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## APRIL 2006 NEWSLETTER

*SRI Alumni Association is 10 years old.*

Founded in 1946, SRI is 60 years old in 2006. A staff celebration is planned for later this year, according to communications director Alice Resnick.

Notable achievements of the last 60 years have been chronicled in a colorful time line. Copies are being sent to all Alumni Association members with the mailing of this Newsletter.

Nearly 30,000 people have worked for SRI over the decades. Do you realize that this means nearly 10 new hires every week, on the average? Many old-timers can remember colleagues with ID numbers with only three digits, or even two digits. (One-digit ID, anyone?)

In the late 1970's employment peaked at over 3000; now there are about 1400 employees generating revenue of \$282 million in 2005. This does not count

some 600 people, and more than \$100 million in 2005 revenue, at SRI's Sarnoff subsidiary.

Some of SRI's most notable projects over the years have been described in loving detail in Don Nielson's book, "A Heritage of Innovation", published last year.

Several groups of alumni and retirees had met previously, organized on a departmental basis. But it was at SRI's 50<sup>th</sup> anniversary celebration in 1996 that George Abrahamson suggested that an association of alumni from all divisions

be formed to continue and promote the feeling of camaraderie among former colleagues. George spearheaded the formation of a Steering Committee, obtained the blessing of SRI, and headed the Association until his death in 2003. Now in its tenth year, the SRI Alumni Association has 500 members.



*Logo courtesy of SRI International.*

### ALUMNI SPRING FLING — MAY 23, 2006

**STANFORD LINEAR ACCELERATOR (SLAC) — PICNIC AND TOUR**



**SEE FLYER FOR DETAILS**

## PRESIDENTIAL ACHIEVEMENT AWARDS — 2005

Last year, two Presidential Achievement Awards were made, and the Newsletter inexplicably failed to report on them. Here, belatedly, are accounts of the two awards—one to a large team, and one to an individual.

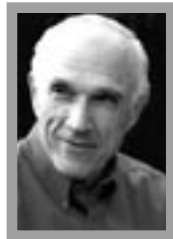
### The CP-1 Team

For more than 30 years, SRI's "CP-1" team has performed leading-edge research to provide solutions for important national security problems. Achievements have been many in this long-running program. The team's remarkable technical contributions reflect 1,000 staff years of experience and SRI's role leading integrated, multi-organizational project teams. For their remarkable long-running record of successes, the members of the CP-1 team were awarded the Presidential Achievement Award.

The current 46-member team represents many of the Institute's research centers and disciplines, including engineering, physics, data analysis, algorithm development, and security.

### Donald L. Nielson

During his 40 years with SRI International, **Donald Nielson** played a key role in guiding the organization and in developing some of the institute's most celebrated innovations.



While much of his early work at SRI was centered in conventional radio systems, in 1972 Don and his colleagues recognized the emerging potential of digital systems and the eventual convergence of digital communications and computing. This vision was so clear that, in a rare initiative within SRI, they petitioned to move their communications laboratory into the computing research environment at SRI where Don became the laboratory's director.

What followed gave SRI opportunities to create some of the earliest innovations in computer communications including, in 1973, leading the design and integration of the world's first mobile digital radio network,

called Packet Radio, and, in 1976, building the first implementation of the internet protocol TCP and using it to span that radio network and the existing ARPANET with the first internet transmissions anywhere.

This laboratory also introduced UNIX to SRI and then contributed some of its early communications features. Don and his laboratory also created some of the first handheld digital terminals for computer access which, by design, were also the first portable communications devices for the deaf. Shortly thereafter, in 1978, SRI built for that community one of the first publicly accessible electronic mail systems.

While an SRI vice-president and director of the Computing and Engineering Sciences Division, Don helped launch two of SRI's most successful spin-off companies: Nuance Corporation, a leader in automatic speech recognition, and Intuitive Surgical, Inc., which offers a revolutionary minimally invasive surgical system.

After retiring from management roles in 1998, he documented SRI's origins and unique research accomplishments in a book, *A Heritage of Innovation: SRI's First Half Century*. During the last year, Don has been traveling tirelessly, making presentations based on the book, and reaching a variety of audiences.

For this body of work, Don received the Presidential Achievement Award. Don received his Ph.D. from Stanford University, and has served on technical advisory committees for the Defense Advanced Research Projects Agency (DARPA) and the Defense Communications Agency (DCA), and for the U.S. Air Force Scientific Advisory Board. He was also a member of the National Research Council studies on Air and Space Transportation and Network-Centric Naval Forces.

Don, a Life Fellow of the Institute of Electrical and Electronics Engineers, has also won a Distinguished Service Medal from the U.S. Air Force and SRI's Mimi Award for fostering the professional growth of co-workers, and is a member of the SRI Alumni Hall of Fame. He continues to serve on the SRI Alumni Association Steering Committee, where he heads the Archives Committee.

## SRI DISPLAYS AT TOKYO EXPO

SRI was present at the Nanobio Expo 2006 held in Tokyo from February 21-23, 2006. This expo on the fusion of nanotechnology and biotechnology was held in conjunction with three other expositions: nanotechnology, new functional materials, and advanced surface technology. Three hundred seventy exhibitors from industry, academia, and government attracted more than 45,000 visitors.

The photo shows **Dr. Osamu Karatsu**, Chief Executive Director of SRI Japan, who hosted more than 250 visitors to SRI's booth.

