundamental idea that government may not discriminate by race in its decisions," Elliott explained. "However, the EPA guidance extends this established principal to reach 'disparate im-



**Monday Plenary Speakers (left to right): James P. Lester, Stuart Harris, and E. Donald Elliott**

acts,' differential effects that are not proved to result from intentional discrimination. While this is an established concept in employment law and other civil rights cases, its transfer to the environmental area is difficult and problematic." Elliott also discussed the main policy objections to the use of E.J. considerations in EPA decision making, including the idea

that E.J. protection may actually harm those it is intended to protect by discouraging development in Brownfields or urban areas. Despite these objections, however, he concludes that E.J. is probably here to stay.

Elliott's basic thesis is that E.J. is a new way of looking at environmental problems, one that brings a new dimension into focus (the distribution of environmental harms). The policy focus on this new dimension—not just the aggregate harm, but who suffers that harm—will profoundly alter the discipline of risk assessment, he said. This is because, ultimately, the only coherent way to think about E.J. is not pollutant by pollutant, or disease by disease, but in the aggregate. If a group is exposed to a little more or a little less of a single pollutant, the members of the group are not victims of discrimination unless it can be shown that their aggregate environmental burdens are greater than those visited on others in the appropriate reference group in the society.

"Thus," Elliott maintained, "E.J. will demand that risk assessors develop defensible approaches to aggregate environmental risks across traditional boundaries. In a sense, E.J. will be technology forcing for risk assessment, requiring us to develop the types of techniques that will eventually be needed for interpollutant and interrisk comparisons and trading. It will not do to object that no valid scientific basis currently exists for these comparisons; because overriding government and even constitutional policy requires that we make these comparisons as best we can, risk assessors will have to find techniques for comparing diverse risks that are 'good enough for government work.'"

"Empirical population studies of revealed preferences in economics may provide a starting point for aggregating environmental 'dis-benefits,' just as they do for estimating the value of environmental amenities that are not traded in markets," Elliott concluded. "Just as the Superfund created a vast industry in geotechnical consulting, it is my prediction that E.J. will be an engine fueling new growth and great acceptance for risk assessment techniques."

### James P. Lester

"An emerging body of literature, collected under the rubric of environmental justice, argues that an unbalanced proportion of environmental hazards is located in minority and poor communities," James P. Lester said as he opened his talk, "Environmental Racism in the U.S.: Myths and Realities." Lester, Director of the Policy Studies Institute at Colorado State University, based his talk on his book of the same name, written with David W. Allen and Kelly M. Hill.

In conducting research for the book, Lester and his colleagues sought to understand the relationships among such variables as race, class, politics, and exposure to toxic hazards. They examined these possible relationships at the state, county, and city levels in the United States.

One of the first reports to document the correlation between toxic risk and income was the Council on Environmental Quality's 1971 Annual Report to the President, according to Lester. He said it wasn't until the early 1990s that the environmental justice movement began to significantly affect national policy, however.

Lester pointed out that a flurry of research took place during the period from 1990 to 1998 to systematically examine the

ecoracism thesis at multiple levels of analysis. However, much of this research was limited to either one level of analysis (state, county, city, or zip code, etc.) or to one environmental harm (for example, toxic waste sites).

His own research, on the other hand, examined the ecoracism thesis at multiple levels of analysis and across several different environmental harms.

He reviewed many of these studies but noted that "given the complexity of the environmental justice issue, no single study is likely to determine whether any specific environmental inequities are prevalent, spurious, or sporadic across all environmental harms and jurisdictions."

He added, "The reason it is so important to rigorously examine this thesis prior to formulating and then implementing a policy is that there are plausible alternative explanations for locational decisions besides racism."

He concluded that fundamentally we should design a policy that allows for equal and efficient environmental protection for all populations within society, rather than pursue "preferential treatment policies" for minorities, based on faulty analyses in the past.

### Robert F. Kennedy, Jr.

Robert F. Kennedy, Jr., a resolute defender of the environment, led off the Wednesday Plenary Session. Kennedy, Senior Attorney for the Natural Resources Defense Council and a Clinical Professor and Supervising Attorney at the Environmental Litigation Clinic at Pace University School of Law in



New York, spoke of his environmental advocacy work as Chief Prosecuting Attorney for the Hudson Riverkeeper.

The Hudson Riverkeeper evolved from the Hudson River Fisherman's Association, a group formed to keep an eye on the Hudson River and track down polluters. Kennedy explained that the blue-collar workers at commercial fisheries along the Hudson were disturbed when they saw the clean, productive river that was their backyard environment being taken away through pollution; they came to believe the government and polluters were in cahoots.

Kennedy said that in order to reclaim the Hudson, the people living and working on the river fell back on an 1888 Harbor and Rivers Guide and began to patrol the river and look for and report polluters. They relied on "the philosophy of ownership—everyone has a right to use it; no one has a right to damage it." Kennedy said there are rights of free fisheries and free access to navigation that are embodied in the constitutions of each of our states that began to erode away during the industrial age.

Today, according to Kennedy, the Hudson River that in 1966 was dead for a 20-mile stretch is now a species warehouse. The riverkeepers concept is being mimicked on every river in the country.

Kennedy gave a number of other examples of pollution and the price of industrialization and closed by saying, "If we denude landscapes and pollute, we will load on the backs of our children the cost of our prosperity."

## Jason F. Shogren

"Economists admire markets," according to Jason F. Shogren, Stroock Distinguished Professor of Natural Resource Conservation and Management and Professor of Economics at the University of Wyoming.

At the Wednesday Plenary Session Shogren said most economists believe markets are the most effective tool humans have "discovered" to organize the diffuse information spread throughout society. Markets use prices to communicate both the laws of nature and the laws of man so as to coordinate decentralized economic decisions efficiently. Markets succeed when resources are allocated to their highest valued use in society.

"Markets can fail too, of course," Shogren said. "Society confronts unacceptable health and safety risks when a market fails to communicate social desires and physical constraints accurately." But Shogren stressed that when markets are a problem, they can be the solution as well.

He explained that society can use markets to manage risk rather than turning to more government regulation or stakeholder processes. "This 'third way' uses the market to manage risk by creating new markets to address the failings of existing markets, except in those cases in which government intervention is demonstrably superior to markets," he said. "Market-based policy serves as a ready substitute for government intervention, which has its own set of successes and failures."

Shogren said the fact that people have been creating and using markets to manage risks constructively for the last three centuries should send a signal of their power. "Securities and insurance markets are prime examples of risk management tools," he added. "Also, people already reduce many risks themselves through the market by purchasing self-protection and self-insurance." Plus most discussions of environmental risk policy today take it as a given that some form of market-based incentive system should be considered. The most unmistakable example is the promotion of emission trading markets to reduce the costs of the Kyoto climate change treaty.

After citing more examples of how markets are used to manage health and safety risk, Shogren concluded, "The market is a process of discovery, a creator of wealth, and more wealth creates more health. And even when one market fails, a new

market can be constructed to manage the risk. Markets can make good risk policy better by allowing for the flexibility to reduce risk cost-effectively. Rejecting market-based solutions to risk requires risk assessors to uncover a logical difference between financial risk and health and environmental risk, a difference so logical that a politician would be unsuccessful in arousing public support for treating them the same."

## John D. Graham

SRA Past President John D. Graham, Ph.D., began his Wednesday Plenary talk, "Making Sense of Risk," with the question, "What are American people to make of the barrage of headlines and how do they decide which risks are real and which are phantom hazards?" Graham, Founding Director of the Center for Risk Analysis at the Harvard School of Public Health, spoke about public perceptions and misperceptions of risk.

We have failed tremendously in risk communication, according to Graham. If you ask which one thing (in the environment

or personal habits) is the most serious in this country in terms of causing health problems, most people think it is the environment. In fact, he said, the five most serious hazards—smoking, consuming alcohol, lack of exercise, poor diet, and being a teenager—are personal habits.

Throughout his talk, Graham emphasized the need for risk assessors. "If we turn over decision making to

ordinary people and leave out the risk assessors we'll spend more money to save fewer lives," he said. He also pointed out many of the reasons ordinary people are not able, because of bias, to make good risk decisions and the need for effective communication to alleviate this problem.

Ordinary people also look at risk beyond the probabilities. To them, fatal is worse than nonfatal, cancer is worse than heart disease, irreversible is worse than reversible, imposed risk is worse than voluntary, and risk to prime-age adults is worse than risk to seniors.

"If you use intuition to evaluate risks you will get the wrong answer," he stated. "We need risk assessors to quantify risks and provide a perspective."

