

The ECE DEI Committee presents:
Asian American and Pacific Islander Heritage Month
Weekly Highlight
May 5, 2023

Chen Ning Yang

Chinese American physicist, winner of Nobel Prize for Physics 1957

Chen Ning Yang is a Chinese American theoretical physicist whose research with Tsung-Dao Lee showed that parity—the symmetry between physical phenomena occurring in right-handed and left-handed coordinate systems—is violated when certain elementary particles decay. Until this discovery it had been assumed by physicists that parity symmetry was as universal a law as the conservation of energy or electric charge. This and other studies in particle physics earned Yang and Lee the Nobel Prize for Physics for 1957.



From 1965, Yang was Albert Einstein professor at the Institute of Science, State University of New York at Stony Brook, Long Island. During the 1970s, he was a member of the board of Rockefeller University and the American Association for the Advancement of Science and, from 1978, of the Salk Institute for Biological Studies, San Diego. He received the Einstein Award in 1957 and the Rumford Prize in 1980; in 1986 he received the Liberty Award and the National Medal of Science. Professor Yang has been elected Fellow of the American Physical Society and the Academia Sinica.

Chen Ning Yang was born on September 22, 1922, in Hefei, Anhui, China, the first of five children of Ke Chuan Yang and Meng Hwa Loh Yang. He was brought up in the peaceful and academically inclined atmosphere of the campus of Tsinghua University, Beijing, China. He received his college education at the National Southwest Associated University in Kunming, China, and completed his B.Sc. degree there in 1942. His M.Sc. degree was received in 1944 from Tsinghua University, which had moved to Kunming during the Sino-Japanese War (1937-1945). He went to the U.S.A. at the end of the war on a Tsinghua University Fellowship, and entered the University of Chicago in January 1946. At Chicago he came under the strong influence of Professor E. Fermi. After receiving his Ph.D. degree in 1948, Yang served for a year at the University of Chicago as an Instructor. He has been associated with the Institute for Advanced Study, Princeton, New Jersey, U.S.A., since 1949, where he became a Professor in 1955. He became a U.S. citizen in 1964.

Nobel Prize Work

Almost from his earliest days as a physicist, Yang had made significant contributions to the theory of the weak interactions—the forces long thought to cause elementary particles to disintegrate. (The strong forces that hold nuclei together and the electromagnetic forces that are responsible for chemical reactions are parity-conserving. Since these are the dominant forces in most physical processes, parity conservation appeared to be a valid physical law, and few physicists before 1955 questioned it.) By 1953 it was recognized that there was a fundamental paradox in this field since one of the newly discovered mesons—the so-called K meson—seemed to exhibit decay modes into configurations of differing parity. Since it was believed that parity had to be conserved, this led to a severe paradox.

After exploring every conceivable alternative, Lee and Yang were forced to examine the experimental foundations of parity conservation itself. They discovered, in early 1956, that, contrary to what had been assumed, there was no experimental evidence against parity nonconservation in the weak interactions. The experiments that had been done, it turned out, simply had no bearing on the question. They suggested a set of experiments that would settle the matter, and, when these were carried out by several groups over the next year, large parity-violating effects were discovered. In addition, the experiments also showed that the symmetry between particle and antiparticle, known as charge conjugation symmetry, is also broken by the weak decays.

References:

[C. N. Yang: Stony Brook Masters Series- YouTube](#)

https://en.wikipedia.org/wiki/Yang_Chen-Ning

Yu Shi, “Beauty and Physics: 13 Important Contributions of Chen Ning Yang”, <https://arxiv.org/abs/1702.01901>.

Chen Ning Yang - Biography, <https://www.tsinghua.edu.cn/en/info/1244/2414.htm>

The ECE DEI Committee presents:
Asian American and Pacific Islander Heritage Month
Weekly Highlight -May 12, 2023

