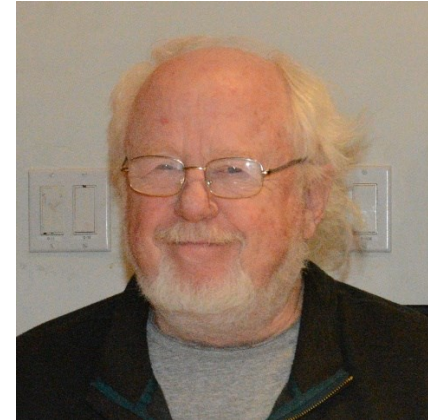




William Russell Graves
November 23, 1946 – April 29, 2022



Lunch catered by:



After the memorial service, friends are invited to join us at Shirley's home:

719 Waxwing Place, Davis, CA 95616, 530-574-2123 (cell).

William Russell Graves, aged 75, passed away on April 29, 2022. Bill Graves earned his BS degree in Physics from MIT in 1968, served in the US Army Reserve from 1969-1975, and then completed his PhD degree in Physics at UC Berkeley in 1977. He was a postdoctoral fellow at Ecole Polytechnique in Palaiseau, France, from 1977-1980. He worked as the Director of the Systems Science Lab and the Acting Director of Test and Measurements, Schlumberger. He was the first President and CEO of Cisco Systems (1987-1988). He was the President and CEO of the Open Hazards Group (2009-2022). He was an avid pilot, holding an Airline Transport and Flight Instructor's Certificates. He taught flying for many years through the Cal Flying Club at Oakland airport and owned a Cessna Turbo 210. He loved skiing and spent many years building a house in Olympic Valley. He was an excellent computer programmer, speeding up some codes by factors of 500. He also enjoyed cooking and experimenting with recipes from many countries. He is survived by his wife, Shirley Chiang, and three children, Michael, Charles, and Alexandra.

Memorial Service Program

David Calfee, Master of Ceremonies

Speakers:

David Calfee, Introduction

Bill's family: Shirley Chiang, wife

Michael Graves, son

Charles Graves, son

Alexandra Graves, daughter

Greg Small

Susan Lea (via Zoom)

Michael Sokoloff

Message from Solange and Etienne Barrelet

Henry Sowizral (via Zoom)

Michael Deering (via Zoom)

Lloyd Embry (via Zoom)

Michael Hannon

Judy and Bill Snow

Bob Brewer

John Rundle (via Zoom)

David Calfee

William Russell Graves – Brief Curriculum Vitae

Born November 23, 1946 in Elizabeth, New Jersey

1951 – Family moved to California and settled in San Carlos

1964 – Graduated from San Carlos High School

Enrolled at MIT to study physics

1968 – B.S. degree in Physics from MIT

Enrolled at UC Berkeley as physics graduate student

1969-1975 – US Army Reserve

1977 – Ph.D. degree in Physics from UC Berkeley

1977-1980 – Postdoc at Ecole Polytechnique, Palaiseau, France

1980-1983 – Engineering manager, Dalmo Victor, Belmont, CA

1983-1984 – Physicist at Lawrence Livermore National Lab

1984-1987 – Director of Systems Science Lab, Schlumberger

Palo Alto Research Lab

1987-1988 – First President and CEO of Cisco Systems

1994-2002 – Owner-builder of house in Squaw Valley

2009-2022 – President and CEO of Open Hazards Group

April 29, 2022 – Passed away of heart failure

William Russell Graves

Nov. 23, 1946 – April 29, 2022

Early Years

Bill was born on November 23, 1946, in Elizabeth, New Jersey as the only child of Winnie Ruth Branch and Harold Frank Graves. They came to California when Bill was 5 years old and he grew up in San Carlos, California,

Early Interest in Technology (Computers and Airplanes).

While still a high school student, Bill began playing with computers. He learned to program a Burroughs computer in FORTRAN. He graduated from San Carlos High School in 1964 and then enrolled at MIT to study physics. While there, he decided to learn to fly a plane, which he did out at Hanscom Air Force Base. After graduating from MIT in 1968, he came to UC Berkeley as a graduate student in physics

Since he did not want to leave school and did not have a high draft number, the Vietnam War encouraged Bill to enlist in the US Army Reserve, just before he would have been drafted. He served in the Army Reserve from 1969 to 1975, finishing as a staff sergeant specializing in supply. During this period he continued to fly airplanes, both single and multi-engine, earning his instrument rating, certified flight instructor's certificate, and then Airline Transport Pilot, which requires 1500 hours of flying time. Showing an early entrepreneurial streak, he financed his flying by teaching for the Cal Flying Club, which was based at Oakland Airport. He also bought several airplanes with partners and rented them to the Club.

In 1977, Bill completed his Ph.D. degree in high energy physics and went to France to work as a postdoctoral fellow at Ecole Polytechnique in Palaiseau until 1980. He lived in downtown Paris and was very proud of the parallel plate avalanche counter (PPAC) that he built with Etienne Barrelet.

Love Life

Shirley Chiang went to UC Berkeley as a physics graduate student in 1976. She and her roommate shared cooking for a year with Bill and his roommate. Bill was very good cook. Shirley met Bill again when he was still living in France but had

returned to California to renew his flight instructor's certificate. Shirley subsequently went to visit Bill in Paris for several weeks. When Bill returned to California in July, 1980 after his postdoc, he moved in with Shirley at her apartment in Berkeley.

