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Partnership Promotes Expanded S&T News By PRI's 'The World'

Public Radio International (PRI) has received a $2.1 million grant from the National Science Foundation (NSF) to create leading-edge coverage of and engagement with science and technology on PRI's "The World," an award-winning global news program co-produced with BBC World Service and WGBH Radio Boston.

The three-year grant will support the creation of a new Virtual Science Café, an interactive Web site and associated applications developed in partnership with Sigma Xi.

The grant also will be used to increase the number and diversity of "The World's" science reports, podcasts and online content for the program's 2.3 million listeners plus online users.

PRI President and CEO Alisa Miller said, "We are honored that the National Science Foundation is making it possible for 'The World' to break new ground and engage Americans with science and technology. We are also thrilled to partner with Sigma Xi on this effort."

According to Sigma Xi Executive Director Jerry Baker, "This represents a fine opportunity for the science and engineering community, PRI journalists and the public to contribute and interact in new ways."

Sigma Xi will work with PRI producers to identify scientists and engineers who can integrate on-air content into online discussions, which they will moderate in "The World's" Virtual Science Café.

NSF Program Officer Sandra Welch said, "This project has great potential to engage millions of Americans in understanding the scientific and technological developments around the world and how these developments shape, and are shaped by, broader global societal forces."

PRI's "The World" is a one-hour, weekday global news program hosted by Lisa Mullins. It offers a mix of news, features, interviews and music from around the globe. •

From the President

Developing Human Capital

In August, the 2008 Summer Olympics proudly showed to the world athletic teams filled with multi-cultural diversity and the value of heritage. The U.S. team, for example, was a beautiful quilt of complexions, ethnicities and abilities. The cohesiveness of the teams and the support given by each member to each other in track and swimming relays, gymnastics, water polo, basketball and volleyball, to name only a few, were marvelous examples of what can be accomplished through genuine mutual support and encouragement.

As a scientist or engineer, one also would hope that our U.S. and global scientific and engineering community would provide evidence of such diversity, support and encouragement. Sadly, data from the top 50 U.S. academic departments of science and engineering lead to a different view. In 2005, Donna Nelson and Diana Rogers published an analysis that indicated that, among these, women and minorities are significantly underrepresented, and that: 1) there are very few tenured and tenure track women, even though a growing number of women are earning Ph.D.s in science and engineering, 2) tenure track minority women faculty are virtually absent, 3) only 3-15 percent of full professors are female and 4) the percentage of women receiving Ph.D.s in science disciplines greatly exceeds the percentage of female assistant professors. Without women and minorities serving as role models and mentors, especially in the senior ranks, the relatively few young underrepresented scientists and engineers will continue to struggle and may well give up their careers.

Why should we care? This was answered most eloquently in 2006 by Mary Beckerle when she was president of the American Society for Cell Biology. She wrote: "Science needs the brightest, most innovative, creative, energetic and dedicated minds. Those will come in all colors, creeds and genders…we need to develop our human capital and access the depth and breadth of our talent pool."

And what about Sigma Xi? The most recent data available for the Society from a survey of more than 39,000 members indicates that 26 percent of our members are female, while faculty data from 2002-2004 for the top 50 institutions averaged only 14.2 percent. The Society's members are 86 percent Caucasian; 2 percent Hispanic; 2 percent African American; 2 percent Native American, Asian American and multi-racial individuals; with another 10 percent being international members. Similar proportions are found in the top 50 institutions. So, while we appear to reflect or better the current gender and ethnic proportions in today's scientific and engineering community, we must work towards equity and even increase these underrepresented groups or risk losing out on their potential.

The scientific pipeline that carries young scientists from their earliest grade school training through to the academic ranks is at risk and leaking at both ends. The foundation strategies we need to adopt to increase the representation of these groups both in science and engineering and within our Society have been developed and led by our Committee on Diversity, as well as such notable programs as JustGarciaHill, MentorNet and others. Another set of foundation strategies resides in active Sigma Xi chapters, which must provide the action and energy to carry out the work of mentoring, recognition, support and inclusion of underrepresented scientists in an often-harsh, and at best, uncaring environment.

