December 2022 Newsletter

SRI International

Alumni Association

333 Ravenswood Avenue • M/S AC-108
Menlo Park, CA 94025-3493

Voicemail: 650-859-5100
Email: steering-committee-alumni@sri.com
Web page: https://alumni.sri.com

MESSAGE FROM ARCHIVES CHAIRMAN DON NIELSON

Don Nielson

Although our COVID world still lingers around us and we still need to act responsibly, there is a sense of freedom, and that was realized in our recent annual Alumni Reunion, with a great turnout. For each reunion, we try to have someone give the alumni a picture of where the Institute stands and an example of an exciting new field of work. We succeeded in both areas this year, and in particular gave the attendees a chance to meet SRI's new leader. In retrospect, I wish we could have had Zoom access to enable even more alumni to participate, and we will endeavor to arrange that next year. You'll find a brief account of the reunion here, with some of Gary Bridges' quality photos.

Part of the reunion is our Alumni Hall of Fame Awards, and this year we had two deserving associates. Their contributions are shown. But it was with great sorrow that we heard that Sally Longyear, who for 30 years attended to our well-being and was loved by a huge segment of the Menlo staff, unexpectedly died before she could receive her award.

You'll next find in this newsletter the usual glimpse into current SRI work, this time a 5G network security project, and a brief update about progress on the huge campus redevelopment poised to begin next year.

The History Corner is intended to ease you back into a setting that might feel familiar or even surprise you. Most of you more mature folks will remember SRI's Long Range Planning Service (LRPS) that began in early 1960 and lasted well over three decades as a vehicle to make its corporate clients aware of what was coming and how to prepare for it. Before its first decade was out, LRPS had over 400 clients in this country and abroad. We're pleased to have Bob Simon of LRPS take us back into his very successful adventure in film-making. The film was based on interviews of some emerging Stanford students, and you'll love the play the film got and the notables who saw it. I might add of those interviewed, I knew four and two of them wound up at SRI!

In the surprise column of our history, you'll see how a "normal" SRI project was so well done, so prescient, that its recently rediscovered 1968–69 publication is making a huge impact in the climate change world.

Thank you, David Gibby, for keeping us up to date and entertained by our UK alumni members' outings, even letting us join in on your cheery luncheon. You are most appreciated.

Finally, we are seeking your accounts of what and how you are doing. Your memories of SRI and how you are exploring your post-SRI world are all interesting. So, please share. Nominations for our Hall of Fame are always welcome, too.

Now, let's look forward to the holidays as we, perhaps for the first time in a long while, join with and embrace those we love!

Annual Reunion, October 6, 2022

The 2022 SRI Alumni Reunion was held on October 6 in the I Building. Attendance for the post-COVID world was good, with about 85 alumni present.

The program began with SRI's new CEO, David Parekh, telling the alumni about where SRI stands now and what the future holds. David has been in his position for only about nine months, but his enthusiasm for the Institute and what it can deliver was clearly evident. In fact, that enthusiasm was contagious to some because he later mentioned to the SRI staff in an All Hands Meeting that the feedback he received that evening from alumni was positive and reassuring despite lingering worries about the campus redevelopment. He spoke of the alums as part of the SRI family.

David reviewed some of the prominent existing programs and the promise they hold, including partnerships in education and bioscience, the winning of intellectual property lawsuits in computer security, and helping build the road map for exploiting the implementation of quantum science. As to strategy, there are a derived, ongoing set of core competencies that SRI will invest in that match opportunities identified in the various SRI divisions. Those divisions, by the way, are now spread over six major locations around the United States. Besides Menlo Park, they are in Ann Arbor, Boulder, Princeton, Shenandoah Valley, and Washington, DC. Perhaps for the first time, a majority of SRI's staff reside outside Menlo Park. David said the redevelopment of the Menlo campus is still on schedule, with the completion of workplace consolidation in 2024.

The attendees also heard about the details of SynFini™ from its leader, Peter Madrid. SynFini is a new, innovative approach to the chemistry of drug discovery. Today, the introduction of a new drug typically takes 10 years and about $1.4 billion. That development cycle is clearly an important target for innovation. SynFini is directed at that portion of the cycle dealing with the early identification, synthesis, and optimization of candidate drug molecules. This portion lies just ahead of preclinical trials and comprises about 23 percent of overall development cost. It is here where SynFini promises to save both time and money. It uses its own systematic, cyclical closed loop of design-make-test-analyze for each trial molecule. The approach relies on both AI and automation.

Two Alumni Hall of Fame inductees were to have been honored at the reunion (see their citations in this issue). Takao Kobayashi was present and graciously accepted his award. Tragically, however, Sally Longyear unexpectedly died shortly before the ceremony. We missed her effervescent personality.

Through the efforts of a lot of your Steering Committee members, plus tasty food and the chocolate fountain, the whole affair was a success. We'd like to acknowledge and thank chairman Dave Harvey, who with Don Shockey greeted everyone; Linda Jansen for name tags and the list of attendees; Linda Hawke-Gerrans for the Hall of Fame poster and certificates; Gary Bridges and Roy Kornbluh for the photo montage memorial honoring Sally Longyear; Gary Bridges for event photography; Augustina Biosic for compiling the invitations and prizes; JD Smith for the monetary duties; the SRI Credit Union for their generous support; and Don Nielson who served as master of ceremonies. Thanks also go to Arturo Franco and his SRI Conference Services staff who provided a pleasant event space with great food and beverages.











SRI Inter






nternational

2022 SRI Alumni Hall of Fame Recipients

Two former SRI staff members, Takao Kobayashi and Sally Longyear, were inducted into the SRI Alumni Hall of Fame at this year's reunion. They received this honor in recognition of their exceptional contributions to the success of SRI. Their complete citations are included here.