Daniel Ken Inouye
Medal of Honor Recipient



Daniel Ken Inouye was born on September 7, 1924 in Honolulu, Hawaii. Inouye's parents were the children of Japanese immigrants. His father, Hyotaro Inouye, was the son of laborers, while his mother, Kame Imanaga, was an orphan who had been adopted by a Methodist minister's family. He received his undergraduate degree from the University of Hawaii, and his law degree from George Washington University. During World War II, Inouye served in the U.S. Army's 442nd Regimental Combat Team. Composed of soldiers of Japanese ancestry, the 442nd became one of the most decorated military units in U.S. history. For his combat heroism, which cost him his right arm, Inouye was awarded the Congressional Medal of Honor, the Distinguished Service Cross, the Bronze Star, and the Purple Heart with Cluster. Following the war, he practiced law in Hawaii before entering territorial politics in 1954. When Hawaii became the 50th state, Inouye became one of its first representatives in the U.S. Congress. In 1962 he won election to the U.S. Senate. Senator Inouye gained national distinction in the 1970s as a member of the Senate Watergate Committee and, in 1987, as chairman of the Senate Iran-Contra Committee. He was a longtime member of the Senate Appropriations Committee, which he chaired from 2009 to 2012, and also served as the Senate's president pro tempore from 2010 until his death in 2012. In 2013 Senator Inouye was posthumously awarded the Presidential Medal of Freedom, becoming the first—and to date, only—senator to receive both the Medal of Freedom and the Medal of Honor.

WWII Hero story: On Sunday, December 7, 1941, the Imperial Japanese Navy bombed the US naval and air bases at Pearl Harbor. In an oral history interview with The National WWII Museum, Inouye remembered his experience on that fateful day. He was getting ready for church, when the radio announcer began frantically repeating that Pearl Harbor was under attack by the Japanese. "We looked towards Pearl Harbor and puff! All the smoke. And you could see puffs of the anti-aircraft shells exploding. And then, all of the sudden, three aircraft flew right over us. Green color with the red dot in the wing. I knew my life had changed." Inouye rushed to a Red Cross aid station to help civilians and sailors wounded in the attack.

The American government, however, denied all Americans of Japanese descent the right to serve in the armed forces. "Though I was a citizen of the United States," Inouye explained, "I was declared to be an enemy alien and as a result not fit to put on the uniform of the United States." In the continental United States, the federal government imprisoned 112,000 men, women, and children of Japanese descent beginning in March 1942. More than 70,000 of those incarcerated were American citizens. No charges were brought against them, and they could not appeal their confinement. The US government did not incarcerate the millions of American citizens who had been born in Italy or Germany, even though the United States was also at war with those nations. Even though Inouye knew that thousands of Japanese Americans were being wrongfully imprisoned and deprived of their property, he and other men of Japanese descent petitioned the US government to allow them to serve in the armed forces. Consequently, the government changed its policy and announced the formation of several segregated Japanese American battalions. Upon hearing the news, Inouye immediately quit his pre-med studies at the University of Hawaii and enlisted in the US Army. He was assigned to Company E in the 2nd Battalion of the 442nd Regimental Combat Team, a regiment made up exclusively of Japanese American enlisted men but commanded almost entirely by Caucasian officers.

Inouye's regiment fought in the Italian theater beginning in the summer of 1944. His unit then took part in the fighting in France where it successfully rescued the First Battalion of the 141st Infantry Regiment, which had been surrounded by German forces. The 442nd suffered devastating casualties in the assault. Some companies in Inouye's regiment had fewer than a dozen men when the engagement ended. On the morning of April 21, 1945, Inouye led his platoon in an assault on a German-held ridge near the village of San Terenzo. Three German machine guns opened fire on Inouye and his men as they attacked. A bullet pierced Inouye's torso, but he continued to advance. He crawled to within five yards of the enemy emplacement and threw two more grenades, killing the enemy machine gunners. He then killed the crew of a second machine gun with his submachine gun. He was then hit by a rifle grenade on his right elbow, disabling that arm, but still managed to kill the enemy with his left arm. Nine hours after being wounded, Inouye finally arrived at a field hospital, where he received 17 blood transfusions, and the remainder of Inouye's mutilated right arm was amputated without anesthesia. He was awarded the Distinguished Service Cross for his bravery and spent the next two years in army hospitals recuperating.

Ref: [U.S. Senate: Daniel K. Inouye: A Featured Biography](#); [Medal of Honor Recipient Daniel Inouye Led a Life of Service to His Country](#) | [The National WWII Museum](#) | [New Orleans \(nationalww2museum.org\)](#)

The ECE DEI Committee presents:
Asian American and Pacific Islander Heritage Month
Weekly Highlight -May 19, 2023

Yo-Yo Ma
World Renowned Cellist

Yo-Yo Ma's multi-faceted career is testament to his belief in culture's power to generate trust and understanding. Whether performing new or familiar works for cello, bringing communities together to explore culture's role in society, or engaging unexpected musical forms, Yo-Yo strives to foster connections that stimulate the imagination and reinforce our humanity.