The display featured panels on numerous SRI projects, including

- SRI's nanotech activities
- MEMS Intelligent Monitoring System
- e-bio sensor for cancer detection
- a transdermal sensor for diabetes diagnosis and a treatment delivery system
- trace explosive detector
- medical device development
- hybrid organic/inorganic technology for pre-ceramic polymers.

The booth also offered demo kits and video clips of the Electroactive Polymer Artificial Muscle (EPAM), and a sample of a flow-through affinity-based biosensor.



## SRI CAFETERIA PATIO REOPENS

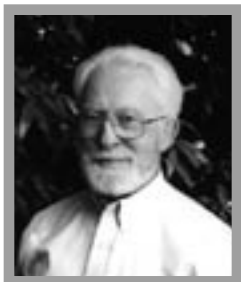
With the arrival of warmer weather, SRI staff will be lunching on the new patio behind the cafeteria. The grand opening is scheduled for April 13. The photos show the condition four weeks before reopening and three weeks before reopening. Workmen have been busy!



## WHAT ARE THEY DOING NOW?

### A Chemist Tackles Qigong

When **Ken Sancier** retired from SRI as a Senior Scientist in 1984, he cast about for a year to find a stimulating endeavor. He settled on Qigong, the basis of Traditional Chinese Medicine, known for its gentle movements, breathing and mediation exercises. Tai Chi and Yoga are both related to Qigong, but among these Qigong (“chi-kung”) is the oldest and has been subject to the most research.



Ken thought that the many claims for its healing powers needed scientific testing. He experimented to demonstrate the effects of qigong on the body, and published 28 papers on his results. He has presented his research at conferences in Beijing, Shanghai, Tokyo and San Francisco.

In 1987, Sancier founded the Qigong Institute, a non-profit corporation run by a volunteer staff. The Institute is supported by memberships, sale of DVDs of lectures and the Database CD, and donations. For details, see the website [www.qigonginstitute.org](http://www.qigonginstitute.org).

Sancier worked with the East-West Academy of Healing Arts to organize the First International Congress of Qigong, held in San Francisco. Together, they sponsored a series of some 60 lectures by teachers, practitioners and Qigong masters. Ten of these lectures are available on DVD's.

He then developed a database to organize the vast body of information on QiGong; currently the Qigong & Energy Medicine Database™ contains almost 4000 abstracts in English. The Qigong Institute sells the database™ on CD's. It is used by medical personnel, researchers, government agencies, and the public.

Ken helps select the teachers for the Qigong Class co-sponsored since 1994 by the City of Palo Alto and the Institute.

In 2002, Sancier retired from the Qigong Institute, but remained as Chairman of the Board of Directors.

Sancier has studied Qigong with many teachers and has developed a personal routine to practice what he has learned. He is convinced that he should study Qigong with more dedication.

*Dr. Ken Sancier was a Chemist at SRI from 1951 until 1984, mostly with the Materials Research group. He worked on projects as diverse as: free radicals in rat liver, measurement of atom concentrations in the atmosphere, heterogeneous catalysis, dry bleaches, and productions of solar-grade silicon.*

### Alumnus Honored

**Ashton (Ash) O'Donnell** was recently honored by the Alumni Association of Whitman College with the Alumnus of Merit Award of 2005, their highest honor. This award was given to Ash in recognition of his outstanding service to, and demonstrated loyal interest in, Whitman College.

At SRI, Ash served from 1954 until 1961 as Manager of Nuclear Economics, later as Manager of Program Development.

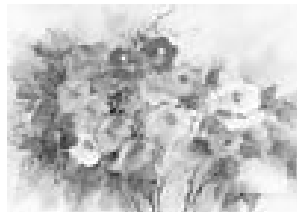
In 1939, Ash was a recipient of a four-year Pre-Professional Scholarship to Whitman College, where he earned a degree in Physics in 1943. He then married Virginia “Gini” Graham, also a scholarship student at Whitman.

Before Ash joined SRI, Ash and Gini were employed on the Manhattan Project; from 1947 to 1954 Ash served with the US Atomic Energy Commission.

Ash left SRI in 1961 to join the International Atomic Energy Agency (IAEA) in Vienna, Austria as a Senior Scientific and Technical Advisor. In addition, he was President of the American International School there. Ash later worked for the Bechtel Group in San Francisco from 1964 until 1986. During this time, he was also active in SRI's international programs. The O'Donnells now live in San Rafael.

Ash served on the Whitman Board of Trustees from 1982 to 1990, the last four years as Board Chair; he is now a Trustee Emeritus. In 1997 he received an Honorary Doctor of Science degree from Whitman. The O'Donnells have been generous donors to a variety of Whitman projects.

Two of the four O'Donnell daughters are Whitman alumnae, and both are married to Whitman alumni. (Ed.: How about those six grandchildren, Ash?)



## NEW RESEARCH PROJECTS AT SRI

### SRI Plans New Rating System for Abu Dhabi Hotels

SRI has signed an agreement with the Abu Dhabi Tourism Development Authority (ADTA) to update and improve the Emirate's hotel quality rating system.

At present the only quality rating available for some 60 hotels in this part of the Middle East is one provided by the hotels themselves. According to Mr. Mohammed Nour, Acting Director of ADTA's Economic Department, "We are keen to update our system with SRI's help, and integrate it with our new e-registration system."

To be done by SRI's Center for Science, Technology and Economic Development (CSTED), the project has these goals:

1. Develop a clearly defined hotel classification system for Abu Dhabi that is comprehensive for all types of properties and accommodations.
2. Introduce a framework whereby the standards of existing and future hotel properties are measured systematically and objectively.
3. Implement a hotel inspection system whereby visitors, travel agents, and tour operators booking visits to Abu Dhabi will be able to clearly differentiate among the types of accommodations available in Abu Dhabi.