Takao Kobayashi

In his career at SRI, Dr. Takao Kobayashi has set a new standard in the ability to analyze a wide range of material fractures. His contribution, called FRASTA, is being used by engineers and scientists in the United States and around the world to solve fracture problems and make the world safer.

By elevating failure investigations from qualitative analyses of a single fracture surface to quantitative analyses of both failure surfaces, FRASTA enables a heretofore unobtainable playback of a failure event, which leads to an understanding not just of a failure's root cause, but also of how to prevent a future failure. Takao and his SRI colleagues have applied FRASTA to understand failure of many materials and under a wide range of loading conditions, from explosive events where fracture occurs in milliseconds to aging structures that fail slowly over decades. They have also applied FRASTA to assist development of 3D-printed materials for use in fracture-critical situations.

Because of his innovations in fracture science and their ongoing worldwide use, Takao has been inducted into the SRI Hall of Fame.

Sally Longyear

Sally is a board-certified ergonomist who has more than 36 years of experience helping SRI implement world-class ergonomics processes. The depth and breadth of her ergonomics expertise are second to none. Sally has developed proven solutions for every type of industry and every workplace setting at SRI. Her methods and tools are based on the latest research and industrial standards that are compliant with global and regional regulations, which has resulted in a consistent and accurate way of measuring and addressing musculoskeletal disorder risks across all of SRI.

Sally developed the Ergonomics and Wellness program from the ground up. With her infectious smile and devotion to helping others, Sally established a legacy of striving to keep SRI employees healthy and pain free for a lifetime.

Note: the Alumni Association sadly learned of Sally's death just prior to the reunion. *Please see page 17 for her obituary.*

SRI Leads Groundbreaking Projects to Address Security Concerns About 5G Networks

The National Science Foundation (NSF) has awarded SRI two grants of $750,000 each to spearhead projects to address security threats associated with 5G technologies. The grants are being issued under the auspices of NSF's Convergence Accelerator (CA) program. SRI is the only prime organization of the 16 program awardees that received two separate awards: One project is to enhance the security of core 5G infrastructure, and the other is to allow secure operation of existing 5G networks.

Adoption of 5G is accelerating, and 5G networks are becoming key components of modern communication systems and essential to national security. Yet, as noted in an *IEEE Spectrum* article, 5G networks are "worryingly hackable." Thus, this work is critical and requires organizations with the right intellectual property and experience to deliver secure networking solutions. "SRI knows networking and security, with more than 50 years' experience in these areas," said Patrick Lincoln, vice president of information and computing sciences (ICS) and director of the computer science lab at SRI.

In the CA work, SRI will make the core 5G infrastructure more secure to enable military, government, and critical infrastructure operators to operate through public 5G networks while meeting security and resilience requirements. SRI will leverage its cybersecurity and networking knowledge, intellectual property, and spinout companies AccuKnox and Confidencial to meet the project goals.

- In the first CA project, SRI will extend mobile infrastructures with services that will enable 5G network operators to see attacks. This project, in which AccuKnox and Ohio State University are subcontractors, will also address a new class of 5G attack surfaces that will arise during future 5G implementations.

- For the second CA project, SRI will lead an effort to provide easily integratable software overlays to ensure 5G security. Subcontractors include SRI spinout Confidencial, which provides privacy-enhancing technologies to secure sensitive information within existing business applications; Good Research, which provides expertise in user experience research, privacy engineering, and data protection; and the University of San Diego's Center for Digital Civil Society, which is working to establish a new type of relationship with data in partnership with the public, industry, and academia that better reflects core values such as accountability, legibility, and resilience.

"The fact that SRI and two of our spinout companies have been chosen to participate in two NSF Convergence Accelerator projects highlights the uniqueness of SRI's cybersecurity and networking intellectual property and knowledge, our track record of innovation and results, our work with our spinouts to extend our innovations into commercial solutions, and our unrivaled government experience," said Todd Stavish, vice president of SRI Ventures.

NSF's Convergence Accelerator (CA) Program

The CA program addresses national societal challenges that can be solved only by "convergence research"—that is, the merging of innovative ideas, approaches, and technologies from a wide, diverse range of sectors and expertise.

Program research proceeds through two phases: Phase 1 is team convergence and proof of concept, and phase 2 is prototyping and sustainability planning. The CA program releases a solicitation featuring research track topics, or focus areas, each year. Funded teams within the tracks make up a cohort. All teams within a cohort begin in phase 1.

The grants awarded to SRI this year are under the CA program for phase 1 of Track G : Securely Operating Through 5G Infrastructure.

More information is available at the following NSF websites:

Overview: https://beta.nsf.gov/funding/initiatives/convergence-accelerator

List of cohorts and tracks: https://beta.nsf.gov/funding/initiatives/convergence-accelerator/portfolio

Sources:

SRI Press Release, September 20, 2022, https://www.sri.com/press/press-release/sri-international-spearheads-two-groundbreaking-efforts-to-secure-5g/

Gent, E. 5G Networks are worryingly hackable. *IEEE Spectrum*. Accessed November 18, 2022, at https://spectrum.ieee.org/5g-virtualization-increased-hackability

Update on the SRI Redevelopment Plan

By Don Nielson

On Tuesday, November 15, SRI CEO David Parekh gave an hour-plus presentation to SRI staff on where the redevelopment plan sits. He also asked the leaders of the divisions to briefly state their position and intentions. It was all very informative, and I'll pass along and few of the highlights.

David first recalled the justification for the redevelopment by bringing to life the value of the land SRI holds. As one who "sat" on that land totally preoccupied with keeping myself and my world in a contributing vein, I truly never saw the value of the "back lot." For an institution struggling for discretionary income, that space was and is a gold mine. So, doing something to monetize the unused land is a no-brainer, particularly as the Institute has seen its staff in Menlo Park shrink. Add to that the hybridization of the workplace, exposed and invoked by the pandemic, and the need for on-site space has only decreased.