In closing, Graham said, "We need to rank risks in order of priority and reallocate priorities from little killers to big killers with the ultimate goal being more public protection at less cost!"



Wednesday Plenary Speakers John Graham, left, and Jason Shogren, right, with SRA President Gail Charnley, center.



## SRA-Japan

Saburo Ikeda, President

### Beijing CJCRAM'98

The First China-Japan Conference on Risk Assessment and Management was held in Beijing on 23 November 1998. The joint conference was organized by SRA Japan (SRA-J) Section and Beijing Normal University (Institute of Resource Sciences) and sponsored by the Department of Earth Science, National Natural Science Foundation of China. Participants were from Japan, China, and five other countries including the United States, Switzerland, and Korea. U.S. SRA Past President Rae Zimmerman was a special guest speaker.

There were six lecture/papers in the plenary sessions, 60 papers in the 15 oral sessions, and 20 papers in two poster sessions. The conference proceedings were published in English before the opening day with 80 contributed papers.

The following lectures were given in the plenary sessions: (1) "Risk Analysis in Japan-Ten Years of SRA Japan and a Research Agenda Toward the 21st Century"—Saburo Ikeda, Institute of Policy & Planning Sciences University of Tsukuba, (2) "China Natural Disaster and Strategy of Disaster Reduction through Insurance in China"—Liu Enzheng and Shi Peijun, People's Reinsurance Company and Beijing Normal University, (3) "Historical and Future Perspectives on Risk Perception and Communication"—Rae Zimmerman, U.S. SRA Past President, (4) "Japan-China Environmental Cooperation and the Role of the Sino-Japan Friendship Center for Environmental Protection"—Hideaki Koyanagi, The Japan-China Friendship Environmental Protection Center, Japan, (5) "The Concepts and Methods of Fuzzy Risk Analysis Application to Disaster Management"—Huang Chongfu, Institute of Resource Sciences, Beijing Normal University, China.

The subjects covered in the presentations were risk perception, risk assessment, risk and insurance, risk management, pollution and chemical risk management, food and resource risk, models and information systems, regional risk, and others.

A special closing session covering the subject of "Asian Network of Risk Research" was presented and discussed by the Chinese and Japanese participants. Suggestions for future cooperation in wider areas of risk research beyond the bilateral cooperation included (1) promotion of joint works in Asian countries to identify the important problems of mutually or globally interested risk issues, (2) setting up an Asian network of risk research and expansion to *RiskWorld* of the Society for

Risk Analysis, and (3) organizing the Second Conference, possibly in 2001, in the Asian Region.

Selected papers will be published both in the *Journal of Risk Research* and the *Japanese Journal of Risk Analysis* as a special issue.

Although the sudden snowfall on the first day disturbed both air and ground traffic in the Beijing area, tireless and careful efforts by the staff of the Chinese Organizing Committee made the first joint conference workable and successful. Of course, all participants had a great time enjoying the white scenery in the Chinese countryside and famous Great Wall, with the minor risky experience of traffic troubles during the field trip on the final day.



### "International Symposium of Endocrine Disrupters"

SRA-J organized a one-day seminar with the following

speakers who had given the key note presentations at the "International Symposium on Endocrine Disrupters" in Kyoto, Japan, sponsored by Environment Agency Japan: (1) Professor Frederick S. vom Saal (University of Missouri, USA), "Low Dose-Response Relationships of Endocrine Disrupting Chemicals," (2) Dr. John Brock (Centers for Disease Control, USA), "Effects of Endocrine Disrupting Chemicals on Human Health," (3) Dr. M. Morita (National Institute for Environmental Studies, Japan), Overviews of Kyoto Symposium on "Monitoring and Exposure Problems of Endocrine Disrupters," (4) Professor Y. Iguchi (Medical School, Yokohama City University) "Ecological Effects of Endocrine Disrupters," and (5) Professor S. Mori (Medical School, Kyoto University), "Human Health and Endocrine Disrupting Chemicals: Some Epidemiological Data."

### 1999 Conference Schedule of SRA-Japan

A Spring Annual Symposium will be held 18 June 1999 from 13:00 to 17:00 at San-Jo Kaikan, University of Tokyo, Hongo, Tokyo. With the theme "A Perspective on Societal Regulation of Technological Risks Toward the 21st Century," the symposium will present risk regulation issues on energy, medicine, chemicals, and civil construction, including discussions by a panel of experts and members of SRA.

The SRA-J Annual Meeting will be held 19-20 November 1999 at the Conference Hall at the National Institute of Public Health, Shirogane-dai, Minato-ku, Tokyo. The theme of the meeting is "Cross-Disciplinary Risk Communication - Revisit" (Preliminary) ◇◇



## SRA-Europe

The Society for Risk Analysis-Europe (SRA-E) would like to welcome all SRA members and other interested parties to the new SRA-E home page ([www.sraeurope.com](http://www.sraeurope.com)). The site will be under construction for some time and suggestions and material from SRA members are welcome. The material can be sent to Britt-Marie Drott Sjöberg ([brittds@sv.ntnu.no](mailto:brittds@sv.ntnu.no)). SRA-E is looking forward to an increased exchange of information, news, and contacts in this way. ◇◇



## Committees

### Public Policy Committee

#### “The Federal Role in Children’s Health Protection”

Jack Fowle, Chair

The SRA Public Policy Committee cosponsored a luncheon briefing with the American Chemical Society’s (ACS) Risk Education Project in Washington, D.C., on 15 December 1998. The topic, “The Federal Role in Children’s Health Protection,” drew a crowd of 87 people, including 37 Congressional staffers, 20 staffers from the Executive Branch, and one reporter.

The briefing was part of an ongoing series of briefings which aim to inform policy makers, Capitol Hill staff, and others interested in public policy about current and emerging environmental issues. Steve Lewis of the Exxon Biomedical Corporation opened the briefing by providing a chronology of events in children’s health protection from the congressional request for the 1988 National Academy of Sciences (NAS) study of pesticides in the diets of infants and children to the present.

Dr. Richard Jackson, Director of the National Center for Environmental Health, Centers for Disease Control (CDC), spoke next, emphasizing that children are not little adults. They eat, drink, and breathe two to four times more than do adults and have a much higher dermal contact to pollutants. Children are also known to have a greater sensitivity to some toxicants, for instance lead. Concern for children’s health protection from environmental toxicants is not new to pediatricians, as the journal *Pediatrics* devoted its June 1973 issue to the “Susceptibility of the Fetus and Small Child to Chemical Pollutants.” The President issued Executive Order 13045, signed in April 1997, requiring Federal Agencies to place a high priority on identifying and assessing environmental children’s health. CDC’s special area of emphasis in this effort is to conduct research to determine the risks to children and to reduce childhood asthma.

Dr. Steven Galson, of the Environmental Protection Agency’s (EPA) Children’s Health Office, noted that the NAS report, “Pesticides in the Diets of Children,” published in 1993, led EPA Administrator Carol Browner to make children’s health protection a priority for EPA.

An Office of Children’s Health was formed in May 1997 to assure that all EPA risk assessments, cost-benefit analyses, and regulations consider children’s health and to increase the awareness of children’s environmental health in communities. Through EPA’s efforts the G8 issued a declaration of Children’s Environmental Health focusing on Risk Assessment, lead, microbial diseases, drinking water, environmental tobacco smoke, and endocrine disruptors.

EPA has established a Federal Advisory Committee on Children’s Health Protection, convened meetings on children’s cancer and children’s health risk assessment, and jointly established Centers of Excellence with National Institute of Environmental Health Sciences to conduct research on children’s environmental health. It also established Children’s Health champions in ten communities and published a Children’s Health Environmental Yearbook. Galson noted that passage of the Food Quality Protection Act and the Safe Drinking Water Act Amendments in 1996 require a number of things, including that an additional factor of ten uncertainty be applied to assessments of pesticide risk to protect children. These provi-

sions raise a number of challenges for EPA.

Dr. Dianne Murphy from the Food and Drug Administration’s (FDA) Office of Drug Evaluation observed that the FDA was founded on catastrophes that occurred in children and that there is inadequate information for 75 percent of all drugs prescribed for children because pharmaceutical firms have not been required to evaluate drug efficacy and safety in children. Children are therapeutic orphans. She emphasized that human clinical trials with children are not experiments. They are carefully designed approaches to insure drugs are safe and effective. Each trial has many built-in safety checks. She noted that once drugs reach the marketplace, labels are the means by which FDA communicates to physicians and others about safe and effective drug usage.