The objective new system is expected to:

- Provide unbiased information to customers, allowing them to make comparisons and make informed choices about where to stay.
- Encourage investment in hotels by introducing international standards.
- Help local brands to compete more effectively with well-known hotel chains. The development of Abu Dhabi standards will help local brands to be recognized for their quality.

"Tourism is a major industry for many cities, regions and countries around the world," says Peter Boone, Principal Investigator in CSTED. Located in Washington, D.C., CSTED helps regions, organizations, and businesses become more successful in today's economy. "It is critical that these areas stay on the forefront of global tourism trends, upgrade their products, maintain high

quality standards, and promote themselves aggressively. SRI helps public-private tourism stakeholders identify unique opportunities, craft a new image, and move forward on pivotal projects that have maximum industry impact."

SRI has worked on similar projects in Egypt, Bahrain, Lebanon, Hong Kong, the Dominican Republic, Australia, and the Czech and Slovak Republics.

### New Program in Molecular Genetics

#### *Genomic Technologies Identify Susceptibility to Nicotine Addiction*

SRI's new Molecular Genetics Program is characterizing gene-gene and gene-environment interactions that may provide clues for predisposition to tobacco dependence, response to treatment for nicotine addiction, and susceptibility for certain cancers. Genetic study designs for the program include twin-based, family-centered and case-control approaches.

An estimated 47 million people currently smoke in the U.S., and an estimated one billion people smoke worldwide. To increase effectiveness of smoking cessation treatments, SRI researchers are exploring molecular mechanisms associated with variations in nicotine use, accumulation of tobacco toxins in the body, the role of brain "reward" circuits (pathways that relate pleasurable experiences), and ethnic and gender-mediated differences. Another goal is to contribute to pharmacogenetic knowledge databases used by the research community. Pharmacogenetics is the study of genetic influence on drug therapies.

"Exploring ethnic differences in nicotine metabolism genes in Caucasians, African-Americans and Chinese-Americans can help to assess elevated risk of certain cancers," said Huijun Ring, Ph.D., director of SRI's Molecular Genetics Program.

These activities are part of SRI's Center for Research on Nicotine Addiction, a collaboration involving experts from behavioral science, molecular genetics, medicinal chemistry, neuroscience and pharmacology. Current Center sponsors include the National

## NEW RESEARCH PROJECTS AT SRI (Continued)

Institute on Drug Abuse, National Institute of General Medical Sciences, National Cancer Institute and the University of California Tobacco Related Disease Research Program.

“By investigating the genetic basis of nicotine dependence, we hope to speed up the search for effective treatments to help people stop smoking,” added Gary Swan, Ph.D., director of SRI’s Center for Health Sciences.

### **SRI and Girls Inc. to Promote Technology Fluency in Middle-School Girls**

In October 2005, SRI International and Girls Incorporated of Alameda County (Girls Inc.) received an \$875,195 three-year grant from the National Science Foundation’s Information Technology Experiences for Students and Teachers (ITEST) program. The grant, known as Build IT, supports Information Technology (IT) fluency and knowledge of IT careers for middle-school girls in typically under-served communities.

The Build IT curriculum will capitalize on the girls’ interest in design and communication technologies to motivate them to use technology, build their technology fluency, and foster their interest in pursuing IT careers.

Pat Loomes, executive director of Girls Inc., says: “Working collaboratively with SRI designers and engineers will stimulate a new level of technological innovation and creativity that allows girls to confront and counteract the societal messages about their value and potential.”

SRI’s Center for Technology in Learning (CTL) will lead the Build IT program

“Developing and implementing Build IT with Girls Inc. gives us the opportunity to inspire middle school girls not only to use IT, but to learn that they can design information technologies that solve human problems,” says Melissa Koch, SRI Build IT principal investigator and director.”

Initially, Build IT will be offered at Girls Inc. middle-school programs in Alameda County and will reach more than 150 girls. Later, Build IT will be disseminated through the national Girls Inc. network, which reaches more than 600,000 girls annually through 1,500 program sites.

Girls Inc. is a nonprofit organization dedicated to inspiring all girls to be strong, smart and bold. Girls Inc. challenges girls to explore their potential, attend college, build careers and to expand their sense of what is possible.

More information about Build IT is available at <http://www.ctl.sri.com/projects/displayProject.jsp?Nick=buildit>

### **New Grant on Pharmacogenetics of Nicotine Addiction and Treatment**

SRI International and the University of California, San Francisco (UCSF), announced in January that they have received a five-year, \$10 million grant from the National Institutes of Health (NIH) for the Pharmacogenetics of Nicotine Addiction Treatment (PNAT) program. The interdisciplinary, multi-center research program is focused on the pharmacogenetics of nicotine addiction and treatment. Pharmacogenetics is the study of genetic influence on drug therapies.

The PNAT program includes clinical, genetic, bioinformatic and statistical research goals. The long-term research objectives are to better individualize treatment for tobacco dependence, facilitate the development of novel medications and reduce the impact of smoking as a major health problem.

SRI’s Huijun Ring, Ph.D., and Neal L. Benowitz, M.D., of UCSF will serve as co-principal investigators. Gary Swan, Ph.D., director of SRI’s Center for Health Sciences, will also provide leadership to the PNAT program. The team will develop a multi-center, interdisciplinary program to examine the genetic basis for individual variation in response to nicotine replacement medications and bupropion for treating tobacco dependence. The research program will also conduct exploratory studies on varenicline and

## PROJECTS AT SRI (Concluded)

rimonabant, two novel medications under clinical development for treating tobacco dependence.