The redevelopment plan is proceeding, with division-prescribed modifications of Buildings P, S, and T beginning early next year. These modifications will enable staff consolidation into them to be completed by mid-2024. At that time, the rest of the campus will undergo demolition and rebuilding over the next two to three years, reaching a total floor size about equal to SRI at present. It will be a hectic time no doubt, and working from home will surely have a lot of allure, unless you are a closet sidewalk superintendent. The consolidation will have its costs, but SRI's share of the income from the completed project will recover them in a relatively few years. In the meantime, the consolidation will save SRI a goodly sum in avoiding maintenance of unused space.

One of the important features of David's presentation was a further description of SRI's presence beyond the three current buildings. Earlier versions of the layout showed SRI headquarters as part of one of the new buildings located interior to the complex. Now more detail has emerged. SRI's central offices will be in a tailored, modern space, designed with conference facilities, dining space, and room to display some of its notable heritage. Adjacent space will also be devoted to a couple of the divisions. The goal for the new space is to have an imposing presence on the property and enable growth. An effort to retain the I Building was investigated for a time but was abandoned both because of the cost of adding stand-alone utilities and its interfering with new construction. The new office buildings will be designed for research use and hopefully lean toward housing entities with which SRI could partner.

An SRI Documentary Film from 1969: *Voices of Tomorrow*

By Robert W. Simon

"Bob, make me a movie."

Doug Hurd, a program manager in the Long Range Planning Service (LRPS), had walked into my office early in 1969. My responsibilities then were in Client Relations for LRPS, and I had never made a movie. But Doug, I just knew, had come to the right place. He was looking many months ahead, to the annual LRPS client conference, and wanted something new to add variety to the legion of talking heads that traditionally comprised our conference. I had been a disc jockey in high school, enjoyed writing and reciting light verse, and had helped prior conference speakers liven up their presentations. I knew I had the ability to pull this off.

My charter would be, in effect, wide open: a 30-minute film on any subject covered in one of the numerous and varied research reports sent each year to the LRPS client base (more than 300 companies worldwide). As it happened, in October of 1968 we had issued a report entitled "The Postwar Generation in the U.S." It focused to a significant degree on the attitudes of college students toward the roles their careers would play in relation to the rest of their lives—and those attitudes (amid the demonstrations against the Viet Nam war) were clearly in flux.

Why not a movie in which an unscientific cross-section of students harboring these new career aspirations would reveal their feelings to an audience of corporate long-range planners and other executives who were about to work alongside new hires with strikingly new goals and expectations? Such a film could be shot at Stanford, just down the road, with me interviewing students who had come from near and far and from many walks of life. And that's just the way it worked.

With the help of interested deans and advisors, 20 students were identified who would have things to say about the subject of the film. Both undergraduate and grad students participated, and four hours of footage was compressed into the final half-hour "answer print," as we movie folk like to say. Not surprisingly, one of our subjects was the editor of the *Stanford Daily*, Phil Taubman, whose comments—as it turned out—formed a kind of natural centerpiece of the film as they captured much of what the other interviewees said and spanned several fields.

Still image from Voices of Tomorrow *of the author talking with Margaid Vivian Ellis, a Stanford Graduate School of Business student from Chappaqua, New York.*

When the great day came, and the film was premiered at the LRPS client conference, the viewers of *Voices of Tomorrow* were intrigued by what was said by the interviewed students. Some of the comments clearly showed that the students were out of touch with what was already happening in the business community; these words brought chuckles from the audience. Many other remarks were novel to the film's viewers. Together, the thoughts expressed had management training implications (see sidebar).

The attendees showed immediate interest in either purchasing a print or renting one to show the folks back home. One Fortune 500 company bought 20 prints, another bought 7, and the pace of rentals was equally gratifying. Some 100 screenings were held across the country at which I introduced the film and then fielded questions about it. Its largest showing (at which I was present) was at The Greenbriar resort, where 450 attendees at the National Freight Traffic Association convention watched it.

Some of its smaller audiences were especially interesting. I was present when John D. Rockefeller III saw it (along with Howard Taubman, Phil's father and critic at large for the *New York Times*). Bill Hewlett also got a private audience—and then asked to be allowed to quote from the film in an upcoming speech (permission granted). Robert McNamara saw the film one evening at SRI, at an event hosted by Arjay Miller. Afterward, McNamara told me they should have a film "like that one" about the World Bank.

Charlie Anderson was president of SRI when *Voices of Tomorrow* was made. He observed that prints of typical

corporate film projects too often gather dust once the project is completed. I think it fair to say that this was not the fate of *Voices of Tomorrow*. In fact, it lives on in a book entitled *Bill's and Dave's Memos*, in which some of Hewlett's and Packard's speeches are also published—including the one in which a student in the film is quoted.

It's true, I'd never made a film before *Voices of Tomorrow*, but it was not the last. A decade after it was such a popular management training device, LRPS produced a sequel, *Voices of Change*, in which some students from the first film were revisited and current students' views were added, all in an effort to see the extent of changes in attitudes in the interval. In hindsight, it might be said that LRPS should not have asked me to moonlight on *Voices of Change* (I had changed employers by then). There were not the kinds of surprises found in the first film, and none of the interviewees expressed a wish or observation that was very much different from what was in that film. In fact, one viewer asked me during a Q&A following a screening of *Voices of Change*, "Bob, were you bored?" (Sorry, my answer is classified.) I suspect *Voices of Change* became one of those projects that is gathering dust.

I hope SRI shows *Voices of Tomorrow* again to an appropriate audience. It was a pioneering effort and, I like to think, a successful one.

What the "Voices" Said

Here are some quotations from the film:

"I think what our generation is basically trying to say, just by its existence, is that we have a universal outlook, more so than any other generation in the past."