Our chapters and membership around the world are uniquely poised to create the necessary feelings of inclusion and companionship that will serve to encourage talented underrepresented scientists and engineers to persevere and to continue to contribute to scientific knowledge, rather than leave science altogether. We must seek out our female and minority colleagues and engage them as active participants in our chapters, and the Society as a whole. We must include and encourage them to serve as committee members and officers. We must find ways to strengthen chapters at minority institutions. And, we must find ways to increase the relevance of the Society for all members, young and old, minority and majority, male and female. These actions will serve not only to strengthen Sigma Xi but, perhaps more importantly, the world-wide scientific and engineering community.

Ann H. Williams

Natalie Angier, Sherwood Boehlert Become Honorary Sigma Xi Members

Natalie Angier and **Sherwood "Sherry" Boehlert** are Sigma Xi's newest honorary members.

Angier is an author and Pulitzer Prize-winning science columnist for the *New York Times*. Her latest book is *The Canon: A Whirligig Tour of the Beautiful Basics of Science* (Houghton Mifflin, 2007), a guide to the fundamental concepts of modern science that researchers wish everybody understood about their work.

Natalie Angier graduated with honors from Barnard College. At the age of 22, she was hired as a founding staff reporter and writer for *Discover* magazine. She also worked as the senior science writer for *Time* magazine; an editor at the women's business magazine, *Savvy*; and a professor of journalism at New York University.

In 1990, she began writing for the *New York Times*, covering genetics, evolutionary biology, medicine and other subjects. Just 10 months later, she won a Pulitzer Prize for a series of articles on a wide array of scientific topics.

Her books include *Natural Obsessions*, an inside look at cancer research; *The Beauty of the Beastly*, a hymn to the mostly invertebrate creatures we'd rather forget; and *Woman: An Intimate Geography*, a celebration of the female body and biology.

She has also written for the *Atlantic Monthly, The American Scholar, Wired, Washington Monthly* and *Natural History*, among many others. Her work has appeared in *The Best American Science Writing* and *The Best American Science* and *Nature Writing*.

Her many honors include the American Association for the Advancement of Science Prize for Excellence in Science Journalism, the Lewis Thomas Award for distinguished writing in the life sciences and the General Motors International Award. She is currently the Andrew D. White Professor-at-Large at Cornell University.

Audubon New York called Boehlert "one of the greatest conservation leaders ever to serve in the U.S. House of Representatives." He served from 1982 to 2006 and chaired the House Science Committee. *Congressional Quarterly* named him one of the 50 Most Effective Lawmakers on Capitol Hill.

Former Congressman Sherwood Boehlert represented Central New York State in the U.S. House for 12 terms.

He served on the House Science Committee for his entire congressional career and in 2001 was elected its chairman. In addition, he was third-ranking member of the House Transportation and Infrastructure Committee.

From 1995 to 2000 he served as chairman of the Subcommittee on Water Resources and Environment. Boehlert was also a long-time member of the House Intelligence Committee and a founding member of the House Committee on Homeland Security.

National Journal dubbed him "The Green Hornet" for his environmental leadership, and *Time* magazine cited him as a go-to "power center" in the House. Boehlert retired from the House in 2007 and joined The Accord Group.

The former lawmaker serves as co-chair of the Bipartisan Policy Center's Transportation Project for the 21st Century. He is also on the boards for the Alliance for Climate Protection, the Natural Resources Defense Council Action Fund, the League of Conservation Voters and the Heinz Center for Science, Economics and the Environment. •

Mathematician Wins Young Investigator Award

Mason A. Porter's interest in mathematics initially arose largely from what he considered visually appealing.

"I had a childhood fascination with patterns," he explained. "The sketches I began drawing when I was 3 years old included many displays of contrasting color. In high school, I noticed that fractals could produce colorful patterns in the same vein as what I liked to draw, which led to my interest in them."

In college, he discovered that what really intrigued him was trying to understand the mechanisms that could produce such interesting pictures and the real-life and man-made systems that exhibited them.

"Since then, my interests have branched out into several fields of science that can be studied using dynamical systems and other methods," said Porter, who today is on the faculty in applied mathematics at the University of Oxford and is also a Tutorial Fellow at Somerville College.