The PNAT program is part of the Pharmacogenetics Research Network (PGRN), a nationwide network of scientists focused on helping doctors tailor drug prescriptions to people's unique genetic make-ups. Three NIH organizations fund the PNAT program: the National Institute on Drug Abuse (NIDA), the National Institute of General Medical Sciences (NIGMS) and the National Cancer Institute (NCI).

## ALUMNI NEWS

### Alumni Spring Fling Set For May 23

On May 23, 2006, SRI Alumni are invited to join their fellow alums at the facilities of the Stanford Linear Accelerator (SLAC), Sand Hill Road, Menlo Park for a picnic and tour. If you haven't ever visited this fascinating place, the time is now!



SLAC is one of the world's leading research laboratories. Established in 1962 at Stanford University, SLAC's mission is to design, construct and operate state-of-the-art electron accelerators and related experimental facilities for use in high-energy physics and synchrotron radiation research. They have a staff of 1400, with three Nobel Prize winners, and are visited, each year, by over 3000 visiting scientists from around the world.

SLAC offers guided tours of its facilities, including the linear accelerator. We have arranged for a tour after our lunch at their picnic facilities outside their cafeteria. They can only accommodate 60 persons for these tours, so if you're among the first 60 to sign up, you're in! The tour start with a brief presentation on SLAC, its history, its mission and its exciting present and future programs before we board the buses.

*A word of caution, SLAC is located in a hilly area and although the tours are carried out in buses, there is some*

## ALUMNI NEWS (Continued)

*walking required. If walking is difficult for you, you may just want to enjoy the lunch, the presentation in the auditorium, the view and the company.*

A flyer for the Spring Fling is enclosed with this mailing. If you would like to attend the picnic and tour at SLAC, please cut and return the attached coupon before May 15<sup>th</sup>. There is no fee for this event.

We look forward to seeing you.

*Happy Spring!*

### Welcome New Alumni Members

The SRI Alumni Association welcomes sixteen new members:

Andrew Agno  
 Len Dary  
 Russell Dewey  
 David Falconer  
 Stanford Field  
 Nancy Karp  
 Carole Mortensen  
 Andres Rodriguez  
 Stephen Sands  
 Charles & Linda Schmidt  
 Joseph Stockhus  
 Melissa Verber  
 Janet Voight-Miro  
 Robert Weidlich  
 Douglas Westover

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

### Alumni Website

Russ Dewey and Phil Monti have agreed to co-chair a revived Web Committee for the Association. They will be rebuilding the website, which has been languishing for some time.

We await their product with eagerness. Keep posted!

Alumni may submit suggestions to the Steering Committee for pages that they would like to see on the website.

## ALUMNI NEWS (Concluded)

SRI INTERNATIONAL ALUMNI ASSOCIATION  
 CASH FLOW/INCOME AND EXPENDITURES  
 YEAR TO DATE as of DECEMBER 31, 2005  
 Submitted by Treasurer: Peter Valenti

|  |                    | <u>YR TO DATE</u><br><u>12/31/05</u> |
|--|--------------------|--------------------------------------|
| <b>CASH BALANCE 12/31/04</b>             |                    | <b>\$13,588.64</b>                   |
| <b>INCOME</b>                            |                    |                                      |
| CASH INCOME FROM MEMBERSHIPS AND FEES    | \$6,358.00         |                                      |
| DIVIDENDS (INTEREST) ON BANK ACCOUNTS    | \$85.81            |                                      |
| SRI Federal Credit Union Contribution    | \$2,058.75         |                                      |
| SRI International Contribution           | \$2,972.82         |                                      |
| <b>TOTAL INCOME</b>                      | <b>\$11,475.38</b> | <b>\$11,475.38</b>                   |
| <b>EXPENSE</b>                           |                    |                                      |
| <b>SERVICES PROVIDED BY SRI</b>          |                    |                                      |
| REPORT PRODUCTION SERVICES               | \$6,937.68         |                                      |
| POSTAGE & MAILING EXPENSE                | \$2,058.75         |                                      |
| REUNION COSTS:                           |                    |                                      |
| CATERING                                 | \$2,972.82         |                                      |
| REFUNDS                                  | \$27.00            |                                      |
|  | <b>\$11,996.25</b> |                                      |
| <b>OTHER EXPENDITURES &amp; EXPENSES</b> |                    |                                      |
| PICNIC OUTING – BOX LUNCHES              | \$437.32           |                                      |
| MISC. SUPPLIES                           | \$323.35           |                                      |
| DONATIONS                                | -                  |                                      |
|  | <b>\$760.67</b>    |                                      |
| <b>TOTAL EXPENDITURES &amp; EXPENSE</b>  |                    | <b>\$(12,756.92)</b>                 |
| <b>CASH BALANCE 12/31/05</b>             |                    | <b>\$12,307.10</b>                   |

**The Hall of Fame Committee** is busy evaluating nominations for new members of the SRI Alumni Hall of Fame—alumni who have made a lasting contribution to the SRI legacy. The Committee relies on the members to nominate those whom they know well, and whom they feel are deserving of this honor. Nominations from locations outside Menlo Park are especially solicited.

New members are inducted into the SRI Alumni Hall of Fame each year as part of the Alumni Fall Reunion.