"The incentive particularly espoused by members of my generation more than any other is that work and fun and growth should go hand in hand, and where work is not viewed as drudgery but where it is viewed as fun."

"Perhaps the most outstanding characteristic of the upcoming generation of students is that they think beyond themselves."

"Right now, education is something that we live and breathe. And you sort of hope that your job will become that, too. And I think that can be, when both the individual and the company he's working for realize that he has many sides to himself. I guess what I'm saying is that I'd like to, you know, have the company design a job around me."

"…there are going to come periods when I will feel that I need some renewal. I'll need to get away from a job…to shift into another context which employs qualities in myself. And this means to me being able to switch from, say, private business to a public service organization…to learn new things there and to make the associations."

"I think one of the things corporations are going to have to do is to allow young people more freedom, more responsibility to act. One of the things that many young people want to do today is exercise some creative and imaginative thinking."

"Not only responsibility immediately, but a chance to be able to at least affect company policies and attitudes towards the current social problems. This is probably the most important problem business has to face today—the changing attitudes on social problems of the undergraduate."

"…the kind of job I would love would be something that I refer to as sort of a vice president for urban affairs."

"…the top priority I would have is a sense that these companies are interested in listening to what I would have to say, and implementing some of my ideas."

An Early Assessment of Atmospheric Constituents and a Climate Change Warning

By Don Nielson

For over 75 years, SRI has been a wellspring of insights and innovations. You might say that because it has been a research institute for that long, you would naturally expect a lot of firsts, particularly in light of the broad interests stemming from the individual freedom SRI researchers enjoyed. But that breadth, in a cloistered research environment, also means it's easy to be surprised by what unfolds and where its impacts lie, even if you work there.

Most of SRI's impacts go unheralded. But what I've observed on a number of occasions is that SRI will receive an inquiry from someone, somewhere whose investigations into the history of a field of work leads them to SRI. I've seen that from writers of the history of lidars, corporate strategic planning, Disneyland, solar energy, personal computing, and others I've forgotten.

This story is about a current inquiry from Beth Gardiner, a journalist writing a book about the petrochemical and plastic industries, with some attention to early studies of climate change. In her first inquiry to us back in January 2021, she mentioned she had unearthed some "very early and prescient research on CO2 [carbon dioxide] and climate change back in the late 1960s" by two SRI authors, Robert Robbins and Elmer Robinson (R&R). We have been helping Ms. Gardiner find what she needed and thought you might like to know more about what led her here. Just another SRI project? Let's see.

Back in 1968 and 1969, R&R had a project with the American Petroleum Institute to look into the sources, abundance, and fate of gaseous atmospheric pollutants. (This reminds me of how two decades earlier the Western Oil and Gas Association funded SRI to analyze pollutants in the Los Angeles Basin, where "smog" got defined.) R&R submitted two reports, a main one in 1968 and a supplement in 1969 that I'll draw on, plus a short article summarizing their work in a 1968 issue of the *SRI Journal*. It has the catchy title, "Where Does It All Go?"

In the 1968 effort, R&R set out to determine the state of knowledge about the sources and sinks (they called them scavengers) for six or so compounds of sulfur, nitrogen, and hydrocarbons, plus carbon monoxide and dioxide. Fittingly, their approach included both natural and man-made

R.C. Robbins and Elmer Robinson

constituents. While inventorying nature's role, they clearly acknowledged that man-made emissions could overtax natural removal processes. Admittedly, they were drawing on existing work, but the scope of their analysis was daunting: It was to be worldwide and quantitative! So, in addition to identified sources and sinks for a given compound, there are quantitative results denoting parts per million, tons of total emission, and life cycle durations.

Interestingly, because carbon dioxide was so prevalent in the natural atmosphere, many in the 1960s didn't consider it a pollutant. Even though this puzzled R&R, the phenomenon led them to conduct a more cursory examination of CO2 in their initial study. Still, they weren't shy about stating their opinion about the consequence of ignoring CO2, and that led to the supplemental report that concentrated heavily on it. Look closely at their early reservation.

> *Measured increases in CO2 in the atmosphere are about 0.06 ppm per month. If CO2 levels continue to rise at the present rates, it is likely that noticeable increases in temperature could occur. Changes in temperature on a world-wide scale could cause major changes in the earth's environment over the next several hundred years, including changes in the polar icecaps. It seems ironic that given this picture of the likely result of massive CO2 emissions, so little concern is given to [it] as an important air pollutant.*

So, the 1969 supplemental effort offered vastly more detail about carbon dioxide. It showed man-made sources a couple of orders of magnitude below natural sources but with the former increasing. R&R's earlier quoted 0.7 ppm yearly increase would lead to an average 370 ppm by the year 2000,

which was exactly what happened, substantiating their warning. Now back to our inquirer and the importance she lends to their work.

Ms. Gardiner has just written a short article for the *Yale Environment 360* online magazine that you need to read to get the significance of the SRI work (https://e360.yale.edu/features/climate-lawsuits-oil-industry-research). There, you will see how R&R's early and specific warning, one not heeded by the industry that paid for it, has become the basis for numerous lawsuits by those seeking reparations for climate change impacts. References to the consequences of the R&R work also appeared in *The Guardian* back in 2016.

A little more searching shows that others, principally those chastising the petroleum industry for its history of avoidance and disinformation, have also pointed to the R&R work (https://insideclimatenews.org/news/13042016/climate-change-global-warming-oil-industry-radar-1960s-exxon-api-co2-fossil-fuels/).

So, just another SRI project well done. Though the Gardiner article portrays the reports as "buried for millennia," the API actually requested 400 copies from SRI. That in itself was both an affirmation of the quality and significance of R&R's research.