Pediatric labeling has been under revision since 1977 when the American Academy of Pediatrics established its Committee on Drugs. In November 1997, the FDA Modernization Act (FDAMA) was signed into law. It touches virtually every aspect of FDA’s activities. One new provision gives FDA the ability to grant market exclusivity for six months if the manufacturer did pediatric testing. The results don’t have to show that the new drug is okay for children, just that it was tested for safety and efficacy for children. This provision has provided a strong economic incentive that is already bearing fruit. As of last summer, less than a year after FDAMA was enacted, 48 new drugs had already been submitted with data from pediatric testing.

#### “Environmental Regulation: The New Voluntary Initiative to Test Chemicals”

Jack Fowle, Chair, and Gail Charnley, SRA President

The SRA Public Policy Committee also cosponsored a luncheon briefing with the ACS Risk Education Project on 24 February 1999. The topic, “Environmental Regulation: The New Voluntary Initiative to Test Chemicals,” drew a crowd of 86 people, including 30 Congressional staffers, seven staffers from the Executive Branch, and three reporters.

ACS President Ed Wasserman opened the briefing by describing its goal as providing the audience with an understanding of the nature of the voluntary agreement and its implications and potential effects. He then introduced Karen Florini of the Environmental Defense Fund (EDF) who set the stage for the presentations by explaining the need for screening-level data.

The passage of the Toxic Substances Control Act in 1976, a 1984 NAS study, and EDF’s report “Toxic Ignorance” provide compelling data indicating that we know little about the toxicity of most high production volume chemicals. The EDF report found that about 70 percent of high production volume chemicals lack publicly available screening information data sets (SIDS). Florini pointed out that without information on toxicity, there is no way to assess risk or assure safety. Based on those results, EDF invited the chemical industry to fill the data gaps, assuming that most of the data exist but are not publicly available. EDF was surprised to learn that most of the data do not exist, and the chemical industry agreed with EDF and EPA that there is a need to screen high-volume chemicals. At the prompting of Vice President Al Gore, who challenged

the industry to put a toxicity screening system in place, EDF, EPA, and the Chemical Manufacturers Association (CMA) announced in the fall of 1998 a voluntary program to develop SIDS data for all 2,800 high production volume chemicals by 2004. Florini noted that the data will be publicly available on the Web and then described the “test smart” animal welfare program developed to reduce the use of animals in laboratory tests. She emphasized that the screening program is just that—a screening program, not a risk assessment—and is intended only to begin the process needed to understand human health risks from high production volume chemicals.

Joe Carra of EPA spoke next and outlined the principles of the testing program. He emphasized the need for basic toxicity data in a publicly available format and noted that although this is a voluntary program, rulemaking will be needed ultimately to compel nonparticipants to cooperate. He described efforts underway to promote international participation in the program. He listed the key elements of a successful voluntary program, which include a clear goal, public commitment to the goal, buy-in by key stakeholders, a transparent tracking system, and public recognition of success.

The program sponsors have agreed to generate data for the high production volume chemicals they manufacture or import and to make those data publicly available; to provide data responsive to SIDS endpoints of toxicity; to test chemicals by categories or groups, where scientifically defensible, in order to reduce laboratory animal and other resource use; to make a good-faith effort to start and finish the work in a timely manner; to update the tracking system; to follow good laboratory procedures; and to cooperate in forming testing consortia. Carra believes that chemical manufacturers will participate in the program in order to be recognized as environmentally responsible industry leaders and to demonstrate their commitment to product stewardship.

Larry Rampy, of the CMA, started by listing the 18 members of the industry association stakeholders participating in the program and describing how compliance with the testing requirements will be tracked. Public accountability is a key component of the effort and is designed to shed light on success stories as well as to create pressure on those whose compliance has been lax. He also described the process by which information resulting from the testing of high-volume chemicals will be made public. Progress to date includes lots of energy on the part of chemical manufacturers and their associations and the formation of testing consortia. He believed that a significant number of chemicals will have been committed by 15 March 1999—the commitment deadline—to being tested. Rampy’s concerns about the program include the large burden that the program places on small companies, the absence of a mechanism to compel cost sharing in a voluntary program, reporting data publicly while preserving confidential business information, and the loss in competitiveness resulting from the economic burden being placed on U.S. industry in an international market.

Charlie Auer, also of EPA, wrapped up the session by describing SIDS data elements and what a great success the effort to set up the program has been overall. Government, industry, and public interest groups are largely in agreement about what needs to be done and how to do it. He believes that “right-to-know” has emerged as an environmental ethic and that product stewardship has become an industry commitment. He concluded by listing the design features of the testing challenge

that are aimed at decreasing the numbers of laboratory animals needed for testing, stating that those features would lead to a 70 percent decrease in the number of animals required at present by SIDS protocols.

Wasserman then opened up the question-and-answer session, which focused primarily on the concerns of animal welfare advocates and of those who believe the testing program is unnecessary or poorly thought out. The Physicians Committee for Responsible Medicine, for example, believes that there are substantial data available for most high production volume chemicals that are being overlooked, that many of the chemicals are known to be safe so should not require testing, that the program is a threat to animal welfare, and that it is, in general, opposed by the public. SRA Past President Jim Wilson expressed his concern that the program sounds like an attempt to fill in the boxes on a spread sheet while ignoring the large volume of data available for many of the chemicals that are not in the SIDS format.

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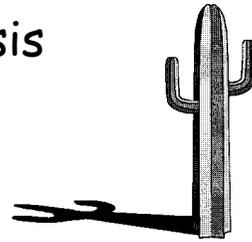
## Advisory Board

### *D. Warner North, Chair*

The Advisory Board for the Society for Risk Analysis (SRA) was established in 1994 to provide guidance to the Council and its Executive Committee. The Advisory Board seeks ways to improve SRA. Its advice to the Council is intended to stimulate thinking, and, hopefully, progress. The Board focuses mainly on broad, long-term, and strategic issues, such as SRA’s growth and governance. Topics addressed by the Advisory Board in the past four years include relations with other professional societies; outreach to government agencies, nongovernment organizations such as the National Research Council, the media, and the public; and proposals for changes in SRA’s organizational structure, activities, and specific practices, such as the presentation of awards at the Annual Meeting. The Advisory Board writes a letter report annually to the Council. The Board often recommends that the Council study an issue, or the Board may propose an initiative for a new activity or a change in the way SRA is carrying out an existing activity.

D. Warner North (warner@dfi.com), who served as SRA President in 1991-92, will serve as Advisory Board Chair in 1999 and 2000. The two previous chairs of the Advisory Board were Paul F. Deisler, Jr. (1995-96), who served as SRA President in 1986-87 and who received this year’s Outstanding Service Award, and B. John Garrick (1997-98), who was SRA’s President in 1989-90. Serving on the Advisory Board are three other past SRA Presidents: James D. Wilson (wilson.jimjudy@worldnet.att.net), Paul Slovic (pslovic@oregon.uoregon.edu), and Chris G. Whipple (cwhipple@ICFKAISER.COM). Other members of the Advisory Board are George Apostolakis (apostola@mit.edu), Donald G. Barnes (barnes.don@epamail.epa.gov), Caron Chess (chess\_c@aesop.rutgers.edu), and Howard C. Kunreuther (kunreuth@opim.wharton.upenn.edu). In addition, Lennart Sjöberg (pls@hhs.se) will provide liaison between the Advisory Board and the European Section, Saburo Ikeda (ikeda@shako.sk.tsukuba.ac.jp) will provide liaison with the Japan Section, and Robin Cantor (robin\_cantor@lecg.com) will continue to provide liaison between the Advisory Board and the Council. Members of the Society are encouraged to contact any of the members of the Advisory Board with suggestions or concerns. ◇◇

# Society for Risk Analysis 1998 Annual Meeting Phoenix, Arizona 6-9 December



In December 1998 SRA held our 17<sup>th</sup> Annual Meeting in Phoenix, Arizona. We were greeted by the worst weather Phoenix had seen in 20 years (proving that the worst case assumption is always plausible!), which kept attendees in sessions and off the golf course. The result was a very interdisciplinary meeting where over 600 attendees explored the theme "Assessing and Managing Risks in a Democratic Society" during 90 scientific and two plenary sessions. The theme was chosen to reflect the current debate about the best ways to integrate social, political, economic, and technical issues into fair risk management decisions. In terms of breadth and quality, it was one of the best meetings SRA has held, a glimpse of which can be seen in the pictures on these pages. Be sure to join us next year in Atlanta!