His research in nonlinear science and complex systems includes classical and quantum chaos, billiard systems, nonlinear waves, Bose-Einstein condensation, granular media and social networks.

He was born in Los Angeles, California, and received a B.S. in applied mathematics at the California Institute of Technology in 1998 and a Ph.D. at Cornell University, with a dissertation on quantum chaos.

He was a postdoc at the Georgia Institute of Technology, jointly in mathematics and the nonlinear physics group; the Mathematical Sciences Research Institute, in their semiclassical analysis program; and Caltech, in the Center for the Physics of Information and the condensed matter theory group.

Porter joined the faculty at the University of Oxford in October 2007. In addition to his research, Porter has mentored more than 20 undergraduate research students. •

Innovation Awards Challenge High School Students

Sigma Xi is among the partnering organizations for the **Pete Conrad Spirit of Innovation Awards**, which challenge high school students to design commercially viable products using science and technology.

The awards are named for the commander of the Apollo 12 mission who was the third man to walk on the moon.

Sponsored by the Conrad Foundation, the competition combines education, innovation and entrepreneurship in three areas: personal spaceflight, lunar exploration and renewable energy.

Student teams compete for more than $120,000 in prize money and the opportunity to connect with leading scientists, engineers and entrepreneurs, who guide them in bringing their concept to the marketplace. The entry deadline is January 9.

Sigma Xi members are encouraged to become involved as judges for the competition, both online and for the final round of judging April 2-4 at NASA Ames Research Center, Moffett Field, California.

Conrad was expelled in the 11th grade from a prestigious school in Haverford, Pennsylvania, because no one recognized that he was dyslexic. At Darrow School in New Lebanon, New York, it wasn't long before the headmaster saw something special in him.

With encouragement, Conrad began to gain confidence and excel in his studies. He was awarded a scholarship to Princeton and eventually had the opportunity to fly Gemini 5 and Gemini 6 and command the Apollo 12 mission.

After retiring from NASA, Conrad pursued his own entrepreneurial spirit, starting four successful companies while continuing his love for exploration. It is in a salute to his entrepreneurial spirit that the Pete Conrad Spirit of Innovation Awards have been created.

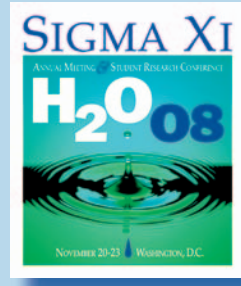
Visit www.conradawards.org for more information. •

Career Options and Guidance

Coming soon... Sigma Xi has teamed up with Experience, Inc. to offer our members the best possible career opportunities and guidance, as well as alumni networking. And it's all free!

- Free member-to-member job postings—invite the best of the best to work for you!
- Free access to hundreds of thousands of careers, internships and job shadow days.
- Free resume and interview tips and techniques.
- Free networking with thousands of other Sigma Xi members.
- Free resume posting—be as active or passive in your job search as you wish!

Look for more information in November about this exciting new member benefit at www.sigmaxi.org. •



Year of Water

A special panel discussion Saturday, November 22, at the 2008 Sigma Xi Annual Meeting and Student Research Conference in Washington, D.C., will feature **Peter H. Gleick**, president of the Pacific Institute; **Andras Szollosi-Nagy**, director of UNESCO's Division of Water Sciences; **Peter Thum**, founder of Ethos Water; and **Thomas G. Mattia**, senior vice president of the Coca Cola Company. The discussion will be moderated by **Michael Crosby**, executive director of the National Science Board and interim vice chancellor for research at the University of Hawaii.

Visit **www.sigmaxi.org** for details, plus white papers on water issues, podcasts of interviews with prominent researchers, a student film competition and more. •

Sigma Xi and UTEK Announce Alliance

Sigma Xi and UTEK Corporation, a leading innovation services company, have entered into an alliance to bring together UTEK's TekScout service and Sigma Xi's membership of research scientists and engineers in more than 100 countries.

TekScout is an online open innovation network, which brings together independent scientists and engineers from across the world to solve R&D challenges focused in the areas of life science, physical science, chemistry, engineering and design, math and computer science, and renewable energy and sustainable product design.