Halloween Meet at the V&A

By David Gibby

On Sunday, October 30, most of the UK alumni met for a visit to the Victoria and Albert (V&A) Museum in Kensington, London, followed by lunch at an Italian restaurant. Everyone had remembered to put their clocks back an hour during the night, so we all arrived on time!

The V&A (https://www.vam.ac.uk/) is the world's largest museum of applied arts, decorative arts, and design. It houses a collection of more than two million objects—ceramics, glass, textiles, costumes, silver, ironwork, jewelry, furniture, sculpture, prints and printmaking, drawings, and photographs—among the largest and most comprehensive in the world.

The V&A was founded in 1852 and named after Queen Victoria and her consort, Prince Albert. In addition to the free "permanent" exhibitions and displays, there are usually a number of temporary exhibitions; currently, these include Africa Fashion; Hallyu! The Korean Wave (the popular culture of South Korea); Beatrix Potter: Drawn to Nature; and Fashioning Masculinities: The Art of Menswear.

We particularly enjoyed the Africa Fashion exhibition (https://www.vam.ac.uk/exhibitions/africa-fashion). It featured clothes by designers from places as far apart as Nigeria, the Congo, and Zanzibar and described materials the designers used, as well as the techniques applied to create the various colored dyes and patterns.

One of the most flamboyant items was the suit and cloak the Nigerian musician and fashion icon Burna Boy wore to the 2020 Grammy Awards ceremony in Los Angeles.

A whole series of brilliant photographs of his outfit are in this article https://www.bellanaija.com/2020/02/burna-boy-grammys-award/.

After meeting up again after our tours of the exhibits, we walked to PappaRoma, an Italian restaurant not far away. We had originally booked a return to Apero, the restaurant we went to for our last reunion lunch, but they had canceled our reservation with only two days' notice, and many other restaurants were fully booked because it was school half-term holiday, as well as the day before Halloween. We were fortunate to find a restaurant that was prepared to accommodate 11 persons at such short notice. We enjoyed a good lunch there, reminiscing about old times and discussing current events.

From left to right: Andy and Sonia Shaw, Nick and Gillian Collin, Gia Campari, Maurizio Petitbon, Anne Saunders, Peter Weisshuhn, David Gibby, Bob Morgen, and Jeanette Gibby.

WELCOME

The SRI Alumni Association welcomes new members:

John Chung
Hal Huntley
Ann Johnston
Clay Ross
Janice Schindler-Horvat
Jacob Skinner
Tim Waltz

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

Directory Addendum Status

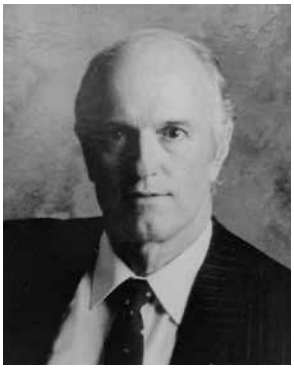
The Directory Update will no longer be published three times a year starting this month. Alumni members who have changes to their contact information should continue to submit changes throughout the year. New Alumni Association members will still be listed in the April, August, and December newsletters; if you would like to have their contact info, please email your request to steering-committee-alumni@sri.com. A complete updated Membership Directory will be published only once per year, in January.

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.

CREDIT UNION NEWS

Robert Emmet Finnigan



Robert "Bob" Finnigan died peacefully at his home in Los Altos, California, on August 14, 2022, at age 95.

Bob was born in Buffalo, New York, on May 27, 1927. He graduated from the US Naval Academy in 1949 and spent the next 10 years as an officer in the US Air Force, achieving the rank of captain. While in the Air Force, he earned his MS and PhD degrees in electrical engineering from the University of Illinois Urbana-Champaign. He taught graduate courses in electrical engineering at the Air Force Institute of Technology in Dayton, Ohio, and worked as a senior scientist at the University of California Lawrence Radiation Laboratory (LRL) in Livermore, California. He left the Air Force in 1959, remaining at LRL for two years designing and building control and instrumentation systems for advanced nuclear reactors.

Bob then took a position as a senior research engineer at SRI, where he was introduced to a recently invented analytical instrument, the quadrupole mass spectrometer. In 1967, Bob cofounded the Finnigan Corporation to realize the potential of this technology, sending his career in a new and rewarding direction.

Finnigan Corporation commercialized the quadrupole mass spectrometer, coupled with a gas chromatograph and controlled by a dedicated computer (the gas chromatograph/mass spectrometer, GC/MS). This sophisticated device enabled components of complex mixtures to be quickly separated and definitively identified. Largely due to the work of Finnigan Corporation, GC/MS became the standard method of analysis for environmental pollutants throughout the world, as well as the gold standard for analysis in many other important applications, including toxicology, biomedical research, biopharmaceutical research, and drug testing.

Bob was deeply curious about subjects that interested him and had an intense interest in people. When evaluating potential markets, he would travel widely, meeting with industry and government leaders, scientists, and technicians to understand the problems they were trying to solve, their concerns, and the challenges they faced. He included them in defining products that would meet their needs. In the process, Bob became a beloved figure in the world of analytical chemistry.

In addition to his work at Finnigan Corporation, Bob was a leading spokesperson on the environment. He cofounded, and for several years led, the Environmental & Occupational Health effort of the American Electronics Association (AEA), which pioneered the movement toward environmental responsibility among US industrial companies. He testified for the AEA and electronics industry before US House and Senate committees dealing with the environment and international trade, helping to pass key environmental legislation. He also led efforts to get worldwide acceptance of US pollution measurement practices. Bob cofounded the US National Working Group on Pollution of the Organisation Internationale de Metrologie Légale, and he served as its chairman from 1982 to 1988. This group helped gain worldwide acceptance of US pollution measurement practices.