**1999 SRA President Gail Charnley and Monday Plenary Session speaker E. Donald Elliott.**



**Lori Strong and Wesley Wilkerson of the Secretariat hand out registration packets.**



**SRA Secretary Tim McDaniels, SRA Past President Rae Zimmerman, SRA-Japan President Saburo Ikeda, and Ragnar Löfstedt, SRA-Europe.**



**Sonia Haimes, Karen Barnes, Don Barnes, John Graham, and Yacov Haimes.**



SRA Treasurer Richard Belzer looks over the meeting program with new members.



SRA Councilor Dale Hattis meets with new members.



SRA Councilor Robin Cantor discusses issues at the new member breakfast.



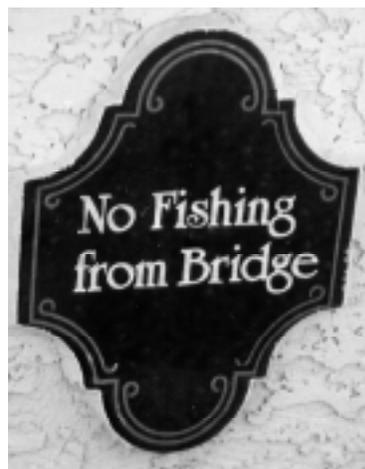
Past President Yacov Haimos hands Dick and Sue Burk the SRA Presidential Recognition Award, presented to SRA Secretariat, Burk & Associates, in appreciation for sustained and distinguished service to the Society for Risk Analysis.



Margrit von Braun at the poster session.



Katherine McComas receives the Exxon Prize for Excellence in Risk Communication, given on behalf of the SRA Risk Communication Specialty Group for the best student paper, from Steven Lewis of Exxon Biomedical Sciences. McComas, Cornell University, shared the award with Joseph Arvai, University of British Columbia (not pictured).





## News and Announcements

### Radiation Advisory Committee Issues Reports

The Radiation Advisory Committee (RAC) of the Environmental Protection Agency's (EPA) Science Advisory Board (SAB) has recently issued two reports of direct interest to SRA members:

1. **"Review of the Office of Radiation and Indoor Air's Federal Guidance Report 13-Part 1, Interim Version (FGR13),"** (EPA-SAB-RAC-99-009), 23 December 1998: EPA has been instructed to formally disclose the uncertainty in the cancer risk (slope) factors proposed for regulatory assessments for radionuclides. Where formal uncertainty analysis is not feasible the RAC has instructed EPA to discuss the limits of applicability of its slope factors.

2. **"Review of the Office of Radiation and Indoor Air's Draft Document Estimating Radiogenic Cancer Risks Draft Addendum: Uncertainty Analysis by the Radiation Advisory Committee,"** (EPA-SAB-RAC-99-008), 18 February 1999: This review applauds EPA for use of subjective probability to quantify state-of-knowledge uncertainty and urges EPA to proceed to use this approach to quantify uncertainty for other toxicological endpoints (that is, reference doses and slope factors for chemicals). EPA is encouraged to consider wider uncertainty estimates for low dose and low dose-rate extrapolations and to use subjective weights for various models used to extrapolate risk from data on Japanese survivors of the atomic bombings of Hiroshima and Nagasaki to risk estimated for the U.S. population.

Anyone can call the SAB(202-260-4126) and request a copy of the SAB reports, including the SAB reports publication list. The reports are also obtainable through the Internet: go to <[www.epa.gov/sab](http://www.epa.gov/sab)> and search on reports.

### Regulatory Policy Update

The U.S. Office of Management and Budget (OMB) recently proposed changes in response to legislation that would require scientific data produced under federal grants to be available to the public through the Freedom of Information Act (FOIA). The new law confers the ability to reach through federal agencies into the affairs of otherwise private organizations, and the emotional response to the proposal has obscured some of the real issues, according to SRA member Dr. Dan Byrd. Byrd attended a meeting of professional organizations concerned about the OMB proposal on 26 February 1999 in Washington, D.C., on SRA's behalf. The meeting was convened by the American Association for the Advancement of Science (AAAS) and Federal Focus, Inc.

The panel of speakers at the meeting included SRA member Dr. Roger McClellan, who described five principles as a perspective on the debate: (1) The dispersal of federal research funds is not a one-way process. The scientific community has asked the public to double research funding, not for the sake of scientists' welfare, but to serve the public interest, (2) Science requires open and rigorous conduct, (3) Scientists should share primary data sets after publication and with adequate protections for factors such as privacy and property, (4) The scien-

tific process is interactive and it includes alternative evaluations, and perhaps interpretations, of the same data, and (5) Especially for protection of public health and the environment, the United States needs to use the best quality data.

Currently, federal agencies have the right to obtain data generated through its grants, but the exercise of this right was exceptional. The new legislation essentially obliges an agency to obtain requested data, then apply FOIA to them. The application of FOIA would apply only to data used in developing policies or rules. Whether the statute applies to all data or only to data used in federal regulations is uncertain. Under the proposal, if the federal government did not use data generated by a federal grantee in a rulemaking, an agency could deny an FOIA request, even if the data could change the regulation. No matter how OMB implements the legislation, interpretations about the breadth of application probably will receive legal challenges.

In McClellan's view, the major problem is that the scientific community has not worked out mechanisms to share data that play a critical role in making important public health policy decisions. A specific recent example relates to the debate over data used in formulating revisions to the National Ambient Air Quality Standard for particulate matter. In this leadership vacuum, Congress moved to use FOIA, a familiar tool.

McClellan proposed that the scientific community collaborate to exercise strong leadership to (1) ask Congress for a timeout to generate better mechanisms than FOIA, (2) foster a positive, not a reactionary dialog, and (3) take advantage of advances in information sciences. He encouraged professional organizations to promote dialogue and debate solutions to the current problems of sharing important data—financed by taxpayers—yet inaccessible. He also suggested that the National Research Council and Institute of Medicine create a joint committee to study data sharing and propose guidance to promote data sharing. Such a committee could build on a 1985 National Research Council report on "Sharing Research Data."

Access to information is crucial to the practice of risk analysis. Thus, some principles underlying the debate about the OMB proposal are important to SRA. In addition, some SRA members will have interests, because of personal academic, scientific, or taxpayer concerns. Comments on the proposal are due by 5 April 1999. OMB has promised a second comment period after publication of a response to the public comments and suggested a goal of late 1999 for a final circular.

SRA members who strongly oppose the revisions may want to support H.R. 88, which would repeal Public Law 105-277 (to which OMB's proposal responds). Its sponsors see FOIA as too crude an instrument to obtain data from grant recipients, but they offer no alternative method. Additional information about the OMB proposal is available on the AAAS Web site at <[www.aaas.org/spp/dspp/sfrl/projects/omb.htm](http://www.aaas.org/spp/dspp/sfrl/projects/omb.htm)>; a full transcript of the meeting should have been posted by mid-March.

[Note: The full text of Byrd's comments on the meeting and the surrounding issues can be found on the SRA Web site ([www.sra.org/a110.htm](http://www.sra.org/a110.htm)).

The full text of McClellan's comments can be found on the Chemical Industry Institute of Toxicology Web site ([www.ciiit.org](http://www.ciiit.org)).

## SFPE Symposium and the NSF\*/SFPE/Clark University Workshop

The Society of Fire Protection Engineers (SFPE) Symposium on "Risk, Uncertainty, and Reliability in Fire Protection Engineering" and the NSF\*/SFPE/Clark University Workshop on "Encouraging the Use of Risk Concepts in Performance-Based Building and Fire Regulation Development" will be held 12-14 May 1999 at the Omni Inner Harbor Hotel in Baltimore, Maryland.

### Symposium and Workshop Format

The Symposium and Workshop will be held over three days, with presentations on the topics of risk, uncertainty, and reliability in fire protection engineering planned for the first two days and presentations and discussions on encouraging the use of risk concepts in performance-based building and fire regulations planned for the third day.

A keynote address is planned for each day, followed by invited presentations and presentations resulting from an open invitation. The length of presentations will be based on the number of responses received, but will likely be 30 minutes.

Members of the Program Committee are Jack Watts, FSI; Brian Meacham, SFPE; Roger Kasperson, Clark University; and Nathan Siu, NRC.

More information can be found on the Internet (<http://www.sfpe.org>).

\*Partial support for this workshop is being provided through the National Science Foundation Award 9730783, a joint NSF/Private Sector Initiative. Private sector participants in this initiative include IBHS, ICC, FMRC, NFPA, and the SFPE E&SF.

## Risk Education Symposium Motivates Call for a Risk Education Specialty Group

Many of the sessions at the 1998 SRA Annual Meeting focused on either public perceptions of risk or risk communication. One of the strongest messages from these sessions was that we not only need a more informed public, but also a public who knows what to do with information about risks. This year, the SRA Annual Meeting also featured a session that began to provide some direction on how to address this need. The symposium, "Risk Education: What's Needed? What's Available? Why Should You Get Involved?", focused on two methods of risk education that can help develop a more informed public.