These challenges are posted in an online forum by large corporations who seek outside expertise. Through this open innovation process, companies are able to drive product development faster, less expensively and more effectively than they might be able to do using only internal resources. Sigma Xi scientists and engineers who solve these challenges earn financial rewards and industry recognition.

"Our alliance with Sigma Xi brings a great new pool of talent and innovative knowledge to our base of TekExperts," said Edward Weisberg, vice president of UTEK and general manager of TekScout. "Sigma Xi's membership consists of some of the brightest scientific minds in the world. We are honored to incorporate them into our program to help solve TekScout scientific challenges."

"Sigma Xi's goal is to encourage support of original work across the spectrum of science and technology and to promote an appreciation within society at large for the role research has played in human progress," said Sigma Xi Executive Director Jerry Baker. "We believe that TekScout will provide an additional forum for our members to carry out this effort."

Visit www.sigmaxi.org to view TekScout's current R&D Challenges and their associated success fees. •

Schoonmaker Named Editor of *American Scientist*

After a year at the helm as acting editor of *American Scientist* magazine, **David R. Schoonmaker** has been named editor of Sigma Xi's flagship publication. His appointment follows a 15-year tenure as managing editor of the magazine.

In all, Schoonmaker has 35 years of experience in magazine production that includes serving as executive editor of Rodale's *Men's Health Newsletter* and technical editor for *Mother Earth News*. He has also written or edited seven books.

"We believe that David Schoonmaker has the leadership skills and vision necessary to keep *American Scientist* at the forefront in scientific publishing," Sigma Xi Executive Director Jerry Baker said.

"He has demonstrated through his extensive experiences his ability and devotion to scientific writing," Baker continued, "which will enhance our efforts to serve our members and the public with informative feature articles and coverage of emerging technologies."

"I am not a scientist," Schoonmaker said, "but I have a deep and abiding love for and interest in science. Growing up with a geologist father, I could tell a syncline from an anticline by age six. Working for *American Scientist* is the best job any editor could hope for. I am privileged to work with talented colleagues and the world's best scientists to produce a magazine I'm passionate about–one that I believe is the best of its kind."

Schoonmaker succeeds Rosalind Reid, who served as editor of *American Scientist* from 1992-2008. She is now acting executive director of the Initiative in Innovative Computing at Harvard University, where she was a visiting scholar in 2007-2008. •

Phillip Cates to Head Organizational Advancement for Sigma Xi

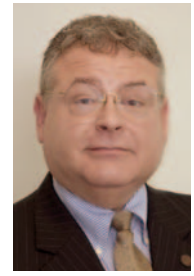
Phillip K. Cates has been named director of organizational advancement for Sigma Xi, a new department combining the Society's development and membership departments.

"It is a real honor to accept the appointment to this new position and a privilege to work with such an experienced and professional staff," Cates said. "Organizational advancement combines Sigma Xi's chapter development, membership and qualifications, member benefits, awards, lectureships and resource development staff into the one unit that has the greatest direct contact with and provides support for our members."

Cates comes to Sigma Xi from Compassionate Capital, a capacity building and resource development consulting firm he founded, which is focused on public, private and faith-based organizations.

He is a former director of partnerships and strategic initiatives for the Public School Forum of North Carolina. While there, Cates organized and managed the N.C. Partners Leadership Council, comprised of private sector organizations and businesses working to improve public education.

He was also a consultant and trainer for SERVE, the southeastern regional federal education laboratory located at the University of North Carolina at Greensboro. Cates assisted in the formation of more than 20 local education foundations and community-based initiatives to improve education and economic development across the southeast U.S.



He has also served as executive director of the Chatham Education Foundation, one of North Carolina's leading rural local education funds, and as the regional resource development director for The Salvation Army, serving the western Triangle area of North Carolina.

Cates is an ordained United Methodist minister. He received his B.A. in political science and philosophy from Greensboro College and masters of divinity and theology degrees from Emory University. He is an Education Policy Fellow with the Institute for Educational Leadership.

His professional affiliations include the Association of Fundraising Executives, National Committee on Planned Giving, Christian Leadership Association and North Carolina Association of Personal and Business Coaches. A native of High Point, North Carolina, Cates and his wife, Toni, have three sons. •