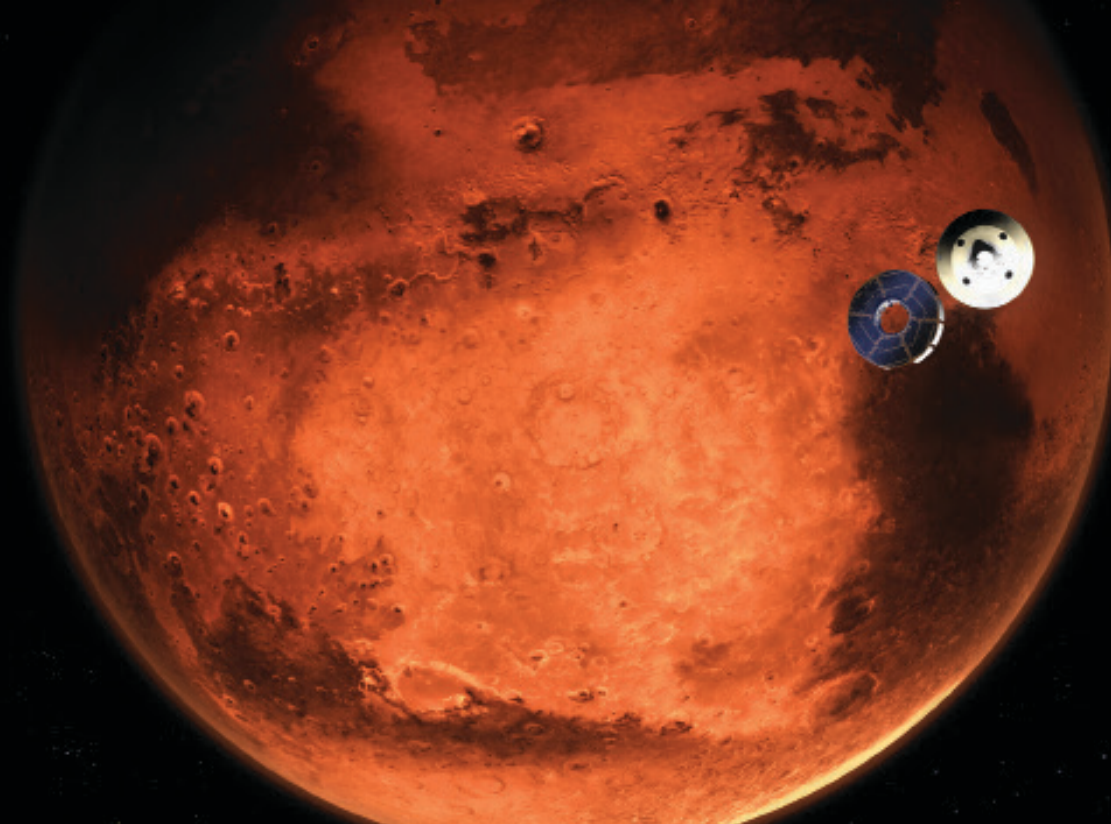


TECHNIQUES

A publication of
Caltech's Office of Gift Planning

SPRING 2021



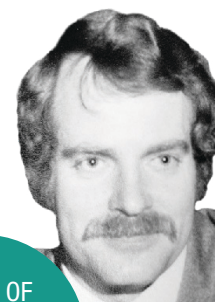
The Jet Propulsion Laboratory, which Caltech manages for NASA, created this illustration of the Perseverance rover casting off its spacecraft's hardware as it approaches the Martian atmosphere. Credit: NASA/JPL-Caltech

WHAT'S INSIDE

- pg.2 A Gift That's All in the Family
- pg.3 A Legacy for Young Engineers
- pg.4 Computing the Impact of a Gift to Caltech
- pg.5 In Case You Missed It: Caltech's Formula for Eminence in Education
- pg.7 *Break Through: The Caltech Campaign—and You*
- pg.7 Good News from Caltech

RECOGNIZE THIS ALUMNUS?

pg. 6



Caltech

Back row, from left: Jeffrey, Jillian, and Brian Nickerson
Front row, from left: Beverly and Bruce Nickerson



A Gift That's All in the Family

The Nickerson family's connection to Caltech goes back decades and runs deep.