Please send your suggestions as soon as possible to: Murray Baron, chair of the SRI Alumni Hall of Fame Committee, c/o SRI Alumni Assn, 333 Ravenswood, AC-108, Menlo Park.



## CREDIT UNION NEWS

### Climb the Rate Ladder at SRI Federal Credit Union

#### Afraid of heights? Not when it comes to higher yields!



“Laddering” gives you the best of both worlds – higher long-term earnings and short-term liquidity.

Assume you have \$50,000 and you want to build a five-year ladder. To start, deposit \$10,000 each in certificates of deposit with maturities of one, two, three, four and five years. When the one-year certificate matures, roll the principal and interest into a five-year certificate. Continue this cycle each year.

You’ll continue to earn our top rate on a significant portion of your funds. Plus, you’ll have access to 20% of your money annually. The average maturity on all your funds will be just 2.5 years. So stop agonizing over whether or not rates will rise or fall; you’ll never be off the pace with laddering.

At SRI Federal Credit Union, you’ll earn competitive rates on certificates of deposit from three months to five years, on our low minimum deposit of just \$1,000. Or, choose your own maturity up to a five-year maximum.

**Call, visit or click SRI Federal Credit Union today!**

**Our most recent rates are always at [www.srifcu.org](http://www.srifcu.org)**



**800-986-3669**

### RECENT RETIREES-- AND OTHER DEPARTURES OF LONG-TIME STAFF

|               |                        | <u>Years of Service</u> |
|---------------|------------------------|-------------------------|
| August 2005   | Kim C. Haustedt        | 14.6                    |
|               | Richard L. Brownrigg   | 11.9                    |
|               | Samuel C. Bonar        | 46.9                    |
| November 2005 | Howard T. Nixon        | 20.2                    |
|               | Samuel H. Spitzer, Jr. | 25.6                    |
| December 2005 | Donald L. Nielson*     | 46.4                    |
|               | John A. Pick           | 14.5                    |
| January 2006  | Dan K. Marker          | 9.0                     |
|               | Kinney Thiele          | 29.8                    |
|               | Stephen W. Scott       | 12.3                    |
|               | Susan H. Gable         | 29.5                    |
|               | Richard D. Dean        | 9.6                     |
|               | Shari D. Fisher        | 15.8                    |
| February 2006 | H. Roberts Coward      | 19.1                    |
|               | Tommy Jorgensen        | 9.6                     |
|               | Philip B. Bentley*     | 42.0                    |
|               | Melissa Verber         | 10.1                    |
|               | Christine A. Connolly  | 11.4                    |
| March 2006    | John G. Wehmeyer       | 16.3                    |
|               | Gerd Kirkemann         | 29.0                    |

\*Rehired on a temporary basis

## IN MEMORIAM

### James W. Engle\*

James W. Engle Jr. died Wednesday, Jan. 11 in Grass Valley. He was 70.

Jim was born May 17, 1935, in Frederick, Md. He graduated from Frederick High School, and joined the U.S. Army Signal School where he became skilled in photography. Jim also studied at the New York Institute of Photography. He worked briefly as a photo instrumentation specialist for FMC in San Jose before he joined SRI's Poulter Lab in 1958 as a Firing Site Technician. He was the test site photo coordinator for the Poulter Lab when he left SRI in 1974.

Jim later owned Engle's Visuals 'n Sound and contracted his services to diverse industries in the space, medical, weapons testing, nuclear and forensic fields. He was an officer in the Grass Valley Knights of Columbus. He also served as an officer in the Bishop O'Connell Assembly of Knights of Columbus and was a member of their honor guard.

Jim is survived by his sisters Olive R. Engle of Frederick, MD and Anna Mae Young of Baltimore; brother Robert E. Young of Wilmington, NC; two children; one niece; one nephew; one great-niece; and two great-nephews.

### Mary Jean Felts

Mary Jean Felts died in her Menlo Park home January 21, 2006. She was 87.

Born August 12, 1918 in Peoria, Illinois Mary Jean Herschel attended Mt. Vernon Seminary, the Univ. of Illinois, and the Univ. of Arizona.

In April 1975 Mary Jean joined SRI as a Secretary in the Physical Sciences Dept. She was a TIA secretary when she left in May 1986.

In addition to raising a family, Mary Jean was a longtime volunteer at Allied Arts in Menlo Park, and was active in the buying and selling of antiques. She loved flea markets and garage sales, rock 'n' roll, and animals.

She is survived by daughter Nancy Waltz; sons Bill, Michael, and Jeff; five grandchildren; and four great-grandchildren.

### Tony Ferrera\*

We only recently learned that Anthony "Tony" Ferrera died at the end of April 2005. He had worked at SRI from 1962 until 2003—over 41 years! He began as an electronic technician in the Control Systems Lab in the Engineering Systems Division. At the time of his retirement he was Supervisor of Technical Services in Property.

### Ralph Heintz\*

Ralph Heintz died in April 2005. He was 83 and had lived in Los Altos.

He earned degrees in EE at Stanford—a BS in 1943, an MA in 1947, and the degree of Electrical Engineer in 1948.

Ralph followed in his father's footsteps. Ralph's father--Ralph, Sr.--was a noted electronics engineer, one of the founders of EIMAC, and a Bay Area legend, a prolific inventor who had built radio receivers and transmitters as early as 1910. In that year, he became one of the first to receive a radio transmission from a plane in flight.