The first was an introduction to risk education curricula that have been developed for students. The two curricula that were featured include Project Learning Tree's new high school module, *Exploring Environmental Issues: Focus on Risk*, and the Environmental and Occupational Health Sciences Institute's (EOHSI) ToxRAP™ series for early elementary, intermediate elementary, and middle school students.

The second approach to risk education involves an ecological risk assessment simulation developed by the American Industrial Health Council. *EcoChallenge: An Ecorisk Simulation Game™* is a board game that demonstrates the principles and practices of the ecological risk assessment and the challenges of resource-limited, multistakeholder decision making.

Dr. Michaela Zint wrapped up the session with several criti-

cal messages to the professional risk community. She discussed the need to identify what types of risk education materials are available and to learn how the use of these materials enhances individuals' environmental and ecological risk decisions. Zint highlighted roles that SRA members can play in risk education, including serving as technical advisors, promoting the use of existing materials, and helping to train educators.

In response to the symposium, moderator Dr. D. Warner North suggested that participants consider forming a new SRA Risk Education Specialty Group that focuses on curricula, pedagogy, learning objectives, instructional methods, and risk literacy. If you have any suggestions for such a Risk Education Specialty Group or would like to get involved in risk education, please contact Project Learning Tree: Sheri Soyka or Adena Messinger, 202-463-2462; EOHSI: Barry Schlegel, 732-235-5129; American Industrial Health Council: Reo Menning, 202-833-2182; or University of Michigan: Michaela Zint, 734-763-6961.

## 1999 Open Meeting of the Human Dimensions of Global Environmental Change

The International Scientific Planning Committee is guiding the organization of an international open meeting on the Human Dimensions of Global Environmental Change at Shonan Village, Hayama, Kanagawa, Japan, 24-26 June 1999.

Host for the meeting is the Institute for Global Environmental Strategies (IGES), Japan. The five themes of the meeting are (1) Conflict and the Environment, (2) Decision Making Processes in Response to Global Environmental Change, (3) Land Use and Land Cover Change, (4) Valuation of Ecosystem Services, and (5) Demographic Change and the Environment.

All presentations and discussions will be conducted in English. The deadline for submissions has already passed; however, the deadline for registration is 30 April 1999. The participation fee is 20,000 yen.

The contact point for the open meeting is Secretariat, IGES, Shonan Village Center, 1560-39 Kami-yamaguchi, Hayama, Kanagawa, 240-0198, Japan; phone: +81-468-55-3720; fax: +81-468-3709; e-mail: <[hdegc@iges.or.jp](mailto:hdegc@iges.or.jp)>. More information is available on the Web at <<http://www.iges.or.jp/>>. ◇◇

## Call for Nominations for SRA Officers

The SRA Nominating Committee invites nominations for the following offices in the Society's 1999 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 **28 May 1999** to the Chair of the Nominating Committee: Rae Zimmerman, Robert Wagner Grad. School Pub. Svc., New York University, 4 Washington Square North, New York, NY 10003; fax: 212-995-3890; e-mail: <[rz1@is2.nyu.edu](mailto:rz1@is2.nyu.edu)>.



## Specialty Groups

### Dose Response Specialty Group

*Elisabeth Reese, President*

The Dose Response Specialty Group (DRSG) was founded in 1994. The purpose of the group is (1) to facilitate the exchange of ideas and knowledge among practitioners, researchers, scholars, teachers, and others interested in dose-response assessment, (2) to encourage collaborative research on dose-response assessment, and (3) to provide leadership and play an active role in advancing issues related to dose-response assessment.



**Dose Response Specialty Group—Top row (left to right): Elisabeth Reese, Scott Baker, Ralph Kodell, Michael Dourson, Larisa Rudenko, Jim Wilson, Lynne McGrath, Jeff Swartout. Bottom row (left to right): Resha Putzrath, Ken Bogen, Dale Hattis.**

#### DRSG Monthly Telecon Meetings

The DRSG holds telecon meetings on the first Tuesday of every month (3:30-4:30 p.m. Eastern time) to discuss and plan SRA symposia, poster-platform sessions, open forums, and other DRSG-sponsored activities on dose response issues. New members and guests are welcome to join our telecon meetings by calling 202-260-7280 CODE: 0577#.

#### DRSG Open Forum

One of the goals of the DRSG is to provide information and discussion on dose-response issues. The DRSG sponsored an open forum on 2 March 1999 during the monthly conference call to discuss a topic of group interest. The open forum featured Dr. Jim Wilson of Resources for the Future, whose presentation was titled "Policy and Professional Practice Issues Raised by the Union of 'Cancer' and 'Noncancer' Risk Assessment." Questions and discussion followed Wilson's presentation. The DRSG will hold two more open forums scheduled for 8 June and 2 November 1999. All are welcome to participate!

#### Student Merit Award in Dose-Response Assessment

The DRSG 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 in the order of several hundred dollars. In addition, the SRA Annual Meeting registration fee will be waived for the winner.

The award is merit based and intended to be competitive. The Executive Committee of the DRSG will rely on seven criteria to evaluate submissions: (1) relevance of the topic to dose response, (2) originality of the research (for example, 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 (for example, multiple phases in a single line of inquiry, sequential outcomes, how much work was done), (6) quality of the write-up (clarity, logic, organization), and (7) submitted to or published in a peer-review journal.

Submissions should be made in the form of abstracts. Format and content of the abstracts are at the discretion of submitters. The deadline for submission is 15 May 1999, the latest date deemed practical for evaluation and announcement at the annual SRA meeting in December. Please submit two copies of abstracts to Scott Baker, International Copper Association, 260 Madison Avenue, New York, NY 10016, USA; phone: 212-251-7240; fax: 212-251-7245; e-mail: <sbaker@copper.org>.

#### DRSG Specialty Group Contact

For more information on the DRSG or to become a member, please contact Elisabeth Reese, Food and Nutrition Board, Institute of Medicine, National Academy of Sciences, 2101 Constitution Ave. NW, Washington, D.C. 20418; phone: 202-334-1705; fax: 202-334-2316; e-mail: <ereese@nas.edu>.

### Ecological Risk Assessment

*Bruce Hope, Chair*

The Ecological Risk Assessment (ERA) Specialty Group held its annual business meeting during the 1998 SRA conference in Phoenix. Bruce Hope (Oregon Department of Environmental Quality) was elected to succeed Bill Alsop (Ogden Environmental) as chairperson. It was noted that Bill van der Schalie (U.S. Environmental Protection Agency) is now the ecological risk editor for *Risk Analysis*.

The Group then considered that of the 87 sessions held at the 1998 conference, only three focused on ERA issues. The ensuing discussion considered ways of enhancing ERA's participation within SRA, including sponsoring special sessions with respect to ecological issues in the locality of the annual conference, hosting symposia devoted to provocative ecological issues (possibly with a point-counterpoint format), or arranging for a conference schedule that does not scatter ERA-oriented sessions. Some thought that the audience for ERA might be expanded if sessions considered its application outside the Superfund (CERCLA) process, presented case studies of how ERA was actually used to facilitate decision making, or dealt with ERA of nonchemical stressors.

We might also offer a one-day preconference workshop on ERA methodologies and applications. Those who would like

to join the Group and/or contribute to this ongoing discussion should contact Bruce by phone (503-229-6251) or e-mail (hope.bruce@deq.state.or.us).

## Food/Water Safety Risk

*Debra Street, Interim Secretary*

The Food/Water Safety Risk Specialty Group met on 7 December 1998 during the SRA annual conference in Phoenix. The Specialty Group's primary focus is on the particular risk analysis issues and challenges posed by hazards in the food and water consumed and used by humans and animals.

During the meeting, the Group discussed a variety of likely topics for symposia and, possibly, a workshop for the 1999 SRA conference in Atlanta. Suggested topics included (1) a consideration of how risk managers use microbial risk assessments, (2) a discussion of risk assessment and water from the perspective of how cost and benefits of various interventions affect risk, and (3) an examination of animal and plant issues related to international trade. Members of the Group agreed to continue to discuss these and other suggested topics during the next few months in order to further develop ideas for the SRA conference in Atlanta.

If you would like to know more about the Food/Water Safety Risk Specialty Group, please contact Don Schaffner, Secretary, by e-mail (Schaffner@aesop.rutgers.edu) or phone (732-932-9611, ext. 214).

