

Alumni Association



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MESSAGE FROM VICE CHAIRMAN KLAUS KRAUSE



Klaus Krause

As we close out another year, we look forward to 2016, which marks the Alumni Association's 20th anniversary. We will observe the anniversary with special coverage of the association's history in the newsletter, featuring reminiscences and anecdotes from longtime members, as well as interesting information from newsletters and

other documents going back to 1996. Stay tuned!

This issue leads off with an account and photos of this year's 20th Annual Reunion. The event featured talks by John Prausa on the status and direction of SRI and by Manish Kothari on recent advances in robotics at SRI. The Alumni Hall of Fame grew by four new inductees, whose achievements and contributions to SRI's success are described in the article. Attendees also enjoyed the special recognition of member Walter Jaye, who received the medal of Knight of the French Legion of Honor for services to France during World War II. His story is detailed in the Alumni News section.

In News from SRI, you'll learn about the recipient of this year's Mimi Award, SRI's highest recognition of staff members who have fostered the personal and professional growth of their coworkers. The diversity of SRI's research is highlighted in an article on ways to increase educational opportunities in science, technology, engineering, and mathematics (STEM) with specialized high schools, and two articles about advanced research on preventing cancer and using the immune system to fight cancer.

In the International Journal, Peter Weissshuhn introduces us to the Isles of Scilly and recounts a fascinating short history of shipwrecks in the dangerous waters around those islands.

You may be tempted to visit there after you read Peter's article and do a little online research on the islands.

After Walter Jaye's inspiring story comes a profile of another member, Harvey Dixon, who did groundbreaking research on military and civilian logistics systems before becoming the first Executive Director of what is now the SRI Education Division and then Vice President, Finance and Administration.

Happy holidays to you and your families from the Steering Committee. See you next year!

Klaus



It is with deep regret that we announce the death of Steering Committee Chairman Pete Valenti on October 13th. Pete was a dedicated member of the Alumni Association for many years, and we will miss his contributions, services, and often entertaining presence at our committee meetings. His obituary is included in this issue's In Memoriam section.

Wanted: Your Submissions

We welcome articles and shorter items from all Alumni Association members to be considered for publication in the newsletter. Have you done something interesting or traveled to interesting places? Received any awards or honors? Your fellow alumni want to know! Please send items to steering-committee-alumni@sri.com.

2015 Alumni Annual Reunion

More than 100 alumni and guests attended the 20th Annual Reunion in the International Building on September 17. After socializing and enjoying drinks and delicious hors d'oeuvres with a background of harp music, the attendees were treated to a program of informative talks, awards and recognitions, and the always popular door prizes. Klaus Krause, Vice Chair of the Alumni Association Steering Committee, made opening and closing remarks; Boyd Fair, former Chair of the committee, served as Master of Ceremonies.

Status of the Institute



John Prausa, Chief Operating Officer and Vice President, Mission Solutions, described SRI's current efforts and plans to meet the evolving needs of clients and society in the 21st century. To provide solutions that make people safer, healthier, and more productive, SRI's research and development divisions now focus on advanced technology and systems, biosciences, education,

and information and computing sciences. To move research out of the laboratory, SRI is also developing new products, licensing its technology, spinning off ventures, forming strategic partnerships with investors and entrepreneurs, and providing innovation programs to governments, universities, and businesses around the world. In a significant departure from previous practices, SRI has formed a wholly owned for-profit subsidiary, Ravenswood Solutions, which will provide advanced technology and services for realistic training exercises and related activities to military, homeland defense, and other organizations. In summary, John said that SRI is well positioned to meet the challenges of the future.

Recent Advances in Robotics at SRI



Manish Kothari, President, SRI Ventures, and SRI Vice President, recapped recent developments in SRI's work on advanced robotics technologies and systems. SRI has been pushing the boundaries of robotics since the days of Shakey the Robot in the 1960s and 1970s. Today, SRI's comprehensive Robotics Program includes teams of researchers who invent, apply, and

commercialize components, software, and systems at the forefront of the robotics revolution.

Manish led his audience on an illustrated guided tour of many of the numerous robotic products and applications in existence and under development. Particularly intriguing were the prospects for the use of robots as personal assistants for people with limitations resulting from disabilities, physical and even emotional health issues, and aging. Such uses will benefit from the development of materials for use in "soft robots"—materials that are flexible, yielding, and light in weight, rather than rigid, hard, and heavy. Another area under development is vision-based sensing systems to enable robots to navigate visually, detect people or objects in their vicinity, verify identity for security purposes, and conduct reconnaissance. Perhaps the most futuristic technology is, surprisingly, the smallest: micro-robots. These miniature devices can be designed and programmed for such diverse uses as targeting drugs by traveling through blood vessels in the human body and working together in large numbers to manufacture products of any size in "micro-factories."

The future of robotics is bright, and SRI's research and technology will continue to be on the leading edge of turning science fiction into mainstream science fact.

Alumni Hall of Fame Inductions

Four alumni were inducted into the Alumni Hall of Fame in recognition of their important contributions to the success of SRI: Ivor Brodie, David R. Brown, Curtis R. Carlson, and Ronald J. Moore.



Ivor Brodie came to SRI in 1973 as a physicist with a background in vacuum tubes and, in particular, the technology of cathode ray displays embodied in various commercial products produced by a company he had cofounded. He entered SRI as the Director of the Physical Electronics Laboratory and successfully led that organization for two decades, after

which he consulted for that group until his retirement in 2002.

In general, Ivor's SRI research centered on photoconductive surfaces and the emerging field of microfabrication. Of particular note, he directed his lab into the development of a vast array of innovative subminiature objects along with the tool development and material science to make them possible. These developments included photoconductive

drums and toners for copiers, field emission arrays for vacuum electronics and flat-panel displays, recorders for medical radiography, and the tools for electron-beam lithography that enabled the printing of submicron features on the substrates of silicon wafers. His contributions to that field were captured in a book he wrote with Dr. Julius Murray: *The Physics of Micro/Nano-Fabrication*. Ivor also brought to SRI its first electron microscope.

Ivor also helped bring world prominence to his SRI lab, evidenced in part by the creation of a brand-new technology, vacuum nanoelectronics. That innovation led to his staff's founding of the International Vacuum Nanoelectronics Conference, which is still being held. Ivor was awarded 10 patents while he was at SRI and was named an SRI Fellow in 1983. As an indication of his ability to attract and develop talent, four of his staff also became SRI Fellows during his second 10 years as Director. He is a Fellow of the American Physical Society.