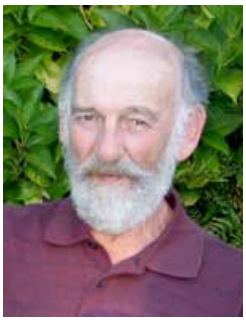
Bob received many honors for his achievements. In 1994, he was selected as a Pioneer in Development of Analytical Instrumentation by the Pittsburgh Conference on Analytical Chemistry (the premier national conference in this field) and the Pittsburgh Society for Analytical Chemistry. In 1999, he was one of 16 industry pioneers chosen as charter members of the Instrumentation Hall of Fame by the American Chemical Society. Bob was selected as a "Legend in Environmental Chemistry" by the Pittsburgh Conference and the American Chemical Society in 2009. He also received multiple alumni awards from the University of Illinois.

Bob was a loving husband to his wife of 72 years and a caring father to his seven children; he will be deeply missed by his family. One of Bob's favorite things in life was to share his love of nature and the outdoors with his wife and children. Memories of the Sierras, Santa Cruz, Mt. Diablo, and the redwoods are woven into all their stories and best moments together. Bob passed his passion for nature to his children and grandchildren. Their homes, vacations, and get-togethers all revolve around this appreciation of the outdoors and love of strenuous exercise. Bob was also a wine connoisseur with an extensive wine collection and a sensitive and educated palate. A voracious reader, Bob had a particular interest in history and biography. An avid handball and squash player, Bob also loved classical and jazz music.

Bob is survived by his wife, Bette; brother Paul; children, Charles, Patrick, Robert Jr., Joan, Shawn, Thomas, and Matthew; and 10 grandchildren and 6 great-grandchildren.

Based on an obituary published by the San Jose Mercury News/San Mateo County Times.

Alexander Florence*



Alexander "Alex" Florence died of a heart attack at the age of 94 on July 18, 2022.

Alex was born outside Carnoustie, Scotland, in 1928. He grew up playing soccer and was a passionate fan of European soccer for the rest of his life. Alex graduated with a degree in civil engineering and began his first job in a civil engineering firm in London. In London he also discovered that he loved opera, another lifelong passion. After a few years at the engineering firm, Alex found the work rather routine and even boring. He decided to go to graduate school at Stanford University in the Applied Mechanics Department. At Stanford Alex met his future wife, Judy, an accomplished engineer. He also met fellow graduate students George Abrahamson and Herb Lindberg. George graduated in 1959 and went to work in Poulter Laboratory at what was then Stanford Research Institute. In the early 1960s, George hired Alex and Herb to join him at SRI. This triumvirate became the backbone of Poulter Lab's Engineering Mechanics Department for several years.

Alex found his niche in Poulter Lab and was never bored at work again. He was a natural mathematical modeler who rarely relied on existing solutions. In most cases, he would start with a blank piece of paper and a pencil and develop an elegant model from first principles. In Poulter Lab he also learned experimental methods. With modeling and experimental tools, Alex was able to solve some of the most difficult problems involving the dynamic response of structures to explosive and impact loads.

Alex worked on numerous and varied projects while at SRI. He collaborated with Herb to study how structural elements (bars, plates, rings, and shells) buckle when subjected to short, intense loads. They wrote the seminal book on dynamic pulse buckling that is still used today. Alex also developed experimental methods for designing structures that would contain the fragments of a high-speed turbine should it fracture into pieces. He developed a method to use explosives underwater to simulate the effects of an underwater nuclear blast on a submarine. In another project, Alex designed and supervised small-scale experiments in the laboratory to develop methods for containing underground nuclear explosions conducted at the Nevada Test Site. He also performed small-scale experiments to determine how underground bunkers fail when subjected to explosive loads at ground level.

Alex was a mentor to many younger members of Poulter Lab, often in collaboration on a project that Alex supervised. But many a time someone working on a different project sought Alex's advice if they were stuck on an analytical problem or needed a new way to think about a problem. He always was willing to help. As one example, Jim Colton attributes a breakthrough in his thesis research to some discussions he had with Alex. Although Alex stopped working full-time in about 2000, he kept his finger in the work of the lab and helped others there until he died.

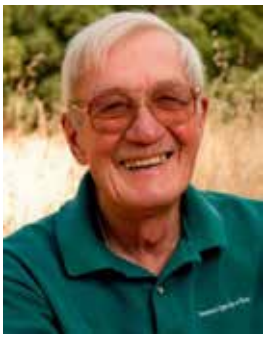
For many years Alex and Judy traveled abroad extensively. They especially enjoyed visiting India, Viet Nam, Argentina, Morocco, South Africa, and many countries in Europe. Alex played tennis regularly with Julius Roth, also an SRI employee. Alex took up golf, too, and played many rounds with Jim Gran; when Alex's eyesight started to fail, they still played together using Jim's eyes.

After Judy's death in 2010, Alex lived alone for the last 12 years of his life. He enjoyed watching European soccer matches and *Opera from the Met* on television. When he could no longer drive, he went on errands with two hired drivers who became good friends. He also enjoyed monthly lunches with Jim Colton, Jim Gran, and Mohsen Sanai, all colleagues from Poulter Lab.

Despite his difficulty seeing and hearing, Alex's mind remained sharp to the end, and he maintained a cheerful attitude. A lunch in his remembrance was organized by Mohsen in August of this year. About 20 of Alex's Poulter Lab friends attended.

This remembrance written by Jim Colton.

Edward Huber



Edward "Al" Huber died peacefully at home surrounded by family on June 23, 2022, after suffering a stroke. He was 92.