Bruce Nickerson remembers attending the annual Reunion Weekend/Seminar Day as a young boy with his father, Douglas (BS '40). And when Bruce was in high school, the family welcomed a Caltech graduate student from Japan to their Sunday dinners as part of a Pasadena Rotary Club program. The student asked if his roommate could join them one evening, and that student became a weekly fixture at Nickerson gatherings, too. This was the start of a pattern that saw a succession of students regularly visiting the Nickerson household.



Douglas (BS '40, top) and Elizabeth Nickerson

"There were probably 25 grad students my parents got to know over the years," Bruce says. "Several of them had weddings in their garden in La Cañada. When I was taking care of my parents' effects [after they died], I found theses by these students that included warm notes of appreciation, thanking my parents for making them feel at home."

When Bruce and his wife, Beverly, were considering how to make a difference with their philanthropy, Caltech naturally came to mind.

"I've been associated with a number of world-class institutions, both directly and indirectly," says Bruce, a retired pediatric pulmonologist who now lives in Seal Beach, California. "Caltech stands out. There's this ambition, and the willingness to tackle impossible problems with incredible intellectual rigor."

AN UNCOMMON GIFT

In keeping with the theme of family, Bruce and Beverly consulted with their three adult children, Brian, Jeffrey, and Jillian, about the gift. According to Jillian, an emergency room doctor based in Washington, D.C., the choice was easy.

"Caltech holds a special place in our hearts and our family culture," she says. "It's been an honor, across our lifetimes, to be involved with Caltech."

The Nickersons made a *Break Through* campaign gift using an uncommon vehicle: the charitable lead trust. In this arrangement, their contribution generates a fixed annuity payment that will benefit the Institute for 20 years, after which the balance will revert to the family.

"Caltech gets a continuing income stream for the next couple of decades, and we get a nice tax deduction," Bruce says, "so everybody wins."

The family's gift provides current-use funds for the Nickerson Early-Career Professorship, established with a preference for female faculty members pursuing engineering and applied science across academic divisions.

BEING PART OF THE THRILL OF DISCOVERY

The family's practice of giving to Caltech began with Bruce's parents, Douglas and Elizabeth, who were ardent supporters of the Athenaeum and members of the Summer Undergraduate Research Fellowships (SURF) Board. In the 1980s, Elizabeth served as chair for both the Athenaeum House Committee and the SURF Board. In 1982, she organized a SURF kickoff

CONTINUED ON PAGE 5

Miki F. Young



A Legacy for Young Engineers

The Miki F. Young Charitable Trust has three trustees: lawyer Bill Kruse, banker Maureen Finn, and accountant Steve Eperthener. All worked with Miki Young for more than three decades, so they knew her well. She was confident, results-oriented, and determined. She was also sincere, humble, and gracious.

However, Young was also a private person, so the trustees didn't know a lot about her personal life. After her death, they were able to piece together some details: She attended the University of California, Santa Barbara, and she volunteered as an usher for the Laguna Playhouse. But they did not discover why she named Caltech a beneficiary in her will.

Although the nature of Young's connection to Caltech remains a mystery, her support for the Institute makes perfect sense. She and her husband, Cy Young, ran an aerospace and aircraft materials manufacturing company from 1963 until his passing in 1980. Miki Young continued to lead The Young Engineers, Inc., with her hand-picked management team for more than 30 years. During this time, Eperthener, Finn, and Kruse came to know her as a supporter of early-career professionals, a strong believer in the value of a good education, and a champion of women in the industry.

The trustees were pleased to establish the Young Memorial Scholarship at Caltech to support undergraduates, with a preference for female engineering students. "Miki wasn't a show-off, and she never did anything for recognition," Kruse says. "Of course, we're different. It makes us feel good to know that she will be remembered for who she was and what she believed in."

Legacy Society

In recent months, the following people have joined Caltech's Torchbearers Legacy Society.

Robert Chave

C. David Forgerson II (BS '77)

Craig P. Helberg (BS '69, MS '70)
and Sharon A. Helberg

Bruce G. Nickerson and
Beverly B. Nickerson

Antoinette F. Perpall

James G. Peterson (BS '74) and
Elaine M. Penwell Peterson

Lei Yu (PhD '87) and Yiping Wang

ESTATE GIFTS

From the estate of **John H. Nichols** (BS '45), Caltech received \$15,000 in unrestricted support.