David Brown joined SRI in late 1963 as the manager of the Computer Techniques Laboratory. It was then one of just four labs in the Engineering Sciences Division and the only one concentrating on computing. Although a decade or so earlier SRI's large project to create the first banking computer made computing research at SRI almost inevitable, in 1963 it

was still not clear what form that research should take. It was incumbent on David in his role as a manager at that time to help figure that out.

In the next several years, David had a hand in bringing to SRI a set of talented researchers such that by the start of 1969 a huge breakout of new identifiable efforts emerged. At that moment, the Engineering Sciences Division expanded from five labs to a dozen identifiable program areas under just two leaders, one of whom was David Brown.

David's group of six programs included the Artificial Intelligence Group, the Augmented Human Intellect Center, and the Computer Science Group, all of which evolved into independent labs with researchers who became world leaders in their field. As these labs matured, David continued as head of the Information Science Laboratory for another 8 years, and his tenure at SRI would eventually total 30 years.

David's contribution to this growth was well expressed by a leader of one of those emerging groups:

It was a time of great change and opportunity in technology and little tradition in independent applied research. SRI attracted some very bright and far-seeing researchers and there was a continuous search for sponsors with vision and resources. The result was a kind of start-up culture, with...a variety of growth profiles, some slow, some explosive, with consequent challenges of management—how to find the right staff, how to combine research themes, how to terminate weak programs, how to cultivate sponsors were some of Dave's contributions. His leadership was crucial in solving these problems and he helped build a home for creativity and a model for a strong institution.

Curt Carlson came to SRI in 1998 as an executive from its subsidiary, the Sarnoff Corporation, to serve as SRI's ninth president. Holding that position until 2014, he led SRI longer than anyone else in its nearly 70-year history. But it is not just that longevity that prompts this award. It is his accomplishments for SRI during those 16 years.



During his tenure, Curt was an engaged and interactive president who relished the opportunity to sit with all staff members to understand their role and their research, with the unspoken goal of encouraging and motivating them. He tackled the perennially difficult issue of interdisciplinary research by bringing different parts of the Institute together to better address a potential client's needs. He explored the essence of the innovation process and left SRI better able to look for, understand, and meet a client's needs. His career in research let him relate easily and effectively to those professionals at SRI responsible for the Institute's livelihood.

Curt's approach helped increase the Institute's revenues from \$160 million, burdened by debt when he arrived, to \$540 million by 2014. His concentration on meeting clients' needs and submitting more effective proposals resulted in a more uniform profitability across the major R&D divisions, a welcome Institute change.

But his most important legacy is his unprecedented attention toward and profit from SRI's intellectual properties. Although Curt did not initiate SRI's entry into the use of its intellectual property, he clearly brought it to a place of prominence and a point of substantial—often crucial—help to the Institute's bottom line. Also building on prior policy, he saw to it that part of the financial return from

that property found its way back to the inventors and to the staff in general. For the first time in its history, royalty and equity became, and are still, key components of SRI's financial picture.



Ron Moore worked at SRI from 1955 until 1992 as a creative artist, from the days of pen and ink drawings and film photography well into the age of computer graphics. His contributions and forward thinking as an illustrator and graphic designer helped consolidate SRI's position in the business and scientific communities as a professional research organization.

Ron's first task was to create, starting with blueprints, an 8-foot-long artist's conception of a finished explosive device. Many more such illustrations followed, including drawings of SRI's famous Shakey the Robot. In addition, Ron created illustrations for a variety of media, ranging from SRI promotional pieces and periodicals to posters for special events and slide presentations. His designs of SRI's publications—the *Long Range Planning Service*, *SRI Journal*, *Investment in Tomorrow*—distinguished them from those of our competitors and won several national awards for cover designs.

Ron recognized early on the importance of a uniform corporate identity, and he worked hard to implement a cohesive corporate identity program that has had long-lasting positive effects on SRI's reputation. The program included harmonious designs for an array of SRI presentation materials, including logos, stationery, posters, and business cards, that became the SRI style. He was quick to realize the potential of early Apple computers, using his own IIe at home until SRI provided him one. He promoted the use of Apple computers in the publications arena, and helped many staff members—eventually including his boss—learn how to use Apple's graphic software.

Through the years, Ron worked across the Institute, stimulating staff creativity and capturing ideas in memorable images and publications. His wry humor and quick wit made him a joy to work with as he helped define the visual character of the Institute through its publications.

A Special Recognition

After the Hall of Fame inductions, another member of the Alumni Association, Walter Jaye, was recognized for having received the medal of Chevalier de la Légion d'Honneur (Knight of the Legion of Honor). Walter received France's premier award for service to France for his actions during the Nazi occupation and subsequent liberation of Europe. Murray Baron gave a brief account of Walter's honor; a full article in this issue is devoted to Walter's story.

A Successful Event

The program ended with the much-anticipated raffle of door prizes donated by Staff Activities and the SRI Federal Credit Union. Another period of socializing, featuring desserts and an impressive chocolate fountain, concluded this very successful event.

Thanks to the following for their contributions:

Martha Agreda, Don Berry, Gary Bridges, Arturo Franco and crew, Dave Harvey, Linda Hawke-Gerrans, Sandy Hinzmann, Katie Kaattari, Judy Lhamon, Sally Longyear, Don Nielson, Caren Rickhoff, and Carolyn Terrill.

And special thanks to Augustina Biosic and Joyce Berry for pulling it all together.







Lynn Newman, SRI's 2015 Mimi Award Winner



In recognition of her inspiration of coworkers and her contributions to their professional development and success, Lynn Newman, a senior researcher in SRI Education, has been selected to receive the 2015 Mimi Award.

More than a dozen staff members and other colleagues nominated Lynn for the award. They described her as an extraordinary supervisor, role model, and amazing mentor, and pointed out that she has always encouraged staff to work to the utmost of their abilities and to stretch when needed. They also noted that she is patient, thoughtful, and approachable. She is always willing to answer questions, and her constant encouragement for people to use their skills and talents to succeed and grow has made a meaningful difference to the careers and lives of many individuals within and outside of SRI. One nominator appreciated how Lynn “took me under her wing because she saw and appreciated many skills and potential” and “helped me learn more advanced research techniques and tools so I could broaden my work arena within the department.”