Ralph joined SRI in May 1950 as a Junior Research Engineer in the Electrical Engineering Department. At the time of his retirement in June 1985, Ralph was a Senior Research Engineer in the Advanced Technology Division.

He was active with the Golden Gate Live Steamers, devoted to model steam railroads. In 1975, Ralph donated some 4000 feet of track, and other materials, to the steam train system in Tilden Park in Berkeley. They named the Heintz Loop in his honor.

In later years, Ralph became an antiques dealer, specializing in music boxes. In 1982-83, he was the President of MBSI, The Musical Box Society International. He once brought a selection of working boxes from his collection to demonstrate at the annual reunion of SRI Alumni.

### John Murray Huneke

John M. Huneke, 75, of Atherton, CA and Englewood, FL, died January 8, 2005.

John was born December 31, 1929, in Los Angeles. He lived in the Bay Area since attending Stanford, where he received a BS in Mechanical Engineering in 1953 and an MBA in 1955. He was a member of the tennis team.

John started at SRI in June 1954 as a research assistant in the Economics Research Department. He was a Sr. Industrial Economist when he left SRI in August 1968; he later became a senior executive with Bechtel Investments in San Francisco.

John wintered on Manasota Key in Englewood FL since 1994. He was vice president of the Manasota Key Association and a member of the Menlo Circus Club. He was also a member and supporter of Ducks Unlimited for many years.

Survivors include his wife, Penelope, "Pencie"; son Murray C. of Los Gatos; daughters Christine H. Kremer of Menlo Park, and Lorraine Huneke of San Francisco; five stepdaughters; brother Albert of Hoopa, CA; sisters Betty H. Buckman of Torrance, CA, and Noura Durkee of Keene, VA; four grandchildren; and seven step-grandchildren.

### Ralph Keirstead

*We reported the death of Ralph E. Keirstead in the December 2005 issue. Here is added information:*

Ralph E. Keirstead, 77, longtime Los Altos resident, died Nov. 3, 2005 at St. Joseph's Hospital in Yonkers, N.Y. The cause of death was respiratory failure after a short bout with pneumonia.

Keirstead was born in Waterville, Maine, and raised in Wethersfield, Conn. After receiving an MA in Mathematics from Johns Hopkins in 1950, Ralph was employed at Aberdeen Proving Ground in Maryland and at Livermore National Lab before joining SRI in 1956.

It was at SRI that he met and married Mary Humphrey.

In 1964 Ralph moved to Control Data, but returned to SRI in 1966. He retired in 1988.

In retirement years, he spent more than 1000 hours working for Recording for the Blind and Dyslexic in Los Altos, including more than 500 hours training volunteers.

Survivors include sons Thomas of Bloomington, IN and William of New York City; and three grandsons, all of New York City.

### Ray Leadabrand\*

Ray Leadabrand, 78, died February 2, 2006 at his home in Boise, ID of an apparent heart attack. He had spent more than 30 years at SRI, leaving as a Senior Vice President of the Engineering Research Group. He was a Charter Member of the SRI Alumni Hall of Fame.

## IN MEMORIAM (Continued)

Ray was born in Pasadena, CA in 1927, and served in the US Navy in 1945-1946. He received a BS in Communications Engineering from San Jose State in 1950 and an MS in Electrical Engineering from Stanford in 1953. He continued graduate studies in EE at Stanford until he joined SRI in October 1955 as a Research Engineer in the Radio Systems Lab.



A born leader, Ray took charge of anything he took a special interest in. He was a mentor to many of his colleagues and helped them advance in their careers. Ray advanced to the post of Executive Vice President of SRI's Engineering Division, a group of about 1100.

In the late 1950s and early 1960s, he and his colleagues performed research on auroral effects on radar that ultimately contributed to improved tracking and lower false alarm rates for the U.S. Ballistic Missile Early Warning Radars (BMEWS). This work involved building and operating multi-frequency research radars in Alaska and Scotland, and later in Stanford; Chesapeake Bay, MD; Sagamore Hill, MA; Kwajelejn Atoll, Marshall Islands; and Ethiopia. Some of these 150-ft dishes are still in use. His concept of scaled illumination, thus equal beam-widths at multiple wavelengths, led to seminal papers on wavelength and orthogonality dependence of radar auroral scattering.

When the U.S. began high-altitude nuclear testing in the early 1960s, Ray helped convince the government that understanding the effects of such high-altitude explosions on defense radars was critically important. This resulted in building and fielding a fully steerable, multiple-frequency radar on Johnston Island during the 1962 Fishbowl nuclear test series. A similar radar was put on a ship, the MV Acania, positioned in the South Pacific to measure effects at the magnetic conjugate region to Johnston Island. Data from those tests helped improve models of radar scattering from high altitude nuclear explosions.

In the late 1960's, Ray initiated incoherent scatter work that ultimately made significant contributions to understanding the structure and dynamics of the high latitude ionosphere, first at Chatanika, Alaska, and later at Sondrestrom, Greenland. Research at the latter facility continues to contribute to high-latitude ionospheric knowledge.

Ray's interest also extended to space-based measurements. In order to measure the coherence bandwidth of the ionosphere, Ray helped develop the Wideband (and later HiLat and Polar Bear) Satellite Program from which coherent beacons at a comb of frequencies from UHF to L Band were transmitted from the satellite and received at ground stations at equatorial-, mid-, and auroral latitudes. This work helped quantify many aspects of scintillation phenomenology and ionospheric structure.

He was named a Fellow of the Institute of Electrical and Electronic Engineers (IEEE) for his original contributions on the effect of aurora and nuclear weapons on radar and communications systems.