From the estate of **Earl K. Seals**, Caltech received over \$879,000 in unrestricted support.

From the estate of **William Rodman Smythe** (BS '51, MS '52, PhD '57), Caltech received a partial distribution of over \$2,800,000 to be added to the William Ralph Smythe Scholarship.

Richard Kenyon, Torchbearers
Legacy Society member and violinist for
the Southern California Philharmonic

Computing the Impact of a Gift to Caltech

When Richard Kenyon was in junior high school, he became fascinated with the beautiful patterns of mathematics. Although his father, an engineer, thought his son would be better served by studying more “practical” subjects, he gave the young Kenyon a book on number theory. The boy wrote to the authors to inquire about practical applications.

“They never wrote back, probably not realizing I was just a young boy,” he shares. “But I continued to love math and became interested in computers before they became commonplace.”

Kenyon earned a bachelor’s degree in physics from Purdue University in 1950. After graduation, reasoning that the cost of an additional degree would be offset by the increased salary an advanced degree would afford, he obtained an MS in electrical engineering the following year. He then took the opportunity to work with a very early computer at Bell Labs—before it became a computer powerhouse. Four years later, he returned to his alma mater, which had just installed a much more powerful computer.

As a doctoral student, Kenyon taught computer programming classes at Purdue. He was named an assistant professor in the Division of Mathematical Sciences in 1961, after he received his PhD in electrical engineering. When Purdue established a computer science department the following year, he became one of its founding faculty members.

In 1965, Kenyon left Purdue and took a job in the computer center of aerospace and defense contractor McDonnell Aircraft Corporation. The job eventually brought him to California to focus on microcomputer projects. As he kept apprised



of computer science news, his attention was drawn to Caltech. He participated in various programs on campus and in 2011 even managed to secure a seat in a packed Beckman Auditorium to attend a lecture by Stephen Hawking.

In retirement, Kenyon developed a curiosity about his family ancestry. This, in turn, sparked an interest in molecular biology and DNA analysis. He returned to Caltech to hear geneticist Svante Pääbo deliver a guest lecture about sequencing Neanderthal DNA.

As Kenyon pondered what kinds of medical breakthroughs he might help fuel through his philanthropy, his thoughts again turned to Caltech. With non-taxable qualified charitable distributions from his IRA, Kenyon established the Kenyon Research Fund. The fund is designated for fundamental research in biology and will be amplified through his estate plan. Kenyon is excited about supporting discoveries that could lead to insights in neuroscience and refinements in precision medicine and diagnostics.

CONTINUED FROM PAGE 2

A Gift That's All in the Family

dinner at the Athenaeum, where students presented their research to faculty members and donors—an occasion so successful that it became an annual event.

The affinity for the Institute passed from one generation to the next. When Brian, Jeffrey, and Jillian were small, Bruce continued the Seminar Day tradition. The Nickerson family remained regulars at the Athenaeum's Christmas Gala, and Bruce and Beverly were married in the Athenaeum Library. They are longstanding life members of the Caltech Associates.

Special Caltech memories for Beverly, a retired nurse practitioner, relate to trips to the Jet Propulsion Laboratory, which Caltech manages on behalf of NASA. She and Bruce saw the Perseverance rover, destined for Mars, while it was still under construction. On a previous visit, they viewed the Curiosity rover's test-double in its practice pen.

"That was amazing," she says. "I just couldn't believe we were standing there watching all of this happen. It was such a privilege."