Perhaps one colleague summed up Lynn’s contributions best by saying that she “recognizes the potential in others and seamlessly moves them from having untapped potential to having demonstrated experience, all without giving them a moment to wonder if it was even possible.”

SRI’s Mimi Award is the highest recognition offered to staff members who have fostered the personal and professional growth of their coworkers. The award is given annually to an SRI staff member who has inspired others to realize their goals and vision. Established in 1994, the award is named in memory of Marian (Mimi) S. Stearns, who was Vice President of SRI’s Health and Social Policy Division.

Can Inclusive STEM High Schools Narrow the STEM Gap for Underrepresented Students?

By Barbara Means, Co-Director, Center for Technology in Learning, SRI Education

In November, SRI Education was honored to participate in the first-ever White House Summit on Next Generation High Schools, which included discussion about ways to expand science, technology, engineering, and mathematics (STEM) opportunities for groups underrepresented in

these high-growth fields (African Americans, Hispanics, females, and students from low-income families). Previous research shows that many students, especially among those from groups underrepresented in STEM, don’t complete the right courses in high school to be prepared for a STEM major in college. If we truly want to increase the participation of underrepresented groups in STEM, we need transformational changes in high school educational opportunities.



Two states, North Carolina and Texas, have taken strides toward meeting this challenge by supporting the creation of inclusive STEM-focused high schools at scale. What sets these high schools apart from traditional high schools is that they admit students on the basis of their interest in STEM, through either open admissions or lottery, rather than selecting students on the basis of test scores. Inclusive STEM high schools target underrepresented groups and provide all their students with a four-year high school experience designed to prepare them for STEM courses in college. Because they work with students for four years, these schools provide longer-term and more pervasive STEM learning opportunities than any single summer program, field trip, or enrichment opportunity could.

To determine how effective inclusive STEM high schools are at contributing to improved academic outcomes for underrepresented groups, SRI Education and George Washington University have been conducting the iSTEM research project, funded by the National Science Foundation (NSF). SRI researchers identified and recruited 39 inclusive STEM-focused high schools and 22 comprehensive (or traditional) high schools serving similar student populations but without a schoolwide STEM focus in North Carolina and Texas for this research. We have investigated both the extent to which inclusive STEM high schools contribute to improved academic outcomes and their impacts on students’ interest in STEM careers and expectations for postsecondary study.

In a survey of 12th graders from both inclusive STEM high schools and comprehensive high schools, we found that higher proportions of students overall and of those from underrepresented groups take more advanced courses in mathematics and science if they attend an inclusive STEM high school rather than a comprehensive high school.

In addition, by comparing high school outcomes for students graduating from inclusive STEM high schools with those of students who graduated from comprehensive high schools, we found that attending an inclusive STEM high school enhances a student's:

- Identity as someone who practices science
- Aspirations for postsecondary education
- Interest in one or more STEM careers.

In addition, our research team's survey of a sample of graduates from inclusive STEM high schools and comprehensive schools in North Carolina found that the former were more likely to be currently enrolled in a four-year college, had completed more college courses and earned more credits, and were more likely to have declared a STEM major than the graduates of comprehensive high schools.

Preliminary results of our research are encouraging, and SRI has committed to provide resources for research beyond NSF funding to further enhance iSTEM activities and broaden the scope of the study. Through objective analyses of educational outcomes, SRI Education strives to make a positive impact and to help the education field better serve all students.

The research described above was supported by a grant to SRI International from the National Science Foundation (DRL-1316920). Any opinions, findings, conclusions, or recommendations are those of the author and do not necessarily reflect the position or policy of endorsement of the funding agency.

This is an edited version of an SRI Blog entry posted on November 10, 2015.

SRI to Support National Cancer Institute PREVENT Cancer Program

SRI has been awarded a contract of up to \$9 million to provide preclinical development services to the National Cancer Institute (NCI) PREVENT Cancer Program (PCP). Under the contract, SRI will provide scientific expertise, modern testing and support facilities, and analytical instrumentation to conduct a wide variety of preclinical

pharmacology and toxicology studies to evaluate potential cancer prevention drugs. SRI has provided such services to the NCI for the past 23 years.

The PREVENT Cancer Drug Development Program is an NCI-supported pipeline to bring new cancer-preventing interventions and biomarkers through preclinical development toward clinical trials. PREVENT enables milestone-driven progression of novel cancer-preventive chemical or biological agents and biomarkers from the laboratory bench toward proof-of-principle clinical testing and registration or validation.

The current contract calls for SRI to deliver high-quality laboratory data to support NCI-PCP's efforts to develop promising therapeutic candidates such as vaccines and chemopreventive agents that will inhibit, delay, or reverse manifestations of cancer. SRI will be responsible for managing therapeutic candidates from conception to submission of an Investigational New Drug application to the U.S. Food and Drug Administration. SRI has broad experience with similar studies for NCI and for many other divisions of the National Institutes of Health, as well as for private sponsors.

Using the Immune System to Fight Cancer

By Kathlynn Brown, Director, Macromolecular Sciences, Biosciences Division

My group at SRI Biosciences is driven by the idea of a "magic bullet" drug that can home in on a particular cell type and avoid healthy cells. This notion of a magic bullet has been around for 100 years, but finding molecules that recognize the address of a particular cell is challenging. In other words, how does a molecule distinguish between one cell type and another, such as cancerous cells versus healthy ones?

Cancer is an obvious application for this kind of targeted therapy. The side effects of chemotherapy—severe gastrointestinal problems, hair loss, immune suppression—result because most of these drugs work on all cells, although they have more of an effect on cancer cells, which are rapidly dividing. Patients are given chemotherapy drugs not at the most efficacious level, but at the maximum tolerated dose to kill the cancer.

The current gold standard for specific cell targeting of cancerous tumors is the use of engineered immune molecules known as monoclonal antibodies. While these are very specific and will attach selectively to cancer cells, there are many disadvantages to using them. Monoclonal

antibodies are large and difficult to modify chemically (such as by adding a drug), and they can be very expensive. A typical round of treatment with monoclonal antibodies for a cancer patient might cost \$100,000 (usually covered by a patient's health insurance).

We wanted to find something smaller, easier and quicker to create, and less expensive than monoclonal antibodies, something that we could chemically modify in a specific fashion and attach whatever we wanted to it but still retain the ability to recognize one cell type over another and specifically bind to those cells.