Most recently, Yo-Yo began **Our Common Nature**, a cultural journey to celebrate the ways that nature can reunite us in pursuit of a shared future. Our Common Nature follows the **Bach Project**, a 36-community, six-continent tour of J. S. Bach's cello suites paired with local cultural programming. Both endeavors reflect Yo-Yo's lifelong commitment to stretching the boundaries of genre and tradition to understand how music helps us to imagine and build a stronger society.

It was this belief that inspired the formation of **Silkroad**, the global music collective. Through his work with Silkroad, as well as throughout his career, Yo-Yo Ma has sought to expand the cello repertoire, premiering compositions by Osvaldo Golijov, Leon Kirchner, Zhao Lin, Esa-Pekka Salonen, Giovanni Sollima, and John Williams, among many others.

In addition to his work as a performing artist, Yo-Yo has partnered with communities and institutions around the world to develop programs that advocate for a future guided by humanity, trust, and understanding. Among his many roles, Yo-Yo is a United Nations Messenger of Peace, the first artist ever appointed to the World Economic Forum's board of trustees, and a member of the board of Nia Tero, the US-based nonprofit working in solidarity with Indigenous peoples and movements worldwide.

Yo-Yo's **discography** of more than **120 albums** (including **19 Grammy Award winners**) ranges from iconic renditions of the Western classical canon to recordings that defy categorization, such as "Hush" with Bobby McFerrin and the "Goat Rodeo Sessions" with Stuart Duncan, Edgar Meyer, and Chris Thile. Yo-Yo's recent releases include "Six Evolutions," his third recording of Bach's cello suites, and "Songs of Comfort and Hope," created and recorded with pianist Kathryn Stott in response to the COVID-19 pandemic. Yo-Yo's latest album, "Beethoven for Three: Symphony No. 6 and Op. 1, No. 3," is the second in a new series of Beethoven recordings with pianist Emanuel Ax and violinist Leonidas Kavakos.

Yo-Yo was born in 1955 to Chinese parents living in Paris. He began to study the cello with his father at age four and three years later moved with his family to New York City, where he continued his cello studies at the Juilliard School before pursuing a liberal arts education at Harvard. He has received numerous awards, including the **Avery Fisher Prize (1978)**, the **National Medal of the Arts (2001)**, the **Presidential Medal of Freedom (2010)**, **Kennedy Center Honors (2011)**, the **Polar Music Prize (2012)**, and the **Birgit Nilsson Prize (2022)**. He has performed for nine American presidents, most recently on the occasion of President Biden's inauguration.

Yo-Yo and his wife have two children. He plays three instruments: a 2003 instrument made by Moes & Moes, a 1733 Montagnana cello from Venice, and the 1712 Davidoff Stradivarius.

[Biography | Yo-Yo Ma](#)

The ECE DEI Committee presents:
Asian American and Pacific Islander Heritage Month
Final Weekly Highlight - May 26, 2023



Jensen Huang
NVIDIA Founder, President, & CEO

Jensen Huang founded NVIDIA in 1993 and has served since its inception as president, chief executive officer and a member of the board of directors.

Starting out in PC graphics, NVIDIA helped build the gaming market into the largest entertainment industry in the world today. The company's invention of the GPU in 1999 made possible real-time programmable shading, which defines modern computer graphics, and later revolutionized parallel computing. More recently, GPU deep learning ignited modern AI — the next era of computing — with the GPU acting as the brain of computers, robots and self-driving cars that can perceive and understand the world.

Huang is a recipient of the Semiconductor Industry Association's highest honor, the Robert N. Noyce Award; IEEE Founder's Medal; the Dr. Morris Chang Exemplary Leadership Award; and honorary doctorate degrees from Taiwan's National Chiao Tung University, National Taiwan University, and Oregon State University. He has been named the world's best CEO by Harvard Business Review and Brand Finance, as well as Fortune's Businessperson of the Year and one of TIME magazine's 100 most influential people.

Prior to founding NVIDIA, Huang worked at LSI Logic and Advanced Micro Devices. He holds a BSEE degree from Oregon State University and an MSEE degree from Stanford University.

Personal Life:

Jensen Huang was born on the 17th of February in 1963 in the Coastal city of Tainan, Taiwan. In his early childhood, Jensen's family moved to the United States, to the Oneida, Kentucky, then finally Oregon. At his young age, Jensen used to play tennis and was once a third junior double at the U.S Table Tennis Open while he was the age of 15. He is married to his Wife, Lori, and they have two children.

[Jensen Huang | NVIDIA Newsroom](#)