## Risk Science & Law

*Wayne Roth-Nelson, Chair*

### Risk Science & Law Specialty Group Program in Phoenix

The third annual program put on by the Risk Science & Law Specialty Group (RS&LSG) featured "Toxic Injury Lawsuits—Parts I and II," chaired by the RS&LSG founder and outgoing Chair, health risk scientist Wayne Roth-Nelson. Invited speakers were Arizona Superior Court Judge B. Michael Dann and Dr. Carl B. Meyer, Kapsa & Meyer (Las Vegas/San Diego), who is both a plaintiff's attorney and a leading expert witness in toxic injury lawsuits.

Dann informed his audience about jury reforms in Arizona and the role of the scientific expert in educating jurors and judges and preparing his or her client's attorney. The judge emphasized how an adversarial system does not serve the jury well; experts should leave advocacy to the lawyers. Also, experts should use plain language suitable for a sixth grader and offer strong graphic demonstrations to the court. He advocates allowing (1) jurors to directly question the experts, (2) back-to-back presentations by experts assisting the opposing sides, and (3) interim summation of the scientific evidence by the two sides.

Meyer, former Professor of Chemistry at the University of Washington, focused many of Dann's issues on toxic tort litigation. For example, he drew attention to the problem of legal versus scientific standards of evidence for an inference of causation or risk of disease from exposure to toxic chemicals. Do the U.S. Supreme Court decisions in the Daubert, Joiner, and Carmichael cases require that scientific evidence meet the customary level of certainty (90 or 95 percent) in the scientific

community, the quite different certainty levels attainable in different scientific disciplines (clinical medicine versus chemical engineering, for instance), or the certainty levels legally prescribed for civil or criminal litigation—more probable than not or beyond reasonable doubt?

Following these presentations, Dr. Susan Poulter, Professor of Law at the University of Utah and a trained chemist, joined Meyer and Dann in a panel discussion that stimulated the audience well into the lunch hour. In Part II of Toxic Injury Lawsuits, Poulter spoke on bridging the gap between science and law when presenting medical testimony in toxic injury cases. Russel Lynn Carruth, legal scholar at the Environmental and Occupational Health Sciences Institute, spoke on the relationship between relative risk and "more likely than not" causation. A paper by toxicologist Brent Kerger on an approach to validating chemical exposure assessment for juries was presented by a colleague at Health Science Resource Integration.

Health risk scientist Dr. Virginia Sublet served as chair of a symposium on "Risk Assessment: Burning Issues in Regulatory Reform," with presentations by risk scientists John Keller and Brad Shurdut (Dow AgroSciences) and by law professors John Applegate (Indiana University) and Wendy Wagner (Case Western Reserve University).

Applegate and Wagner also organized and presented the annual RS&LSG Poster Session—"Risk Analysis in the Courts: A Roadmap for Risk Analysts." The 1998 Session again summarized key toxic risk regulatory and personal injury cases in which risk analysis played a role.

In a symposium on "Risk Management Policy Issues in Regulatory Improvement," legal analyst and RS&LSG Secretary-Treasurer Katy Kunzer (Chemical Manufacturers Association) and toxicologist Steve Lewis (Exxon Biomedical Sciences) presented talks on regulatory applications of comparative risk analysis and on independent peer-review panels.

Public health scientist and lawyer Paul Locke spoke on legal approaches to public health protection in another symposium. Legal scholar Vern Walker (Hofstra University) spoke on new risk analysis requirements at the World Trade Organization.

### Annual RS&LSG Business Meeting

In the absence of nominations from the general membership of the Specialty Group, the Executive Committee nominated Virginia Sublet to fill the vacancy in the Chair for 1999, subject to actual election by a forthcoming mail ballot. The nominee selected to serve her second-year term on the Executive Committee is Vern Walker.

Susan Poulter and Wendy Wagner were nominated for reelection to the Executive Committee after completing their initial one-year terms. John Applegate and Steve Lewis both continue into a second year on the Executive Committee from our first election in 1997, and Katy Kunzer continues through 1999 as Secretary-Treasurer.

It was decided to put on an accredited Continuing Legal Education workshop at this year's annual meeting in Atlanta, with Sublet and Locke leading the effort. Walker offered to coordinate the RS&LSG program for 1999 and sit on the Society's program committee to negotiate our group's participation. As in past years, there will be a separate Call for Papers, Panels, and Symposia directly from our own organizers.

Wayne Roth-Nelson offered to continue building our *RiskWorld* Web site, which can be accessed either via *RiskWorld* or the Society's Web site ([www.riskworld.com/profsoci/SRA/](http://www.riskworld.com/profsoci/SRA/))

RiskScienceLawGroup/homepage.htm or www.sra.org/specialt.htm).

Web site development priorities are (1) recruiting regular byline contributors of editorials, articles, and reviews for online publication, (2) preparing a digest of the 1997/1998 database on "Risk Analysis in the Courts" for online access, and (3) publishing a position paper on distinctions between legal and scientific standards of probabilistic risk evidence.

### RS&LSG Membership Contact

Currently a membership carries no Specialty Group surcharge although that is a clear possibility in the near future. In particular, the Group wishes to sponsor one or more university law or science students with paid travel and registration at the Society's annual meeting.

To register with the RS&LSG, contact Secretary-Treasurer Katy Kunzer (kathleen\_kunzer@mail.cmahq.com). ◇◇



## Regulatory Risk Review

### Show Me the Money

David Clarke, Chemical Manufacturers Association

Budgets reflect priorities. Judging from the Environmental Protection Agency's (EPA) Fiscal Year 2000 budget request announced by Administrator Carol Browner 1 February, clean and safe water tops the agency's priorities for the coming year. A summary describing the proposed budget notes that EPA is asking Congress for \$2.5 billion—35 percent of its budget—to pursue the agency's clean water goal. Overall, EPA is seeking \$7.2 billion, 5 percent less than the Fiscal Year 1999 budget. Risk analysts interested in environmental policy will be pleased to know that within the water program, and the budget as a whole, risk-based priorities and improved understanding of risks continue to receive prominent mention. Whether prominent mention equates with real money remains to be seen.

As with last year's budget, EPA this year submitted its request in terms of the strategic goals, objectives, and performance measures mandated under the Government Performance and Results Act (GPRA). For instance, one of EPA's stated purposes is to ensure that "all Americans are protected from significant risks to human health and the environment where they live, learn, and work" and to ensure that "national efforts to reduce environmental risk are based on the best available scientific information." EPA's ten GPRA goals provide the core chapters of the agency's budget summary.

Within the priority clean water goal, EPA says that it has stepped up the development of tools that will help states and tribes protect residents against health risks from contaminated recreational waters and fish caught in polluted rivers and lakes. Fish and shellfish advisories, water quality criteria, fish tissue monitoring, and risk assessment are among the activities EPA mentions in this area. Under GPRA performance goals, EPA says that by 2000 it will "develop modeling, monitoring and risk management methods that enable planners and regulatory officials to more accurately characterize receiving and recreational water quality and to select appropriate control technologies."

Clean air, of course, constitutes a major part of EPA's program. The agency budget request is for \$722 million, 35 percent more than last year, including \$175.5 million to reduce risks from air toxins. With regard to risks from air toxins in urban areas, EPA plans to promote a new national regulatory strategy focused on "the highest risk toxics in the most populated areas." According to the agency's budget summary, "EPA proposes to make a very deliberate effort to use risk assess-

ment tools to set an agenda that provides a new focus for the air toxics program," including cumulative risk addressed in a cross-media manner. Noting that technical difficulties in assessing risk have limited EPA's reliance on risk-based decision making, the budget summary goes on to conclude, "We believe that the science of determining risk has advanced sufficiently to enable the Agency to make much better cross-Agency decisions on how to protect public health and the environment."

Consistent with the Clinton Administration's highlighting of children's risk issues (emblazoned in neon lights, as it were), the budget seeks new money to address the growing problem of childhood asthma nationally. A total of \$22.2 million would be directed at reducing "children's exposure to toxins in our environment that can exacerbate asthma," and a total of \$40.1 million would focus on "chronic childhood afflictions, such as cancer and developmental disorders." In all, the agency is seeking \$62.3 million to protect children from environmental threats, according to Browner.