The concept is that if we could take a chemotherapy drug and connect it to a molecule that would find and attach to cancer cells, it could then be delivered preferentially to those specific cancer cells and thereby decrease the side effects. This strategy could potentially allow for delivery of more drug to the right place than conventional methods since the toxic compounds are affecting only cancer cells rather than every cell in the body.

To find molecules that specifically target cancer cells, my lab has taken advantage of a technique called phage display. It utilizes bacteriophages, essentially viruses that attack bacteria, to produce massive amounts of potential targeting agents quickly. We have engineered phages to produce short pieces of proteins called peptides. Hundreds of millions of phages with these peptides displayed on their surface are incubated together with cancer cells—my lab focuses on non-small cell lung cancer—to see which ones bind to the cells. Anything that sticks can be sequenced to determine the composition of the peptide and then develop ways to use it.

We are exploring a range of applications of these peptides. Some focus on delivering drugs; some focus on doing molecular imaging to better understand the underlying biochemistry. We are also working with other groups at SRI to develop in vitro diagnostics to help detect cancer earlier or to follow treatment to see how a disease or therapy is progressing, pointing toward more personalized and precise medicines in the future.

The latest news is that we are now using these peptides as immunotherapy. One of my research colleagues had the idea that, since we have identified peptides that bind to cancer specifically, what if instead of a drug we delivered an antigen that the immune system could recognize as foreign? If we delivered an antigen that people have been vaccinated

against, maybe we could trigger a potent memory immune response that flags the cancer cells to be killed naturally by the immune system.

We created microscopic 100-nanometer “fat spheres” called liposomes and encapsulated inside each one a small peptide from measles that is known to cause an immune response to the measles vaccine. On the outside of the liposomes we put various cancer protein peptides that we have identified by phage display screening so that liposomes carrying this measles antigen would be delivered specifically to cancer cells.

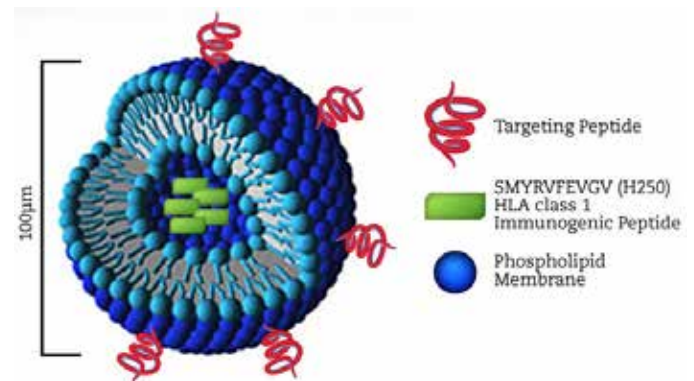


Illustration of a peptide-targeted, antigen-loaded liposome

Basically, we are trying to trick the immune system into thinking that cancer cells are infected with measles without actually using measles virus. If the body's immune cells encounter cancer cells with this measles protein on their surfaces, they will kill those cancer cells. We have found that there is a significant reduction in tumor growth rate when using the targeted liposome treatment in mice, so our hypothesis appears to be correct.

We have a lot more work to do, finding different antigens and studying how this process is working, and also studying it in different cancer types to see if it is broadly applicable. Overall, we think using our identified peptides as immunotherapy is a promising idea, and our search for a magic bullet will continue.

Research reported in this SRI Blog post related to immunotherapy was supported by the National Cancer Institute and the National Institute of Biomedical Imaging and Bioengineering of the National Institutes of Health under grant numbers R01CA164447 and R01EB014244, respectively.

This is an edited version of an SRI Blog entry posted on August 14, 2015.

Editor's note: During a week's vacation in the Isles of Scilly with his wife, Peter Weissshuhn became intrigued by the number of shipwrecks in the area. He compiled this history from local records.

A Short History of Shipwrecks in the Isles of Scilly

By Peter Weissshuhn

The Isles of Scilly, located 30 miles west-southwest of Land's End, off the southwestern-most tip of England, enjoy an exceptionally warm climate, allowing subtropical plants to thrive there. The beaches are among the finest I have seen, with translucent water in sheltered bays, ideal for children. But the Atlantic is cold. Lying dangerously near major shipping lanes, the Scillies have been a graveyard for ships driven onto their rocks by a combination of weather, mechanical faults, and human failings. More than 700 major wrecks have been recorded over the centuries, a few of which I describe below.

1707: Great Loss of Life

On October 22, 1707, Admiral Sir Cloudesley Shovell led a fleet of 21 ships back to Portsmouth after a successful campaign in the Mediterranean in the War of the Spanish Succession. In thick fog, the fleet got "hopelessly lost." Five ships hit the rocks, with the *Association*, *Eagle*, and *Firebrand* sinking rapidly, taking 1,400 to 2,000 men down with them, according to different sources. The admiral's naked body was later found in a shallow grave, deprived of some of his rings. It is unclear whether he had reached the shore alive and was murdered for his jewellery, or whether he had drowned. His corpse was brought back to London and given a state funeral by Queen Anne.

In response to the Scilly naval disaster, the British Parliament offered a financial reward to anyone who could find a method for accurately determining longitude. This incentive led to John Harrison's invention of the marine chronometer.

1798: Irreplaceable Loss of Antiquities

On December 10, 1798, *HMS Colossus*, a third-rate 74-gun ship of the line of 1,703 tons, was on its way home after two years in the Mediterranean, patrolling Cadiz and Lisbon and blockading Malta. By then, it had rotten sails, worn rigging, soft timbers, and no spares. To add to its difficulties, Admiral Nelson had requisitioned its two main anchors to be used by other ships that were even worse

off. The weary old vessel was heavily laden with wounded sailors from the battle of the Nile and with the private stores of officers who joked about their trophies as "presents from the French." Finally, that unseaworthy ship carried a second priceless collection of Greek, Roman, and Etruscan antiquities being sent to the British Museum in London by the British ambassador at the Court of the Two Sicilies in Naples, Sir William Hamilton. A first collection Sir William had sent formed the nucleus of the exhibits we see today.

This second collection Sir William was sending to the British Museum, he claimed, "was even finer than the first." Alas, it never arrived. After two months of toil, the *Colossus* was caught in a fierce storm and could not be prevented by its feeble auxiliary anchors from drifting onto the Scilly rocks and breaking up. Amazingly, only one life was lost.