In 1986 Ray left SRI to become Sr. Vice President of SAIC for the Bay area and Silicon Valley. In 1989 he retired but remained an active participant on government advisory committees and technical advisory groups. He served six years as a member of the Army Science Board and, until the last year, spent time in Washington DC almost every week participating in these activities. During his long and productive career, he significantly influenced the present and future operations of the US Department of Defense. He published many papers in professional journals.

Ray married Millie Armbruster in 1956. For many decades, they lived on the Peninsula, but in 1999 they moved to Boise ID to be near their son Paul, his wife Terry, and granddaughter Kaitlyn.

A pilot and Bonanza airplane owner, Ray served as President of the American Bonanza Society. Also an avid aviation historian, he was President of the Palo Alto Airport Association and the Idaho Aviation Heritage Museum. He served on the Airport Support Network for Boise Airport. His son was infected with his enthusiasm for aviation and is now a business jet pilot.

### Ernest J. Moore\*



Ernest J. Moore, former SRI Vice-President, died peacefully at his home in Palo Alto on November 18, 2005 after a short illness. He was 86.

Moore was born Ernst Hans Moos in Stuttgart, Germany in 1919. He was part of a Jewish family that by 1934 was forced to leave its homeland -- moving first to Belgium, where he became fluent in French, and then to England, where he mastered English and earned a bachelor's degree in E.E. from the University of London. His family emigrated to the United States in 1941, settling in San Francisco, where he changed his name to Ernest John Moore.

After Ernie obtained an M.S. in E.E. from UC Berkeley, his further studies were interrupted by WW II, and he was drafted into the U.S. Army in November 1942. After basic training, Ernie was sent to Camp Ritchie where he joined other native-born Germans who had become American citizens. "The Ritchie Boys" were trained in the black arts of intelligence gathering, psychological warfare and prisoner-of-war interrogation. (More information about the exploits of this famous group can be found at the Web site [www.ritchieboys.com](http://www.ritchieboys.com).)

Landing in Normandy a few days after D-Day in June 1944, Ernie "trudged through France, Belgium and then into Germany," according to his wife, Ursula. Because of his expertise in electronics, Ernie drove an elaborately equipped truck crammed with electronic gear. He was assigned to install electronic eavesdropping devices in the cells of captured Germans so the Allies could listen in on the prisoners of war and gain vital intelligence about enemy troop deployments and intentions. Later Ernie "wired up" the cells of high-ranking Nazis tried for war crimes in Nuremberg.

After the war, Ernie returned to Cal for his doctorate in electrical engineering and in July 1950 moved to Palo Alto and joined SRI as a Research Engineer in the E.E. department.

After numerous technical assignments spanning 34 years, Ernie retired in 1984 as vice president, but was rehired for a short stint as a Senior Director in the Health Social Services Division.

In 1985 Ernie joined the Institute of Transpersonal Psychology in Menlo Park. (It is now in Palo Alto.) On its Web site, [www.itp.edu](http://www.itp.edu), the institute describes itself as a "leader at the forefront of psychological research and education, probing the mind, body, spirit connection."

Moore retired as President of ITP in 1989, but continued to serve as a trustee. He was also a trustee (including two terms as president of the Board) of the Palo Alto Unitarian Church. He loved long walks and was skiing until age 83.

His widow, Ursula Moore, 84, a psychiatric social worker, is still seeing patients 20 hours a week! She too escaped Nazi Germany with her parents. Other survivors include a sister, Ruth Schrag of San Francisco; three daughters--Barbara Ellis of Danville, Ginni Davis of Davis and Jacqueline Moore of Berkeley; and nine grandchildren.

*This obituary includes material from articles written by Michael Taylor and Sue Atwell for the San Francisco Chronicle.*

## IN MEMORIAM (Continued)

### Joseph E. Nanevicz



We reported the death of Joe Nanevicz in the December 2005 issue. Here is added information:

Joe died November 5, 2005 at age 80. He is survived by his wife of 50 years, Shirley; sons Michael and Mark; daughters Nicola Willets and Tania Nanevicz; and seven grandchildren--all of the above of Palo Alto; and by a brother Stanley, of Seattle.

### James R. Peterson\*

James R. Peterson died on January 28, 2006 in Palo Alto at the age of 81, following a distinguished career in experimental atomic and molecular physics research that spanned six decades.

Jim was born in Hollywood on June 2, 1924, and graduated from high school at 16. Following service in the Army Air Force in the Pacific theater during World War II, Jim followed his interest in meteorology and obtained his A. B. degree in physics at UCLA in 1948. With time out for a Fulbright Fellowship in Holland in 1953-4, Jim received his Ph.D. in physics at UC Berkeley in 1956.



He joined SRI that year as one of the founding members of the Molecular Physics Laboratory, where he spent his entire career. Jim undertook a research program to determine the fundamental structure, properties, and reactions of positive and negative atomic and molecular ions, especially those species that compose our Earth's and other planetary atmospheres.

Jim pioneered the use of fast merged beams for these studies, utilizing its advantage of kinematically narrowing the beam-interaction energy spreads within the center-of-mass frame to achieve high resolutions. The technique was applied first with merged positive- and negative-ion beams to study ion-ion neutralization reactions, followed by merged ion and laser beams for photofragment and photodetachment studies.