Since it was a bad time to look for a permanent job in high energy physics, Bill decided to take an engineering job at a defense contractor, Dalmo Victor, in Belmont, California. After a year of a terrible commute from Berkeley to Belmont, Bill and Shirley found an apartment in the Noe Valley part of San Francisco. His last interesting project there involved a custom computer board using an Intel processor and a camera with a machine vision algorithm to examine highway traffic; Bill tried, without success, to sell this to the Maryland Department of Transportation.

Dual Career Partnership

In 1983, just before finishing her Ph.D. degree in condensed matter physics, Shirley started looking for a job. She interviewed at Bell Laboratories in New Jersey and IBM Research in New York. Since she and Bill were planning to get married, he also interviewed at both research labs. Shirley also interviewed for a job at the laser fusion division at Lawrence Livermore National Laboratory, but she ultimately accepted a job at IBM Research in San Jose, California, to build a scanning tunneling microscope (STM), which could make images of surfaces with atomic resolution. Meanwhile the hiring manager at Lawrence Livermore Lab, who had met Bill when he accompanied Shirley to dinner following her interview at the lab, offered Bill a job in the laser division. Since Bill liked the idea of going to work on physics problems again, albeit in a very different area, he took the job. They decided to stay in the Bay Area, as that seemed not only like a better place to live (Bill much preferred California to the East Coast), but also promised better job opportunities for both of them.

Marriage

Bill and Shirley got married on August 20, 1983, in Berkeley, California. They spent their honeymoon traveling in Europe via rail for 6 weeks (England, Scotland, Denmark, Netherlands, France, and Italy.) They also visited the STM inventors at the IBM Zurich Research Lab. In early 1984, they bought a

house in Fremont, California, which had a fixed mortgage interest rate of 13.5%!

Jobs

Bill's new job at Livermore Lab involved working with high power, short pulse lasers. Although he had previously held a top secret clearance, it took most of a year before he obtained the Q clearance that covers nuclear weapons and related materials.

After a year at Livermore, Charlie Smith, the new director of the Schlumberger Palo Alto Research Lab (SPAR, formerly Fairchild Semiconductor), offered him a job as Director of the Systems Science Lab. Thus, Bill again became an engineering manager at a lab, but one which consisted mostly of computer scientists. Bill loved working with PhDs. He loved their independence and appreciated their creativity. He did complain, however, that getting them to work together on a common project was like trying to choreograph an acre of monkeys. Bill was also a bit of an iconoclast. Most of the computer scientists used high powered Sun and Silicon Graphics workstations, so Bill bought an early Mac computer for his desk. One of his first pronouncements at the new lab was that in his view "Computer Science is not a Science!" While at Schlumberger, he and 4 others invented and patented an improved controller for an electrostatic plotter.

Cisco Systems

When Schlumberger decided in 1986 to move the lab to Austin, Texas, Bill helped his personnel to find new jobs. Sandy Lerner had been hired to manage the research computer systems for Schlumberger Computer Aided Systems Laboratory. She and her husband, Len Bosack, had been building computer networking routers in their living room, based on technology developed at Stanford where Len was working. Unable to raise capital, they hired Bill in early 1987 to be the first President and Chief Executive Officer of Cisco Systems. Bill negotiated an agreement to license the router software and two computer boards from Stanford and also figured out how to sell the products to numerous universities. He was a road warrior, spending a week in the office to oversee production and then a week on the road to sell routers. In December 1987 he negotiated \$2.5 million in venture funding from Sequoia Capital. Bill was pushed out of the company in May 1988 but

retained his stock until after the company went public in February 1990.

Family Life

Bill and Shirley's first son, Michael Graves, was born in April, 1989, and their second son, Charles Graves, was born in October, 1990.

In 1991, they bought a lot at the Resort at Squaw Creek and began discussions with an architect to design a house there. They started building in 1992. By 1994, the estimate to plumb the new house was more than the entire value of the Fremont house, so Bill decided to go and work on the house himself, becoming an owner-builder. He worked on the house for the next 8 years, while also managing his investments. He learned how to weld and did all of the plumbing and some of the electrical work.

Meanwhile, in 1994, UC Davis offered Shirley a position as a full professor in the physics department, and in September, the whole family, with three cages of chinchillas, moved to Davis. Bill purchased a condo on the ski trail at Northstar-at-Tahoe as a place to stay while working on the Squaw Valley house.

Skiing

Bill loved to ski and taught the boys to ski at Northstar. Michael and Charles joined the Development Team at Squaw Valley around ages 10 and 11. Alix joined the Mighty Mites there at age 4 in 2001. They all later skied for the Davis High Ski Team, helping the team to win several state championships. Even after the kids graduated, Bill continued to follow the DHS ski team, helping with races in the Tahoe area.

Open Hazards

Bill founded the Open Hazards Group with John Rundle and James Holliday in October, 2009. Bill was the President and Chief Executive Officer. He also worked on computer software, speeding up earthquake forecasting codes.

Health Issues

After the COVID-19 pandemic occurred in March, 2020, Bill and Shirley spent about a year and a half together at Squaw Valley. Bill passed away unexpectedly in his sleep of heart failure on April 29, 2022.