Among the goods salvaged from the wreck was the embalmed body of Admiral Lord Shuldham in a lead casket hidden in a wooden box underneath general cargo in deference to the seamen's superstition about corpses on board. When Sir William learned of the disaster he exclaimed, "Damn the Admiral's body, it can be of no use but to the worms. But my priceless collection would have given information to the most learned!"

Sir William was not only an avid collector of antiquities, but also the husband of Emma, who had become Nelson's mistress. Lady Hamilton must have had a theatrical streak, for she liked to pose and dance among the Greek urns and statues, striking "attitudes."

1915: Betty and the U-Boat

We now skip ahead over the 19th century, during which ships of all kinds continued to founder on the rocks of the Scilly Isles. It was war, and German U-boats patrolled the sea lanes around Britain, imposing a blockade similar to the Royal Navy's blockades of Mediterranean ports in past centuries. On July 1, 1915, a German submarine challenged the 4,656-ton steamer *Caucasian*, ordering it to stop. When the *Caucasian* attempted to flee, 17 shells from the sub disabled it and caused the crew to abandon ship.

In the scramble to get into the lifeboats, Captain Robinson's pet Pomeranian, Betty, fell into the sea. She immediately headed for the deck of the sub, presumably taking it for a rock. Captain Robinson's boat followed Betty, and the captain fished her out and placed her on his shoulder. Having observed this, the sub's commander informed

Captain Robinson that he had earlier given an order to machine-gun the lifeboat crew. But, in recognition of the captain's brave rescue of his dog, he had rescinded the order.

This was one of those rare instances of gallantry in war, when the human spirit transcends the killing instinct.

1967: An Ecological Disaster

Seafarers are not immune to human error. All Captain Rugiati of the *SS Torrey Canyon* wanted to do was to take a shortcut to the mainland refinery at Milford Haven. Unfortunately, he was in command of the largest crude oil tanker in the world at the time, and the *Torrey Canyon* struck the deadly Pollard Rock, which produced a fatal 610-foot gash in the ship's starboard side. Over the next week the *Torrey Canyon* broke up, and most of its 120,000 tons of crude leaked to cover square miles of the sea and beaches. Different solutions were tried to contain and neutralise the oil. Finally, the RAF dropped tons of kerosene and 200,000 pounds of incendiary bombs on the oil. The flames reached 500 feet, and the stench travelled 70 miles into Cornwall.

It seems that the ecological damage was not as lasting as feared because of the constant action of wind and waves. Forty-six years later, we could find no trace of it.

1997: Salvage and Looting

By 3:00 a.m. on March 26, 1997, the watch-keeping officer of the merchant vessel *MV Cita* en route from Southampton to Belfast had fallen asleep and the watch alarm was turned off. The rest of the mostly Polish crew members were below deck asleep or, according to one rumour, watching a football game. The *Cita* carried 200 containers. She struck Newfoundland Point on St. Mary's, the largest island. The spilled cargo comprised computer mice, car tyres, tobacco, house doors, plywood, plastic bags, and women's summer shorts.

Most locals assisted in the salvage operation by removing floating items from the coastline. The women's shorts had got wet so were washed and sent to Romania. Other items, especially the doors and tyres, were inevitably appropriated for local use, which was illegal. The Merchant Act of 1906 decrees that people recovering flotsam must report their find to the official Receiver of Wreck. Eight policemen were dispatched from Cornwall to enforce the law, but in the end no prosecutions were brought.



Walter Jaye – A Remarkable Man, a Remarkable Story

In July of this year, the President of France awarded Alumni Association member Walter Jaye the medal of Chevalier de la Légion d’Honneur, France’s premier award for service to France. This honor was bestowed on him for actions in the service of the Free French Forces during the German occupation of France and during the liberation of the European Continent. On Wednesday, October 14, 2015, Walter was presented the medal at the French Consul General’s residence in San Francisco.



Worthy of note is that Walter’s Legion of Honor award is exactly the same award given by the President of France to the three Americans who took down the terrorist on the train to Paris earlier this year.

And on Saturday, October 24, he celebrated his 90th birthday (which is actually October 21) at his Menlo Park home with friends and family. At that celebration, he was presented with proclamations from both the California State Assembly and the city of Menlo Park in honor of his remarkable life and achievements.



Proclamation by Menlo Park’s mayor at Walter’s 90th birthday



Walter with Consul General Pauline Carmona

Walter Jaye can reflect on a life touched by all of the very best, and very worst, of modern history. Walter was born to Jewish parents in Berlin, Germany, in 1925. His father, who had served honorably for four years in the German Army during World War I, was told by former army comrades that Germany was no longer a safe place for Jews after the Nazi rise to power. Walter’s father left Germany in early 1934 for Belgium, with Walter and his mother and sister following later that year.

When Germany occupied Belgium in May 1940, his father was suddenly designated an enemy alien and sent to an internment camp at Gurs, France. The family joined him soon after as refugees, and they struggled together for survival.

In July 1942, Walter’s parents managed to have him transferred to a small rural camp, where there was more food available. His parents were taken to Auschwitz in September 1942 and were killed there. His sister had managed to escape from Gurs and found refuge in Switzerland.



Official award certificate



The medal

Walter escaped from the camp where he was held and found shelter in Le Chambon sur Lignon, Haute Loire. This Huguenot community, led by two Protestant Christian

Ministers, risked their own lives by sheltering thousands of Jews and other refugees. The remarkable behavior of this small mountain village, where regular individuals stayed true to their beliefs and risked everything to help others, has been frequently studied and cited as a rare example of collective faith and courage in the face of terrible evil.

The local clergy helped Walter enroll in the town's high school, the College Cevenol, which he attended for several months. His stay in Le Chambon was often interrupted by police raids, during which local families hid him in the surrounding countryside. In December 1942, he obtained false identity documents and with a group of 11 others set out to reach Spain. After a 28-hour hike over the Pyrenees and then hitching rides on freight trains, he and only one other companion ended up in Valencia, Spain, where they were imprisoned for six weeks. With the help of the British consulate, he was freed from prison and made his way to England, where he joined the Free French Forces in London in March 1943. After basic training, in December he was shipped to Africa to join the 501st Régiment de Chars de Combat of the 2nd Division Blindée (Division Leclerc), known in English as the French Second Armored Division.

In March 1944, his division was transferred back to England, where they were incorporated into General George Patton's Third Army. They landed in Normandy on August 1, 1944, and were in combat for most of the next nine months. Their accomplishments included the liberation of Strasbourg and, most famously, the liberation of Paris. Walter was decorated with the Croix de Guerre for action in combat, and his unit was honored by the United States Government with a Presidential Unit Citation.