He later made significant contributions to the use of merged ion and electron beams for dissociative recombination measurements. Jim also pioneered the use of cesium vapor as a source of low-energy electrons for the study of Rydberg states in many diatomic and triatomic molecules using dissociative charge transfer reactions, and for the study of negative ions using double charge transfer techniques. Drawing upon a particular fondness for exotic, highly correlated negative ions, Jim led pioneering studies of He<sup>-</sup>, He<sub>2</sub><sup>-</sup>, Be<sup>-</sup>, and Ca<sup>-</sup>. His work has been published as more than a hundred refereed articles in scientific journals; he was a regular contributor at the DAMOP, GEC, ICPEAC, and DR conferences, frequently accompanied by his wife Lindy.

In recognition of his scientific contributions, Jim Peterson was elected a Fellow of both the American Physical Society and the American Association for the Advancement of Science, and he spent time as a Visiting Fellow at the Joint Institute of Laboratory Astrophysics (Boulder), as a Visiting Professor at the University of Washington, and as a Fulbright Scholar at the Kammerlingh-Onnes Laboratory, Leiden.

Although he retired in 1992, Jim continue to actively collaborate with researchers in Sweden and Holland.

Jim's lifelong enthusiasms included skiing, backpacking, cycling, music, travel. He was an active longtime member of the Palo Alto Unitarian Universalist Church of Palo Alto, where he sang in the choir.

In retirement, Jim contributed many hours of volunteer work in tutoring disadvantaged children (through Peninsula Interfaith Action) to develop their reading skills, and in community organizing to provide access to affordable housing and health care for all residents of the San Francisco Peninsula.

Jim was a member of the SRI Alumni Association Steering Committee from its formation in 1996 until 2004.

Survivors include his Barbara (Lindy), his wife of 53 years; son Eric, daughters Tia P. Bickley, Kristin P. Sheehan, and Janna P. Daly; six grandchildren, and a brother and sister.

### Paul V. Roberts

Paul Roberts, a research engineer at SRI from 1968 to 1971, died February 12, 2006 of leukemia at his home in Cupertino. He was 67.



Born in November, 1938, Paul earned a B.S. in Chemical Engineering at Princeton in 1960 and a Ph.D. from Cornell in 1965. After a short stint teaching in Chile, he came to the Bay Area to work at Chevron, then moved to SRI in late 1968 as a Chemical Engineer in the Ch.E. Lab.

While at SRI, he enrolled in the Honors Co-op Program at Stanford, where he received an M.S. in Civil and Environmental Engineering in 1971.

Paul had found his life's work. He left SRI in early 1975 to spend five years working in Water Pollution Control for the Swiss government in Zürich. Paul returned to Stanford in 1980 as a Professor in the Department of Civil and Environmental Engineering.

Over the decades, he directed many pioneering projects in reclaiming wastewater and studying groundwater contamination. Paul was elected to the Swiss Academy of Sciences and the National Academy of Engineering, and he won the 1989 Scientific and Technical Achievement Award from the EPA. He became Professor Emeritus at Stanford in 2000.

Inge, his wife of 40 years, whom he met at Cornell; sons Christopher and Sebastian; daughter Nina; and nine grandchildren survive Paul.

### John Rothrock

Col. John E. Rothrock died from heart failure in the ICU at the University of Maryland Medical Center in Baltimore on November 25, 2005. He was 63, a resident of Ruxton, MD.

Son of a merchant marine captain, John was born in San Francisco and raised in Maryland. His formal education included a BA in Political Science from Hobart College (1964) and an MA in Government and International Studies--with a certificate in Russian and Eastern European Studies--from Notre Dame (1975).

Commissioned in the Air Force in 1964, he served in Vietnam as an intelligence officer--where he received the Bronze Star-- and as a senior fellow at the National Defense University, in addition to assignments at the NSA and CIA. Col. Rothrock was chief of Air Force Intelligence Planning when he retired in 1990. He had more than 25 years of service to his country prior to joining SRI.

## IN MEMORIAM (Concluded)

John worked in the SRI Washington office from 1990 to 1999, first as a Program Manager in Government Marketing, later as Director of the Center for Global Strategic Planning, and finally as a Senior Technical Advisor in Sector Marketing.

While at SRI, John advised several high-level decision makers, including Andy Marshall and General Merrill McPeak. He wrote many papers on strategy and a book: *New Power versus Old Strengths* (not yet published).

He later formed his own consultancy, STARS (Strategic Technologies, Assessment, and Relationship Services) to offer his expertise in intelligence and on the former Soviet Union. His analytical and opinion pieces were published by IDA and DARPA and in the *Air University Review*.

Never married, John is survived by his fiancé Mary Greenwood of Ruxton, MD; an aunt, an uncle, and a cousin.




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\*SRI Alumni Association Member

### Mildred Abrahamson

Friends of George and Mildred Abrahamson will be saddened to learn of Millie's death on March 7, 2006. They had been married nearly 55 years, until George's death in July 2003.

Mildred Bernice Bratton was born February 10, 1928 in Poteau, Oklahoma. She was living in Los Angeles when she met George. They were married in 1948, moved to Stanford in 1948, then to Kenneth Drive in Palo Alto in 1952, where they remained until 2003.

In addition to raising four children, Millie served as organist at the First Baptist Church in Palo Alto, taught piano, and volunteered for the Children's Health Council and other charities.

Millie was seen frequently at SRI events, even in later years, as George lovingly cared for her in her struggle with Alzheimer's disease. One of George's last acts was to have Millie comfortably installed in a Menlo Park skilled nursing facility.

## SRI IN BLOOM FOR SPRING



Enjoy SRI's floral photographs  
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