Goal 8, "Sound Science, Improved Understanding of Environmental Risk, and Greater Innovation to Address Environmental Problems," most explicitly espouses EPA's commitment to better science and risk assessments. The 2000 budget asks for \$321 million for this goal, \$25 million less than in 1999. Under this goal the agency describes its plans to develop and verify "innovative methods and models for assessing the susceptibilities of populations to environmental agents, aimed at enhancing current risk assessment and management strategies and guidance." EPA's ubiquitous children's risk issues again receive mention here in the form of eight university-based research centers to study "the unique environmental risks threatening our children," especially asthma and developmental disorders. EPA's growing efforts to research and address ecosystem protection are also described here. Those efforts fall into four areas: ecological monitoring, modeling, risk assessment, and risk management. New computer-based tools, endocrine disruptor risks, 50 Project XL agreements that EPA hopes to sign in 2000—these and other areas of science and innovation appear within this goal.

As suggested by this second budget organized around GPRA goals, EPA increasingly sees fit to define its objectives in terms of better methods to assess and reduce risks, a welcome development for practitioners and supporters of risk analysis. But is EPA putting its money where its mouth is, and then using that money to truly use the best science for reducing risks? Congress is saying, "Show me!" and GPRA is the display table. ◇◇

**Budgets  
reflect  
priorities.**



## Member News

### Dennis J. Paustenbach

Dennis J. Paustenbach, Ph.D., DABT, has joined Exponent, Inc., as a Group Vice President. He will lead the firm's human and ecological toxicology and risk assessment groups as well as the epidemiology practice.



In making the announcement, Exponent President and CEO Michael R. Gaulke said that Paustenbach's scientific and consulting background will make a significant contribution to Exponent and to its clients. Paustenbach will direct the efforts of more than 200 scientists, engineers, physicians, and

business consultants, including more than 80 professionals in the firm's Bellevue, Washington, office.

Paustenbach is a recognized international authority in risk assessment, environmental engineering, occupational health, and ecotoxicology. He is the former President and CEO of McLaren/Hart, Inc.

Paustenbach has published more than 100 peer-reviewed manuscripts and written numerous book chapters in the fields of industrial hygiene, human health, aquatic toxicology, engineering, and risk assessment. Many universities have used his book on risk assessment during the past ten years.

Former founder and director of ChemRisk, Paustenbach has been involved in some of the country's most important environmental projects, including Times Beach, Love Canal, and the Hudson, Passaic, and Hackensack Rivers.

### Brent Finley

Exponent, Inc. (NASDAQ: EXPO), is pleased to announce the addition of Dr. Brent Finley, Principal, to its Menlo Park, California, office. Finley is a board-certified toxicologist with 16 years of experience conducting and managing studies involving exposure and human health risk assessment. He specializes in health risk assessments, applied research, litigation support, regulatory negotiations, and risk-based site investigations. Finley has studied the health effects of exposure to a wide range of chemicals, including chromium, dioxins, PCBs, and DDT.

Finley will also be managing the operation of Exponent's Environmental Group staff located in the Menlo Park office.

### Peter Woodman

Exponent, Inc. (NASDAQ: EXPO), is pleased to announce the addition of Dr. Peter Woodman, Principal, to its Natick, Massachusetts, office. Woodman has 26 years of experience conducting and managing toxicological, pharmacological, and medicinal chemistry programs to assess and control the effects of chemicals and radionuclides on human health and the environment.

Woodman has conducted numerous deterministic and probabilistic risk assessments and air monitoring programs to evaluate the impact of hazardous chemicals and radionuclides on human health, public welfare, and the environment under federal regulatory programs, the Massachusetts Contingency

Plan, and other state programs using innovative approaches to develop site-specific, risk-based cleanup goals and risk management.

### Kurt A. Frantzen and Cristopher Williams

VHB/Vanasse Hangen Brustlin, Inc., a leading national transportation, land development, and environmental services firm with 11 East Coast offices, has named Dr. Kurt A. Frantzen, Ph.D., as Director of Environmental Risk Management. Frantzen has specialized in the assessment, characterization, and management of environmental risks and communication about risk for 12 years.

At VHB, Frantzen will focus on the human and ecological risks and financial impact issues associated with the redevelopment and reuse of Brownfields and other environmentally impaired properties.

Frantzen has published more than 60 articles on environmental risk analysis and management and has spoken widely on the subject to professional associations and colleges. His current book in progress, *Risk-based Analysis: A Practical Guide for the Corporate Manager*, will be published by Lewis Publishers this year.

Joining Frantzen at VHB is SRA member Cristopher Williams, Ph.D. Williams, an experienced toxicologist and pathobiologist, will manage ERM risk analysis studies. His consulting has primarily been in the area of technical support for litigation purposes and Superfund and occupational risk analysis.

### Paul Chrostowski and Sarah Foster

Paul Chrostowski and Sarah Foster are pleased to announce the founding of Chrostowski, Pearsall & Foster (CPF Associates, Inc.). CPF is a scientific research and consulting organization that was founded to offer specialized services to the regulated community. The three principals of the firm have almost 60 years of experience helping clients with forensic, regulatory, and technical problems associated with the manufacturing, use, and disposal of chemicals, biological materials, and physical agents. Core areas of expertise include strategic environmental management, exposure and risk analysis, cost recovery/cost allocation, forensic environmental sciences, regulatory affairs, and specialized applications of chemistry. Their work includes strategic support, technical analysis, regulatory negotiation, development and implementation of scientific litigation strategies, and expert testimony.

Chrostowski has been working in diverse areas of environmental and occupational health sciences for 25 years, is active in over ten professional societies, and has authored or coauthored over 100 publications or presentations. His particular areas of interest include mathematical modeling and quantitative analysis of complex problems including the interface between business and environmental management strategies. Foster has 15 years of experience in the environmental sciences, has numerous publications, and specializes in risk analyses of hazardous materials, consumer products, and transportation. CPF can be reached at 301-585-8062 or <cpfasoc@aol.com>.

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### James LaVelle

Camp Dresser & McKee Inc. (CDM), the global consulting, engineering, construction, and operations firm, is pleased to announce the promotion of senior toxicologist Dr. James LaVelle to principal of the firm.

LaVelle has over 20 years of academic and professional experience with the toxicology of chlorinated solvents. He has served as an expert in all matters related to hazardous waste and has extensive experience relating their impact on human health and surrounding ecosystems. His experience with the environment, and especially human health risk assessment, earned LaVelle a position as a regional Superfund representative for the U.S. Environmental Protection Agency, an appointment to the governor's Health Advisory Panel for the former Rocky Flats nuclear weapons facility, and a position on a special legislative panel for regulatory risk cost-benefit analysis.

LaVelle also has experience outside of the hazardous waste field, teaching graduate toxicology courses at the University of Connecticut and the University of Colorado. LaVelle currently serves as a member of the American Association for the Advancement of Science, the Society of Toxicology, and the Society for Risk Analysis.

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### Judy S. LaKind

Dr. Judy S. LaKind announces the establishment of LaKind Associates, LLC. LaKind Associates offers clients a comprehensive approach to management of risks associated with chemicals/products. Specific services include comparative risk analysis, scientific and technical analysis for regulatory and litigation support, and risk communication. Employed individually or in combination, these services form the basis of LaKind Associate's product stewardship service. LaKind, a health and environmental scientist with ten years of risk management consulting experience, combines her skills and experience with the expertise of associates to provide a full suite of risk management services. LaKind can be reached at 106 Oakdale Avenue, Catonsville, MD 21228; phone: 410-788-8639; fax: 410-788-1971; e-mail: <judy@jcssc.mts.jhu.edu>.

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### Michael L. Gargas

McLaren/Hart announces the appointment of Michael L. Gargas, Ph.D., a 22-year veteran toxicologist and expert in health risk assessment, as National Director for ChemRisk, its highly respected human health and ecological risk assessment group.

Gargas is a recognized expert in human health risk assessment and biochemical toxicology. He has published over 60 peer-reviewed journal articles and has been a contributing author for seven books. Gargas joined ChemRisk in 1992 after previous experience as a toxicologist at Wright Patterson Air Force Base and the Chemical Industry Institute of Toxicology. He was named Consulting Operations Manager for McLaren/Hart in 1996, Vice President in 1997, and manager of the company's Cleveland, Ohio, office until this appointment.

For more information about ChemRisk and McLaren/Hart, please contact Michael Gargas, Ph.D., in the Cleveland office at 440-684-8300 or by e-mail at <michael\_gargas@mclarenhart.com>. Information about ChemRisk and McLaren/Hart, Inc., is also available on the Internet at <www.mclarenhart.com>.

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### Michael Gough

Michael Gough has retired from The Cato Institute and full-time work. He will continue to work part-time as a consultant and contractor. He also plans to write a novel about a U.S. fighter squadron in the Philippines at the beginning of World War II. Gough can be reached at 6404 E. Halbert Rd., Bethesda, MD 20817-5423; phone: 301-229-3532; e-mail: <mgough@bellatlantic.net>.