After demobilization, Walter returned to the College Cevenol on a full scholarship to obtain his first and second Baccalaureate. He became a French citizen in February 1947 and then continued his higher education in Paris.

After an American friend casually asked if he would consider studying in the United States, he applied for and received a reverse Fulbright scholarship in the fall of 1949 to attend the University of Rhode Island, where he earned a B.S. degree in electrical engineering. He then went to Stanford University in the fall of 1951, earning an M.S. in electrical engineering.

Soon after graduation, he joined SRI, where he stayed for 40 years until his retirement in July 1992. His significant contributions to clients of SRI, including the Department of Defense and Intelligence Agencies, made him virtually indispensable to many top-secret projects and facilitated his

gaining U.S. citizenship in 1959. His work took him around the world, including long postings in the South Pacific, where he helped "observe" both U.S. and French nuclear testing.

Walter was married in February 1956 and had two children by his first wife. He remarried in 1968 to Diana Jaye, with whom he has enjoyed a long and close marriage.



The SRI Alumni Association welcomes new members:

Dennis Bechis
 Gary Bridges
 Howard Cohn
 John Larribeau
 Akiko Lipton
 Harry Pettis
 Walter Sedriks
 Dorothy Sloma
 Antonia (Toni) Tena
 Peter van Veen

We look forward to your participation in the Alumni Association and hope to see you at our next group event.



Happy Holidays!

Directory Addendum

The enclosed directory addendum (covering the period August 1, 2015, to November 30, 2015) contains new members and corrections. Please add it to your 2015 Directory.

Harvey Dixon



If you need to unplug your sink, you hire a plumber. If you need to tackle poverty and education, you work with a social scientist and a legislator. If you have a unique idea and are seeking funding, you go to a venture capitalist. Well, in

our case all we need to do is go to Harvey Dixon because he has done it all. Who else that you know has served as Vice President of Engineering, Operations, Finance; run a medical diagnostics company; served as Executive Director for Urban and Social Systems in the post-Lyndon Johnson Great Society era; and was one of the first to participate in optimization studies for complex logistics systems? Flexibility, adaptability, determination, and will are apt descriptors for Harvey.

Born in 1927 on a farm near Lawrenceburg, Tennessee, Harvey grew up in a family of ten. His father was a blacksmith and ran a wagon-building business in the small town of Westpoint. Westpoint had no electric power until Harvey reached the fourth grade. Up to then he studied with a kerosene lamp.

Harvey would always help out with the family chores and recalls developing a talent to be able to grind corn with the family gristmill to exactly the proper coarseness that the farmers liked to use as “mash” in their stills for making moonshine. He went on to complete high school and lettered in both basketball and football. He was the Class President and Valedictorian at his high school graduation in April 1945.

Because World War II was still raging and all the boys were being drafted to serve, Harvey tested to become a pilot with the Army Air Corps and the Navy. However, the war ended and the training programs were shut down, so he decided to attend Coyle Electrical School, a trade school to learn basic electronics, so he could pass the Electronic Technician test offered by the Navy. He did join the Navy and was assigned to Moffett Field as an Aviation Electronics Technician. He spent the balance of his enlistment repairing radio transmitters and receivers on top of Hangar One (the one with the skin now removed) and the high-frequency transmitters mounted just off of Moffett Boulevard. He completed his service and enrolled at Stanford University in 1949.

After graduating from Stanford with B.S. and M.S. degrees in industrial engineering, Harvey started his career with Sylvania Electric Products and then moved to SRI in 1954. In 1956, he was selected to be project leader for a U.S. Air Force study to assess how a new heavy transport aircraft could be used most effectively. The project was focused on calculating the number of aircraft, route, and total time required to deploy an Army battalion of troops with full gear to any location. Harvey, supported by a team of mathematicians, statisticians, and software programmers, wrote a series of seven separate programs that combined to produce the first computer-based simulation of a logistics air transportation system in the United States. This groundbreaking work modernized the task of logistics planning for the U.S. military.

During his time at SRI, Harvey worked on a number of other interesting and often groundbreaking projects, including a series of studies with the Office of Civil Defense and Mobilization to assess when the rail transportation system could be reconstituted after a nuclear attack. His breakthrough research and analysis of the fallout radiation hazard led to a change in national policy.

Following the rash of laws passed by Congress during the 1960s to support the Great Society programs of President Johnson, SRI formed a new Urban and Social Systems Division (now SRI Education). Harvey was named the division's first Executive Director. His leadership and drive in working on major problems resulted in the largest social science research organization in the United States.

After serving for seven years as Vice President, Finance and Administration, at SRI, Harvey moved to Palmer Partners, a venture capital firm based in Boston, Massachusetts. It is unusual to join a venture firm late in life, but Harvey often played tennis with John Shane, who started the firm, and was asked to join based on his experience, extensive network, and ability to evaluate technology and people quickly. He successfully concluded his career after opening a West Coast office on Sand Hill Road, evaluating proposals and periodically serving as CEO for start-up companies.

Harvey met his wife, Beverly, at a USO function in San Jose. They were married in 1950 and were together until 2014, when she passed away. They have four children and ten grandchildren.

Harvey continues to support volunteer work with Habitat for Humanity, plays golf, and also plans to join the bowling

league and bridge club after he gets settled at his new location at The Forum. He was injured earlier this year in a traffic accident but expects to be able to rotate his shoulders and be back on the golf course soon. Harvey is definitely following his own advice: “Enjoy today and live for tomorrow.”

This article is adapted from an article by Ron Nakamoto in the July 2015 issue of Trail Tips, the newsletter of Sons in Retirement, Mission Trail Branch 35, Los Altos.



CREDIT UNION NEWS

A winter-themed advertisement for SRI Federal Credit Union. The background is a dark blue night sky with white stars and snowflakes. In the foreground, there's a red vintage-style car with a green Christmas tree on its roof rack. To the right of the car is a small white house with a chimney and a tree. The SRI Federal Credit Union logo is in the upper right. The text "WRAP UP A NEW CAR" is written in large, bold, gold and white letters. Below the car, there's a red banner with white text: "1.99% APR – NEW OR USED – 72 MONTHS".