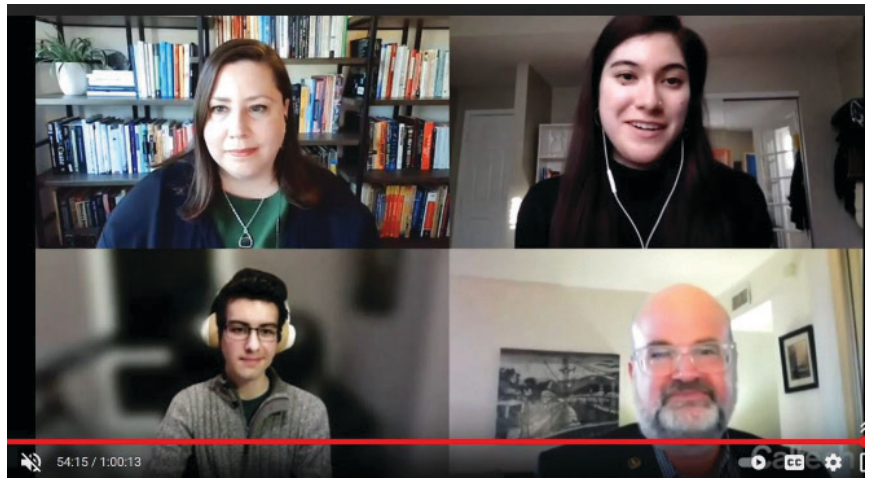
For the Nickersons, supporting the Institute is a way to be part of the thrill of discovery.

"I've always found Caltech to be an exciting place," Bruce says. "The world changes when our understanding of the world changes or we develop new technologies, and a lot of that comes out of Caltech."

In Case You Missed It: Caltech's Formula for Eminence in Education

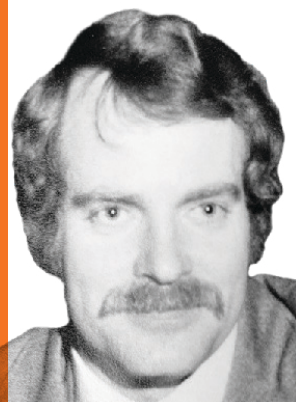
On March 24, 2021, Torchbearers Legacy Society members and friends gathered remotely for an inside perspective on the Center for Teaching, Learning, & Outreach (CTLO). Center director Cassandra Horii discussed Caltech's plan to achieve a level of teaching excellence that parallels its renowned research excellence, the shift to remote instruction during the pandemic, and educational outreach to enlighten and inspire future scientists and engineers. Joining the discussion were planetary science graduate student Aida Behmard (MS '19) and mechanical engineering major Daniel Neamati (class of 2021).

Visit <https://giftplanning.caltech.edu/Torchbearer-Events> for the recording of this event.



Clockwise from top left: Cassandra Horii, Aida Behmard, Jim Ehlers, and Daniel Neamati

Recognize This Alumnus?



This alumnus says he learned from the best. But, as he describes it, his greatest insights did not originate in laboratories or classrooms. His most notable Caltech moments occurred while socializing over beer in the basement of the Athenaeum, lunching at Burger Continental on Lake Avenue, and attending barbecues in faculty members' backyards.

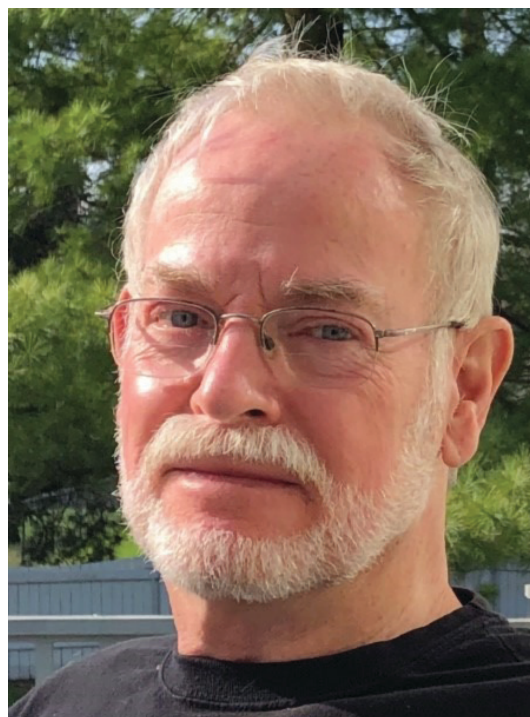
Although Caltech gave this alumnus extraordinary research opportunities and access to leading-edge instruments, he attributes the true value of his education to the mentors and colleagues who inspired him and taught him how to be an effective communicator and leader. "At Caltech, I learned that one of the most productive things a scientist can do is simply talk, without agenda, to other scientists," he explains. "I came to understand what physics is—and how to think like a physicist—not in lectures, but in conversations."

After earning his PhD, the physicist went on to become an assistant professor of radiology at the University of Washington. He worked there until he was recruited by Eastman Kodak Company, where he gained his own research lab. Among other successes, he and his interdisciplinary team designed a mammography imager that was honored with a prestigious R&D 100 Award in 2004.