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### Yacov Y. Haimes

Yacov Y. Haimes is author of the new book *Risk Modeling, Assessment, and Management*. Drawing on Haimes' experience in the practice of risk-based decision making in government and industry, and building on results from numerous management-based projects, the book presents the most up-to-date theories and methodologies for understanding risk modeling, assessment, and management and for applying these methods to decision making problems.

Because *Risk Modeling, Assessment, and Management* is organized into two parts presenting both basic and advanced methodologies, it is a valuable guide for anyone interested in this field—from undergraduate and graduate students to decision makers in government, business, and industry.

For ordering information, contact John Wiley & Sons Inc. at 1-800-225-5945.

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### Elizabeth L. Anderson and Roy E. Albert

*Risk Assessment and Indoor Air Quality* is the title of a new book authored by Elizabeth L. Anderson, Ph.D., and Roy E. Albert, M.D. Anderson and Albert tie together the tools and methodologies of risk assessment to the study of indoor air quality. The text takes a look at the problem of long-term exposure to low-level concentrations of toxins. In addition to commonly found toxins such as chemical fumes from furnishings and carpeting, and indoor use of pesticides, this volume discusses risks associated with exposure to indoor allergens and infectious disease pathogens such as Legionnaires Disease. Because few scientific models exist for understanding the dynamics of indoor air quality, *Risk Assessment and Indoor Air Quality* is an essential resource for all students and professionals involved in evaluating, testing, and monitoring indoor air quality.

For ordering information, contact Lewis Publishers at 1-800-272-7737 or <orders@crcpress.com>.

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### Rao Kolluru

Dr. Rao Kolluru, President of SRA Metro Chapter, presented a paper on "Applying Risk Analysis toward Sustainable Development" at the First China-Japan Conference on Risk Assessment and Management in Beijing. He also outlined the "Frontiers of Environmental Management and Sustainable Development" at East China University of Science and Technology in Shanghai as part of its special Century Tribune Lecture program.

In Japan, Kolluru was invited by the Osaka Industrial Association to speak on "Chemical Management and Industrial Initiatives through Risk and Life-Cycle Analyses." In a slightly different vein, he expounded on "Sustaining Business Success through Natural Connections—the Dow of Tao" at the Japan External Trade Organization in Tokyo. ◇◇◇



## Chapter News

### Northern California Chapter

*Ron Block, Secretary*

At the Northern California Chapter's February meeting the new Board was introduced: Leonard Levin, Past President; Bill Kastenbergh, President; Melanie Marty, President-elect; Liz Miesner, Treasurer; Ron Block, Secretary; David Ting, Councilor; and Ravi Arulanantham, Councilor.

Plans were made to hold the first general membership meeting as a dinner meeting in Berkeley sometime in April.

### Ohio Chapter

*Jacqueline Patterson, President*

The Ohio Chapter welcomes its newly elected officers for 1999, who met in February to plan the 1999 program: President, Jacqueline Patterson of Toxicology Excellence for Risk Assessment; President-elect, Glenn Rice of the EPA's National Center for Environmental Assessment; Secretary, Ed Pfau of the Division of Emergency and Remedial Response of the Ohio EPA; Treasurer, Steve Lutkenhoff of EPA's National Center for Environmental Assessment; and Councilors, Cathy Pickrel of Ashland Chemical Company, Deborah Gray of the Ohio Department of Health and Ohio State University, and Hallie Serazin of Science Applications International Corporation.

### Philadelphia Chapter

*Kenneth R. Foster, Chair*

The Philadelphia Chapter held a meeting on 19 January 1999. The speaker was Dr. Isadore Rosenthal, newly appointed by President Clinton to the Chemical Safety and Hazard Investigation Board. Rosenthal, who has been a Senior Fellow at the Wharton Risk Management and Decision Processes Center at the University of Pennsylvania, spoke about "The Chemical Safety and Hazard Investigation Board."

The next meeting of the Philadelphia Chapter was on 23 March. The speaker was Charles N. Haas, the L.D. Betz Professor of Environmental Engineering in the School of Environmental Science, Engineering, and Policy at Drexel University.

The title of his talk was "Back to the Future: Engineering Safe Water and Safe Food in the 21st Century." Haas is the author of a forthcoming book titled *Quantitative Microbial Risk Assessment* (Wiley) and editor-in-chief of a new journal (to commence publication in mid-1999) titled *Quantitative Microbiology*.

All Philadelphia Chapter meetings are held at the Faculty Club of the University of Pennsylvania. There is a social hour at 6 p.m. followed by dinner and the talk at 7:15 p.m. Reservations are needed for dinner.

Contact Eileen M. Mahoney, Chapter Secretary, at 7939 Winston Rd., Philadelphia, PA 19118 (eimahoney@sprintmail.com).

For current information, see the Chapter home page at <<http://homepage.seas.upenn.edu/~kfoster/psra.htm>>. ◇◇



## Advertisements

### Program Director, National Science Foundation

#### Decision, Risk, and Management Science Program

**Program Description:** This position will be filled on a one- or two-year basis. The position will be open in July 1999. The salary for the position ranges from \$68,570-\$106,868.

**Duties and Responsibilities:** The Program Director will be responsible for the planning and administration of the Decision, Risk, and Management Science Program within the framework of legislation, agency policies, missions, objectives, and resources. The Program Director serves as a spokesperson for the program in communications with members of the scientific community. She/he is responsible for the planning, coordination, and management of basic research, facilities, and other scientific activities supported by the Decision, Risk, and Management Science Program, primarily through issuance of federal grants to academic institutions, professional organizations, and firms in the private sector. She/he coordinates the evaluation process for proposals, including the selection of external reviewers and advisory panel members, the operation of advisory panel meetings, and the formulation of final recommendations for acceptance or declination of proposals. She/he assumes internal budget and operating responsibilities for the program and serves in a lead capacity for coordination of budget plans for the program.

**Qualifications:** Applicants must have a Ph.D. or equivalent research experience in a discipline relevant to the program's focus and at least six additional years of research experience beyond the doctoral level. Administrative skills, an interest in working with others, and the ability to communicate effectively are also desired.

NSF IS AN EQUAL OPPORTUNITY EMPLOYER COMMITTED TO EMPLOYING A HIGHLY QUALIFIED STAFF THAT REFLECTS THE DIVERSITY OF OUR NATION.

**Contact for More Information:** William Butz, Division Director, 703-306-6953, <[wbutz@nsf.gov](mailto:wbutz@nsf.gov)>.

### Public Health Assessor/Toxicologist

#### Idaho Department of Health and Welfare

The Bureau of Environmental Health and Safety, Division of Health, Idaho Department of Health and Welfare, is recruiting for a Public Health Assessor/Toxicologist in Boise, Idaho, to conduct public health assessments, including toxicological investigations and related activities, to determine actual or potential human health risks from exposure to toxic substances in the environment or workplace.

**Qualifications:** At a minimum, a Master's in environmental health, environmental epidemiology, toxicology, biochemistry, pharmacology, or a closely related field; experience conducting public health assessments and investigations, writing public health assessment reports, and developing public relations materials; and excellent interpersonal and communication skills.

**Salary:** \$39,000-\$48,000 per year (plus full benefits)

**Application Deadline:** Open until filled.

**More information:** Contact Maura Mack (phone: 208-334-0606 or e-mail: [maddoxp{DHW TOWERS/TOWERS2/maddoxp}@dhw.state.id.us](mailto:maddoxp{DHW TOWERS/TOWERS2/maddoxp}@dhw.state.id.us)). ◇◇



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**Deadline for RISK *newsletter* submissions**

Information to be included in the **Second Quarter 1999** SRA RISK *newsletter*, to be mailed at the beginning of July, should be sent to the Editor at the address above no later than **20 May**.

**RISK *newsletter* and SRA Web Site Advertising Policy**

Employment openings, books, software, courses, and events may be advertised in the 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. Camera-ready ads are accepted at a cost of \$250 for a 3.25-inch-wide by 3-inch-high box. The height of a camera-ready ad may be increased beyond 3 inches for \$100/inch.

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 Editor, with billing instructions, by 1 March for the First Quarter issue (April), 1 June for the Second Quarter issue (July), 1 September for the Third Quarter issue (October), and 1 December for the Fourth Quarter issue (January). Editor, RISK *newsletter*, RR1 Box 139H, Elysian, MN 56028; e-mail: gnrsslr@frontiernet.net; phone: 507-362-8958 or 507-362-4176; fax: 507-362-4513.

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.

For additional information see the Web site at <www.sra.org/policy.htm#events>. Ads placed on the Web site will usually appear several days after receipt.

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