1.99% APR – NEW OR USED – 72 MONTHS

Gloria Alldredge*

Gloria Alldredge, a former SRI staff member, died September 14, 2015, after a short illness. Her SRI career began in 1978 and included a focus on specialty chemicals. She retired in 2001 as an Administrative Assistant in the Chemical Marketing Research Center, Process Industries Division.

Gloria is survived by her daughter Meryl, her son Don, and their families.

James Gaddie*

James Gaddie, a former SRI engineering staff member, died in Los Altos on July 1, 2015, after a long illness, at age 78.

Jim (many of his coworkers called him Pete) was an avid fan of amateur radio and built nearly all of his own equipment and antennas. He was hired in 1973 and devoted his career at SRI to radio in one way or another. Jim was a member of SRI's Communications Laboratory for many years and worked on a variety of radio experiments, including many overseas assignments. He also led a project on quieting the electric noise in cars. Later, he transferred to the Remote Measurements Laboratory, where he worked on SRI's over-the-horizon radar project and helped rebuild SRI's Wide-Aperture Research Facility (WARF) transmitter site in Lost Hills, California. During the 1980s, he did some design work and supported operations at the Los Banos, California, WARF receiver site for a successful project that explored the use of large receiving-antenna apertures. He also set up and operated high-frequency (HF) equipment at remote field sites. Jim Barnum recalls that "Pete" was "a genius at circuit design and experimentation and a true engineer from the word go." Don Nielson recalls that he "would do whatever was necessary to get the job done and be congenial, conscientious, and professional about it."

Jim is survived by his wife, Barbara; brothers Donnie, Dale, and Bruce; sister Rosemary; and sister-in-law Vicki.

Based on an obituary written by Jeanie Graham.

Marion Hill*

Marion Hill, a former SRI chemist and chemistry manager, died in Portland, Oregon, on August 2, 2015, at age 95.

Born in Pawnee, Oklahoma, Marion grew up in Oklahoma in the 1930s. During World War II, he was a decorated Army Air

Corps officer and was wounded in the Battle of the Bulge. After his convalescence back in the United States, he received a bachelor's degree in chemistry and a master's degree in organic chemistry, both from the University of Oregon.

In the 1950s at the Naval Ordnance Laboratory, Marion developed a key propellant plasticizer for Polaris missiles and changed the nature of undersea warfare, an achievement for which he received a Navy commendation and monetary award. He joined SRI in April 1960 in the propulsion group. At SRI, he founded the Chemistry Laboratory and was instrumental in the maturation of the Physical Sciences Division from the early sixties onward. The Chemistry Laboratory he created in 1965 grew to more than 100 scientists in five departments with \$60 million in revenue and multiple publications in synthesis, oxidation, and polymer and environmental chemistries over the next 19 years. Marion retired as Lab Director in 1984 but was immediately rehired and served SRI as a Senior Chemist until 2000.

Marion was that rare science manager at SRI without a Ph.D. However, he had keen instincts for chemistry that worked, as well as good management practices and excellent contacts within the Department of Defense and other government agencies. His legacy, besides the Chemistry Lab, includes a high-energy chemistry program directed by new Fellow Mark Petrie and a recent American Chemical Society award to another Chemistry Lab Fellow, Ripu Malhotra, for coal liquefaction studies initiated by Marion in the 1980s. He remained intellectually engaged to the end of his life, recently recalling a synthesis he devised 60 years earlier for a chemical we needed for current research.

Marion is survived by children Stephen, Tom, and Diane; 7 grandchildren; and 16 great-grandchildren.

Based on an obituary written by Ted Mill.

Maharu Himuro

Maharu Himuro, a former SRI staff member, died of cancer on November 12, 2015.

Maharu worked in the Japanese office for 34 years, starting with SRI in 1981. She helped build the Business Intelligence Program in Tokyo and continued on through its transitions to SRI Consulting and (currently) Strategic Business Insights (SBI). She worked as a researcher and also as a bridge between the U.S. and Japanese offices, using Telex as a tool for communication. She was the liaison with Japanese clients and coordinated their requests and inquiries. Her intelligence and flexibility helped clients find their real issues and communicate with experts.

Based on an obituary written by Kim Evans.

Abner Young Jones*

Abner Jones, a former SRI engineering staff member, died in Palo Alto on September 5, 2015, at age 88.

Born in Tulare, California, Abner was raised in Palo Alto and graduated from Palo Alto High School in 1944. His 30-year SRI career began in 1964. When he retired in 1994, he was an Engineering Assistant in the Materials and Chemical Engineering Lab in the Sciences and Technology Group.

Abner is survived by daughters Pamela and Marta; grandchildren Martha, Sanaye, Cecilia, and Donyel; great-grandchildren Cameron, Brittany, Tiffany, Roosevelt, Lazarus, and David; and great-great grandchildren Elijah, Kaleb, and Mikaela.

Ruth Lizak*



Ruth Lizak, a former SRI staff member and Alumni Association newsletter editor, died October 31, 2015, at age 84.

Born in Norristown, Pennsylvania, Ruth attended Lansdowne High, Drexel University, and Temple University. She moved to Palo Alto

in the mid-1950s, and in 1956 she married her Palo Alto neighbor, Edward John Lizak, a native of Buffalo, New York. After their two children were born, they returned to

the East Coast and for a short time ran a small bakery in Clementon, New Jersey, but they soon came back to the Bay Area for good.

Ruth joined SRI in 1968, beginning a 27-year career, during which she rose to the Director level. Her specialty was the commercial application of NASA technologies, leading to memberships in the American Public Works Association and the Technology Transfer Association, and to a close relationship with the Golden Gate Transit District, which tested NASA-formulated anticorrosive paint on the Golden Gate Bridge. When she retired in 1995, Ruth was a Technology Consultant in the Automotive, Manufacturing, & Operations Management Center. After retirement, she served as editor of the newsletter of the just-formed Alumni Association from 1996 to 1999.

Ruth was a resident of Palo Alto and a member of the Menlo Park Presbyterian Church for more than 50 years. She was active in the Menlo Park Presbyterian Missions program and a member of the Chancel Choir. The welfare of Native Americans on reservations was a major concern of hers, and she sponsored a boy in Arizona for many years.

Ruth is survived by daughter Pamela, son Peter, granddaughters Nicole and Cambria, grandson Joshua, and great-granddaughters Reagan and Kennedy.

Edith Molton

Edith Molton, a former longtime SRI staff member, died of heart failure on November 20, 2015, at age 93.