Well before his retirement, **William Edwin (Bill) Moore (MS '71, PhD '76)** and Joan Moore, his wife of 41 years, began to think about their estate plan and agreed that they would leave Caltech whatever amount remained after they provided for their loved ones. Over the years, as Moore's career thrived, their nest egg—and their bequest to Caltech—grew.

Through his estate plan, Bill Moore created the Dr. William Edwin and Joan Jordan Moore Endowment. It was a decision he knew his wife, who passed away in 2015, had embraced. The fund will advance experimental physics at Caltech and likely will grow to include support for a professorship, a postdoctoral research associate, and a graduate student. "The way I see it," he says, "I wouldn't have had that money in the first place were it not for Caltech."

Moore is gratified to know that his gift to Caltech will support researchers at all levels for years to come. "My success and my love of Caltech," he says, "all come down to people."



William Edwin Moore (MS '71, PhD '76)

Good News from Caltech

A NEW HOME FOR NEUROSCIENCE

Caltech hosted a virtual dedication for the Tianqiao and Chrissy Chen Neuroscience Research Building on January 29, 2021. The 150,000-square-foot facility is home to the Tianqiao and Chrissy Chen Institute for Neuroscience at Caltech, which was spearheaded with a \$115 million campaign gift from the Chens in 2016. Located on Moore Walk, the building serves as a gateway to the northwest corner of campus. This new hub for brain research features state-of-the-art wet, dry, and computational laboratories; labs and offices for more than a dozen principal investigators; a neurotechnology lab; and a 150-seat lecture hall.



WHEELS TOUCH GROUND ON MARS

On February 18, 2021, after eight years of development at the Jet Propulsion Laboratory, the Perseverance rover successfully touched down on Mars. The landing site, Jezero Crater, is believed to have contained a lake billions of years ago. “Jezero would have been a place that was habitable,” says Ken Farley, the mission’s project scientist. “Life as we know it could have lived in that lake, and the mud of a delta is really good at preserving the biosignatures of life.” The rover will collect rock samples that a joint NASA–European Space Agency campaign will transport to Earth in 2031 for detailed analysis.



WHITE HOUSE APPOINTS ARNOLD

The Biden administration appointed Frances Arnold co-chair of the President’s Council of Advisors on Science and Technology (PCAST). Winner of the 2018 Nobel Prize in Chemistry and numerous other honors, including the 2011 National Medal of Technology and Innovation and the 2016 Millennium Technology Prize, Arnold is a pioneer in creating more sustainable biofuels, pharmaceuticals, and pesticide alternatives through protein and chemical engineering. She will advise the president on public policy related to technology, education, innovation, the American economy, national and homeland security, and other topics.



Break Through: The Caltech Campaign— and You

Your support helps Caltech scientists and engineers create a better world. There is still time to contribute to the *Break Through* campaign and enjoy a charitable tax deduction in return.

- A cash gift to Caltech can offset up to 100 percent of your adjusted gross income. Extending a popular incentive of the CARES Act, the Consolidated Appropriations Act of 2021 increases the amount of deductible cash contributions from 60 to 100 percent.
- A gift of appreciated securities (stocks, bonds, or mutual funds that have increased in value) can earn you an income-tax deduction equal to their fair market value, and capital gains taxes will not be assessed on the transfer.
- If you are 70-1/2 or older, a qualified charitable distribution (“IRA charitable rollover”) allows you to give up to \$100,000 tax-free.

Before the campaign’s sunset on September 30, 2021, contact the Office of Gift Planning to learn about ways of giving that can benefit you today and society in the future.



Office of Gift Planning
Mail Code 5-32
Pasadena, CA 91125



Contact Us

Techniques is published by Caltech's Office of Gift Planning. For more information about the stories featured in this issue, or if you have questions about deferred or other planned gifts, please call or email us.

PHONE: **(626) 395-2927**

EMAIL: **giftplanning@caltech.edu**

WEB: **giftplanning.caltech.edu**

Jim Ehlers

Senior Director

Natalie Piega

Deputy Director

Frank Bernal

Senior Gift Planning Officer

Rick Robertson

Senior Gift Planning Officer