## Obituary: Fred Kavli (1927 – 2013)

## Hirosi Ooguri Kavli IPMU Principal Investigator

On November 21, 2013, we received the sad news that Fred Kavli, Founder and Chairman of The Kavli Foundation, had passed away at the age of 86. He was an extraordinary man, and with his passing we feel the loss of one of the strongest advocates of basic science.

Fred Kavli was born on August 20, 1927 and grew up on a family farm in the Norwegian village of Eresfjord. After studying physics at the Norwegian Institute of Technology (now known as the Norwegian University of Science and Technology in Trondheim), he moved to the United States and founded the Kavlico Corporation, which became one of the world's largest suppliers of sensors for aeronautic, automotive, and industrial applications. Its products have been used in such landmark projects as the Lockheed SR-71 "Blackbird" (Mach 3+ strategic reconnaissance aircraft) and the Space Shuttle.

In 2000, Fred Kavli divested his interest in the company and established The Kavli Foundation to advance science for the benefit of humanity, to promote public understanding of scientific research, and to support scientists and their work. The Kavli Foundation currently supports seventeen Kavli Institutes of Science, seven university endowed chairs, and many other programs such as symposia,



Credit: Dan Dry; Photo Courtesy of The Kavli Foundation

workshops, and science outreach. In 2008, The Kavli Foundation launched the Kavli Prizes in partnership with the Norwegian Academy of Science and Letters and the Norwegian Ministry of Education and Research to recognize scientists for their seminal advances in astrophysics, nanoscience, and neuroscience.

Fred Kavli was a Fellow of the American Academy of Arts and Sciences, a member of the Norwegian Academy of Technological Sciences, and a member of the U.S. President's Council of Advisors on Science and Technology. He received many honors including the Royal Norwegian Order of Merit for Outstanding Service and honorary doctorates from the Norwegian University of Science and Technology, Northwestern University, and the University of Oslo. In 2011, he received the Bower Award for Business Leadership from the Franklin Institute, one of the oldest science education centers in the United States, and the Carnegie Medal of Philanthropy.

I am honored to be part of the vision of Fred Kavli,

as the inaugural Fred Kavli Professor of Theoretical Physics and Mathematics at the California Institute of Technology and a Principal Investigator of the Kavli Institute for the Physics and Mathematics of the Universe (Kavli IPMU) at the University of Tokyo. His enthusiasm for basic science was infectious. I vividly remember his passionate speech at the 2012 Kavli Prize ceremony in Oslo describing his interest in the latest advances in astrophysics, nanoscience, and neuroscience, and his speaking eloquently on the joy of life enhanced by the scientific understanding of nature.

In 2012, the IPMU joined the Kavli family of institutes and changed its name to the Kavli IPMU. This was the first time for a national university in Japan to receive a donation from a foundation abroad to create an endowment to support research. The perpetual funding from the endowment provides a secure foundation for the Kavli IPMU and ensures that the institute will remain at the forefront of its field in the future.

Let me quote from a remark by Fred Kavli at the Kavli IPMU Naming Ceremony, which took place on May 10, 2012 at the Kavli IPMU building on the Kashiwa campus of the University of Tokyo:

"I grew up on the other side of the planet earth in a green valley in Western Norway, flanked by tall mountains — where I would experience the power and beauty of nature as thunder and lightning would shake the valley from mountainside to mountainside. And at times the whole sky was aflame with the northern lights shifting and dancing across the sky, down to the white clad mountaintops. In the stillness and loneliness of the white mountains, I would so clearly see the Milky Way and the stars and the immenseness of the universe — so big beyond imagination. I pondered the universe, the planet, nature and the wonders of man. I'm still pondering."

"It has been a long road from the while mountaintops of Norway. After studying physics at the Norwegian Technical University, I came to America and settled down in southern California where I had a long journey through the business world. My interests are now back full circle to where I started — to the Universe — from the smallest building blocks to the vastness and incredible wonders of space and to the emerging master of nature, the human brain."

"We support science worldwide through our philanthropic effort. Philanthropy is a great tradition in the United States of giving back to society and I am very pleased to be able to share our philanthropic tradition with Japan — a great friend of America. It is a privilege to partner with IPMU in our quest to support excellence in science through cooperation across national borders worldwide."

Rockell Hankin, Vice Chairman of the Board of The Kavli Foundation, and Robert Conn, the President of The Kavli Foundation, wrote to us:

"Fred always looked to the future, which is why he had a special appreciation for the critical importance of the scientific enterprise. He understood that basic research rarely brings immediate rewards, but he also understood that future generations would come to depend on the discoveries of science to create a better world."

"Fred always believed his greatest legacy would be the scientific accomplishments of the community of scientists working at Kavli Institutes and at great institutions to make the world a better place for us all. This is what always brought him the greatest joy."

As we pause to reflect on the meaning that Fred Kavli gave to our lives, we find ourselves enriched by his commitment and dedication to the advancement of science. We will endeavor to honor his legacy.

Obituary