Edith was born in Mainz, Germany. She and her mother immigrated to the United States in 1940, settling first in St. Louis, Missouri, and then in Los Angeles, where she worked as a secretary for the City of Los Angeles Department of Public Health. After she married Stephen Molton, another German immigrant, and had a son, the family moved to Palo Alto in 1955.

Edith started her 43-year SRI career in 1955. After an initial position as a secretary, she worked as a translator of World War II records and as Administrative Assistant to the Director of Security. When she retired in 1998, she was the Inquiry Specialist in the Marketing and Public Relations Department.

Edith is survived by her son, Lawrence; granddaughters Naomi and Marnina; four great-grandchildren; and niece Jenny.

William Porter



Bill Porter, a former SRI staff member, died October 14, 2015, in Kauai, Hawaii, at age 86.

Born and raised in Boulder, Colorado, Bill worked as a young cowboy during summers between school sessions. After serving in the Navy, he received a B.A. in mathematics from Adams State

College in Alamosa, Colorado; an M.S. in physics from Kansas State University; and an M.B.A. from the MIT Sloan School of Management.

After working on advanced electronics for several large companies and then founding and selling his own electronics company, Bill began working at SRI in 1974 as a Senior Industrial Economist. While at SRI, he worked extensively in Sweden for a number of companies, including Norden, Saab, and Asea AB. He also initiated and managed a large multiclient study on microelectronics in the 1980s. His SRI assignments took him to many Western European and Asian countries. He also consulted for Grupo Alfa in Mexico. When he left SRI in 1982, he was Director of Special Projects in the Industry Consulting Division. At this point, his name was on 14 patents covering a number of electronic devices and processes that are still in use today in a variety of fields.

After leaving SRI, Bill helped revolutionize the buying and selling of stocks by co-founding Trade*Plus, an electronic stock-trading service for brokers that processed the world's first online trade in 1983. In 1992, he founded a successor company, E*Trade, as an online brokerage, which had its own stock listed for trading in 1996. In 1997, Bill also co-founded the International Securities Exchange, the first all-electronic U.S. stock options exchange, dramatically improving the efficiency of the options market. Often called "the founder of online trading," Bill was the driver in the revolution in stock trading, recognizing the value of immediate online information and empowering the individual investor.

Bill and his wife, Joan, moved to Kauai in 2004, where they became well known for their philanthropic work on behalf of their community, benefiting organic farming, arts,

recreation, and community building on the island's North Shore. Their most ambitious project is Anaina Hou ("a new gathering place"), a recreational park in the Wai Koa Plantation, which they had purchased. The park features a 5-mile hiking trail, skate park, playground, nursery, café and gift shop, recycling center, bike rentals, farmers' market, and 18-hole miniature golf course. He also planted mahogany trees, resulting in what today is the largest mahogany plantation in the world. Other philanthropies include providing funding for a private, independent middle and high school and establishing a farm that grows organic local produce in hydroponic greenhouses.

Bill is survived by Joan, their four children from previous marriages, eleven grandchildren, and a great-grandchild.

William Rees*



William Rees, a former SRI staff member, died in Edmonds, Washington, on November 1, 2015, at age 93.

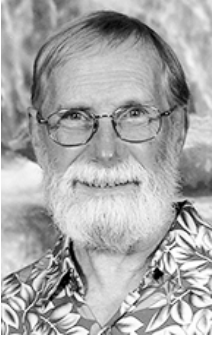
Born in Kansas City, Missouri, Bill graduated in 1942 with a B.A. from Rockhurst College in Kansas City and in 1946 with an M.D. from St. Louis University.

He served on active duty in the U.S. Army Medical Corps from 1946 to 1949 and remained in the Army Reserve until 1986, attaining the rank of Colonel. After returning to the United States from Army service in Japan, Bill received a Master of Public Health degree from the University of Minnesota in 1950.

Bill's SRI career began in 1965. When he left SRI in 1972, he was Assistant Director of Program Development in the Government Marketing Group in SRI-Washington. Over his entire 33-year career, he held many positions with opportunities and responsibilities in medicine, public health, dermatology, and pharmaceutical research. Bill traveled to 42 countries and lived in Japan, Austria, Germany, Switzerland, and several states.

Bill is survived by daughters Virginia, Diane, Carolyn, Karen, and Mary Noel and by 13 grandchildren.

Russell “Rick” Sperry



Rick Sperry, a former SRI engineering staff member, died July 28, 2015, at age 77.

Rick grew up and spent most of his life in the Bay Area. He graduated from Serra High School in San Mateo in 1955. He joined SRI in 1965 and was an Engineering Associate in the Advanced Development Division when he left in 1981. After leaving SRI, he

became a process engineer at Acuson in Mountain View, where he worked with a team that developed transducers for ultrasound machines. Rick enjoyed storytelling, dancing, fly-fishing, bowling, and travel; but family was always the most important thing in his life.

Rick is survived by his wife, Shirley; sister Sheryl; children Steve and Joi; grandchildren Justin, Jessica, and Brianna; and great-grandson Matthew.

Peter J. Valenti*



Pete Valenti, a former SRI financial manager and Chairman of the SRI Alumni Association Steering Committee, died of complications from pulmonary fibrosis and heart disease on October 13, 2015, at age 78.

Born in Kansas City, Missouri, Pete moved with his family to Redwood City as a young child. He attended

Bellarmino Preparatory School in San Jose and received a bachelor's degree in business administration from Menlo College in 1955.

In 1961, Pete joined SRI, where he spent more than 40 years working in various accounting positions and ultimately as SRI's Corporate Controller. Pete loved his job at SRI and was so proud of the work that SRI does. After retiring in 2004, he also served on the board of the SRI Federal Credit Union and on the Steering Committee of the Alumni Association, which he chaired in his last year.

Pete was a sports fan and, in particular, an avid 49ers fan. He was a 49er season ticket holder for more than 60 years and enjoyed meeting many of the players and coaches. He would offer game analysis to anyone who would listen. Pete also loved music, particularly the sounds of the big bands. He himself played saxophone and clarinet in a band during his high school and college years. Other interests included golf and home remodeling. He was particularly proud of his design and implementation of upgrades to his own home.

Pete is survived by his wife, Diane; sister Beverly and brother-in-law Gerry; niece Amy and her children, Lucas and Lyla; nephew Peter and his children, Andrew and Allison; stepdaughters Marisa, Julie, and Jana; and Jana's children, Dylan and Justin.

*Member of the SRI Alumni Association

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