Al was born in Alton, Illinois, to Edward and Mary Huber on August 31, 1929. His many happy childhood memories included often playing with his brother, Ray, and cousins at the "Fensterman Farm" in Bunker Hill, Illinois (where his mother grew up). He graduated from Marquette High School in 1947 and joined the US Navy in

1948. After a year of training, he worked as an electronics technician and First Class Petty Officer on the USS *Steinaker* while traveling around the Mediterranean, Caribbean, and Europe until 1952. According to Al, joining the Navy was the smartest thing he ever did because it provided him with a college education, good career, and new perspective from his world travels.

Al met his future wife, Betty, on a double-date with his brother and Betty's best friend in 1952. Betty and Al were married on August 21, 1954. At the University of Illinois, he graduated with a BS in engineering in 1956 and a PhD in electrical engineering in 1960, completing his studies while he and Betty raised three young children in Champaign. The family moved to Palo Alto, California, in 1961 for his "first real job" as an engineer at GTE Labs. In 1962, he was hired by Sylvania and bought the family home on Los Palos Avenue, where their youngest daughter was born and where he lived for the rest of his life. After retiring early from Sylvania, Al worked part-time at SRI until retiring "for real" at age 62.

During his life, Al enjoyed many hobbies with family and friends, including camping and backpacking, running marathons, hiking, birdwatching, gardening, traveling, kayaking, and maintaining his home. He had an enduring love for nature and the outdoors, earning the nickname "Nature Guy." Al also devoted countless hours volunteering in his community with Habitat for Humanity, Peninsula Open Space Trust, St. Nicholas Church, and many other organizations.

His wife, Betty, and brother, Ray, preceded him in death. Al is survived by his four children, Teri Bundros, Cathy Walz, Greg Huber, and Jenny Huber, and by his 10 grandchildren, 6 great-grandchildren, and other extended family.

Based on an obituary published by the San Jose Mercury News.

Sally Alden Longyear*

Sally Longyear, who spent more than 36 years at SRI bringing fitness and ergonomic health to its staff, died in October 2022 from complications following a heart attack. She was 61.

Born to John and Mary Alden in Stanford, California, Sally was the oldest of three siblings. The young family relocated to Palos Verdes, California, where she was active in student government and volunteer roles. She returned north to attend Stanford University and earned a degree in human biology. There, Sally also met her future husband, Rick Longyear, and the pair settled in Redwood City, California, after graduation. Rick taught at Menlo-Atherton High School, and Sally eventually joined SRI.

At SRI Sally initially led SRI's fitness activities, helping create a wellness program and operating a staff fitness center in the basement of Building I. She went on to create and lead SRI's ergonomics program, endeavoring to bring staff members into comfortable and safe alignment with their workplaces. As such, she was one of few staff whose range was the entire Menlo Park campus, and if there was anyone who could light up a room with her presence, it was Sally. Many people at SRI fondly remember Sally's gentle, cheerful admonitions to stop slouching or properly adjust their monitors and chairs. If she saw that someone's workstation was not properly set up, she rearranged it so that it was. Sally also created the "Awaysis" on the Menlo Park campus, a refuge from the stress of a fast-paced work environment.

Although always in motion, Sally invariably took time to for a cheerful hello, whether you met her once or a hundred times. In short, she was a tireless, uplifting talent to all she served. So much so that she was awarded the SRI Alumni Hall of Fame Award in 2022, an honor she was able to appreciate just before her death.

Sally's contributions to SRI extended beyond the Menlo Park campus. Having lost her mother to cancer as a teenager, Sally was active in Menlo Park's Relay for Life, a fundraiser for the American Cancer Society in which teams cooperated to keep at least one person walking for a 24-hour period. For more than 20 years, Sally led Team SRI and was always among the most prolific fundraisers for the event. She also held several leadership roles for the event over the years.

Sally's spirit joins her husband, Rick, and daughter, Sarah, in our memories. She is survived by her son, her father, two siblings, and three step-siblings, as well as dozens of in-laws, nieces, nephews, and cousins.

This remembrance was written by Don Nielson in collaboration with Roy Kornbluh and Sally's son.

Thomas C. Poulter, Jr.*

Thomas "Tom" Poulter died on May 23, 2022.

Tom worked at SRI from 1954 to 1957. He loved taking photographs, working with Photoshop, and getting together with his photography group. Tom was known for sending out pages of wonderful photos with the family Christmas newsletter each year. Another of Tom's passions was flying his twin engine airplane.

Tom is survived by his wife, Audrey; children, Thomas III, Linda, Ted, and Karen; and his grandchildren and a great-grandchild. He is greatly missed.

This remembrance was written by Tom's daughter Karen.

L. Michael Smith

L. Michael Smith died on July 26, 2022, in Oakland, California. He was 78.

Michael was born on March 31, 1944, to Loron and Ruth Smith in Tulsa, Oklahoma. He graduated from Central High School in Tulsa in 1962 and received a bachelor's degree from Stanford University in 1966. He pursued a doctorate at the University of California, Berkeley, in American intellectual history, passed his oral examination, and attained a candidate in philosophy degree.

Michael worked for Bechtel for several years and then joined SRI as a technical editor. He transferred to SRI Consulting, the for-profit arm of SRI, and worked for a short-lived spinoff of SRI Consulting before retiring in 2001. Michael continued to edit SRI proposals, reports, journal articles, and other documents as a contract editor, and many SRI authors requested his time specifically, appreciating his insightful comments and attention to the details of grammar, spelling, punctuation, and syntax.

Michael had an enormous intellectual and aesthetic appetite. He loved beautiful things, whether idea, object, music, or written word. In people he admired courageous thinking and the works it manifested, as well as humor, wit, intellect, and kindness. He took pleasure in cooking, growing orchids and other plants, reading favorite books for the third or fourth time, collecting Asian art and antiques, and spending time with friends and family.

Michael is survived by his sister, Judith Russell, three nephews and their five children, and a community of thoughtful, loving friends. Michael was respected, admired, and loved by those who knew him.

Remembrance written by Kevin Harmon, one of Michael's nephews.

Robert James Stephens*

Robert James "Bob" Stephens died peacefully at his home in Menlo Park, California, on September 13, 2022, after a struggle with Alzheimer's disease. He was 91.

Born on June 3, 1931, in London Township, Ontario, Canada, he was the fifth child of Lawrence James Melville Stephens and Mary Gertrude (Mossop) Stephens. Bob attended Medway High School in London, Ontario, and completed his high school diploma in Los Angeles, California, in 1951. He held a bachelor's degree in biology from Pepperdine College, a master's degree in embryology/histology from University of Southern California, and a PhD in cell biology from Cornell University; he completed a postdoctoral fellowship at Yale University. As one of a handful of scientists trained to use an electron microscope, Bob was engaged in research at SRI, where he published more 125 academic papers, many focusing on chronic lung diseases, particularly emphysema, as related to air pollution.

Bob was politically active in Menlo Park, California, first joining a concerned citizens coalition opposing the Willow Expressway, then running for city council. He served on the city council from 1971 to 1980 and was mayor from 1979 to 1980. During his time on the council, Menlo Park implemented a local minibus service and improved recreational and arts programs.

Bob explored various interests during his life. He sang from a young age and began performing on CFPL Radio in London, Ontario, as a teen. He met Lola, the woman who would eventually become his wife, while performing in *The Mikado* at Pepperdine. He also sang in other productions such as *The Magic Flute*, *Little Red Riding Hood*, and *Bastien*

und Bastienne. He also pursued business entrepreneurship with the local restaurant Pear Williams, which he ran with his wife, and Tech-Star Industries, a small manufacturing company that he ran with his son James.

After his retirement, Bob championed the achievements and lasting impact of Charles Darwin. Bob was cofounder of an effort to promote a "Darwin Day" in the late 1990s, and as a result of Bob's efforts, Darwin Day is now recognized internationally. In his later years, Bob enjoyed annual summers in Oxford, England, with Lola, spending time in the city that saw the important Huxley-Wilberforce debate at the Oxford History Museum.

Bob was a steadfast father and grandfather and will be missed by his family, who take comfort in the knowledge that he is at peace and reunited with his bride, Lola Marie.

Bob was preceded in death by his wife of 64 years, Lola Marie (Mathews) Stephens; his siblings, Frances Bertha Velma Bond, William Henry "Harry" Stephens, John Lawrence "Jack" Stephens, Earl Thomas Stephens, and Gertrude Laureen Wells, and a two-day-old daughter. He is survived by his children, Robert L. Stephens, Susan L. Stephens, and James W. Stephens; four grandchildren and two great grandchildren.

Based on an obituary published by Palo Alto online.

Marianna Vaughan*

Marianna Vaughan died at the age of 83 in July 2022.

Born in 1938 in the state of Washington, Marianna was an active Girl Scout, elected state treasurer for the Future Homemakers of America in 1954, and a Daffodil Princess representing Sumner, Washington, in 1955. She graduated with academic awards from Sumner High School in 1956. Marianna attended the University of Washington, majoring in mathematics, where she met and married John Temple.

With her naval officer husband, Marianna lived in many places, including Japan, Connecticut, and South Carolina. The couple settled in California to raise their children.

Marianna worked at SRI as a mathematician deciphering radio communications reflected off the ionosphere while putting her husband through Stanford Business School. After their time in California, the family moved to Florida, eventually settling in Boca Raton. Marianna received her MBA from the University of Miami and became a certified public accountant working for a local firm in Pompano Beach. After divorcing, she retired to Nevada, moving to Lake Tahoe where she enjoyed hiking, skiing, and searching for wildflowers.

Marianna loved to travel and visited many countries as well as every state in the United States. She always had a special affinity for technology and loved learning about new inventions and scientific discoveries. Marianna was loved and will be deeply missed by all who knew her.

Marianna was preceded in death by her sister Betty Janson and by granddaughter Nora Temple, who always had a special place in her heart. Marianna is survived by her sister Nancy Gundler; her three children, Teresa Long, Will Temple, and Cindy Duncan; seven grandchildren; and a large extended family that she adored.

Based on an obituary published in The Palm Beach Post.

*Member of the SRI Alumni Association

Please consider joining the SRI Alumni Association. The association was founded in 1996 to provide former staff members the opportunity to keep in touch with SRI and their colleagues, to support the institute in a variety of ways, and to help perpetuate SRI's traditions and values.

SRI Alumni Association members enjoy many activities and services:

- **Alumni Association Newsletter**—Published three times a year, giving news about SRI programs, Alumni Association activities, and individual members (see past issues at https://alumni.sri.com/newsletter.html).
- **Membership Directory**—A regularly updated resource of contact information for association members.
- **Annual Reunion Meeting**—An opportunity for:
  - Socializing with other Alumni Association members.
  - Viewing the Alumni Hall of Fame Induction ceremony.
  - Hearing a prominent SRI speaker describe an important SRI project or organizational development.
- **Spring Fling**—A picnic or visit to a Bay Area point of interest; past trips have been to the Computer History Museum, the Hiller Aviation Museum, NASA-Ames, and the California Academy of Sciences.
- **SRI Archives**—Association members maintain and catalog SRI's photographic and nonproject archives.

We encourage you to participate in the SRI Alumni Association. Your first year's membership is free. Your membership thereafter will be $25 per year. By completing and returning the application below, you will be enrolled and will receive future issues of the newsletter and invitations to all alumni events. Please indicate how you would like your information to appear in the Membership Directory. If you prefer that some or all of your contact information not be published in the directory, please indicate your preference below. Also, please indicate whether you would prefer receiving the newsletter as an electronic copy (PDF, which saves the association printing/mailing costs) or as a hard copy. If you prefer to complete an application online, please do so at https://alumni.sri.com/join.html.

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