

# Stephen Hawking, best-known physicist of his time, has died

March 14 2018, by Robert Barr

---



In this March 30, 2015 file photo, Professor Stephen Hawking arrives for the Interstellar Live show at the Royal Albert Hall in central London. Hawking, whose brilliant mind ranged across time and space though his body was paralyzed by disease, has died, a family spokesman said early Wednesday, March 14, 2018. (Photo by Joel Ryan/Invision/AP, File)

Stephen Hawking, whose brilliant mind ranged across time and space

though his body was paralyzed by disease, died Wednesday. He was 76.

Hawking died at his home in Cambridge, England, according to a statement by the University of Cambridge.

The best-known theoretical physicist of his time, Hawking wrote so lucidly of the mysteries of space, time and black holes that his book, "A Brief History of Time," became an international best-seller, making him one of science's biggest celebrities since Albert Einstein.

"He was a great scientist and an extraordinary man whose work and legacy will live on for many years," his children Lucy, Robert and Tim said in a statement. "His courage and persistence with his brilliance and humour inspired people across the world. He once said, 'It would not be much of a universe if it wasn't home to the people you love.' We will miss him forever."

Even though his body was attacked by amyotrophic lateral sclerosis, or ALS, when Hawking was 21, he stunned doctors by living with the normally fatal illness for more than 50 years. A severe attack of pneumonia in 1985 left him breathing through a tube, forcing him to communicate through an electronic voice synthesizer that gave him his distinctive robotic monotone.

But he continued his scientific work, appeared on television and married for a second time.

As one of Isaac Newton's successors as Lucasian Professor of Mathematics at Cambridge University, Hawking was involved in the search for the great goal of physics—a "unified theory."



In this March 6, 2017 file photo, Britain's Professor Stephen Hawking delivers a keynote speech as he receives the Honorary Freedom of the City of London during a ceremony at the Guildhall in the City of London. Hawking, whose brilliant mind ranged across time and space though his body was paralyzed by disease, has died, a family spokesman said early Wednesday, March 14, 2018. (AP Photo/Matt Dunham, File)

Such a theory would resolve the contradictions between Einstein's theory of relativity, which describes the laws of gravity that govern the motion of large objects like planets, and the quantum mechanics theory, which deals with the world of subatomic particles.

For Hawking, the search was almost a religious quest—he said finding a "theory of everything" would allow mankind to "know the mind of God."

"A complete, consistent unified theory is only the first step: our goal is a

complete understanding of the events around us, and of our own existence," he wrote in "A Brief History of Time."

In later years, though, he suggested a unified theory might not exist.

He followed up "A Brief History of Time" in 2001 with the more accessible sequel "The Universe in a Nutshell," updating readers on concepts like super gravity, naked singularities and the possibility of an 11-dimensional universe.

Hawking said belief in a God who intervenes in the universe "to make sure the good guys win or get rewarded in the next life" was wishful thinking.

"But one can't help asking the question: Why does the universe exist?" he said in 1991. "I don't know an operational way to give the question or the answer, if there is one, a meaning. But it bothers me."



In this March 30, 2015 file photo, Professor Stephen Hawking poses for photographers upon arrival for the Interstellar Live show at the Royal Albert Hall in central London. Hawking, whose brilliant mind ranged across time and space though his body was paralyzed by disease, has died, a family spokesman said early Wednesday, March 14, 2018. (Photo by Joel Ryan/Invision/AP, File)

The combination of his best-selling book and his almost total disability—for a while he could use a few fingers, later he could only tighten the muscles on his face—made him one of science's most recognizable faces.

He made cameo television appearances in "The Big Bang Theory," "The Simpsons" and "Star Trek: The Next Generation" and counted among his fans U2 guitarist The Edge, who attended a January 2002 celebration of Hawking's 60th birthday.

His early life was chronicled in the 2014 film "The Theory of Everything," with Eddie Redmayne winning the best actor Academy Award for his portrayal of the scientist. The film focused still more attention on Hawking's remarkable achievements.

Some colleagues credited that celebrity with generating new enthusiasm for science.

His achievements and his longevity helped prove to many that even the most severe disabilities need not stop patients from living.

Richard Green, of the Motor Neurone Disease Association—the British name for ALS—said Hawking met the classic definition of the disease, as "the perfect mind trapped in an imperfect body." He said Hawking had been an inspiration to people with the disease for many years.

Although it could take him minutes to compose answers to even simple questions Hawking said the disability did not impair his work. It certainly did little to dampen his ambition to physically experience space himself: Hawking savored small bursts of weightlessness in 2007 when he was flown aboard a jet that made repeated dives to simulate zero-gravity.



In this March 30, 2015 file photo, Professor Stephen Hawking arrives for the Interstellar Live show at the Royal Albert Hall in central London. Hawking, whose brilliant mind ranged across time and space though his body was paralyzed by disease, has died, a family spokesman said early Wednesday, March 14, 2018. (Photo by Joel Ryan/Invision/AP, File)

Hawking had hoped to leave Earth's atmosphere altogether someday, a trip he often recommended to the rest of the planet's inhabitants.

"In the long run the human race should not have all its eggs in one

basket, or on one planet," Hawking said in 2008. "I just hope we can avoid dropping the basket until then."

Hawking first earned prominence for his theoretical work on black holes. Disproving the belief that black holes are so dense that nothing could escape their gravitational pull, he showed that black holes leak a tiny bit of light and other types of radiation, now known as "Hawking radiation."

"It came as a complete surprise," said Gary Horowitz, a theoretical physicist at the University of California, Santa Barbara. "It really was quite revolutionary."

Horowitz said the find helped move scientists one step closer to cracking the unified theory.

Hawking's other major scientific contribution was to cosmology, the study of the universe's origin and evolution. Working with Jim Hartle of the University of California, Santa Barbara, Hawking proposed in 1983 that space and time might have no beginning and no end. "Asking what happens before the Big Bang is like asking for a point one mile north of the North Pole," he said.

In 2004, he announced that he had revised his previous view that objects sucked into black holes simply disappeared, perhaps to enter an alternate universe. Instead, he said he believed objects could be spit out of black holes in a mangled form.





In this March 6, 2017 file photo, Britain's Professor Stephen Hawking is presented with his illuminated Freedom scroll by the Chamberlain of the City of London Peter Kane as he receives the Honorary Freedom of the City of London during a ceremony at the Guildhall in the City of London. Hawking, whose brilliant mind ranged across time and space though his body was paralyzed by disease, has died, a family spokesman said early Wednesday, March 14, 2018. (AP Photo/Matt Dunham, File)

That new theory capped his three-decade struggle to explain a paradox in scientific thinking: How can objects really "disappear" inside a black hole and leave no trace, as he long believed, when subatomic theory says information can be transformed but never fully destroyed?

Hawking was born Jan. 8, 1942, in Oxford, and grew up in London and St. Albans, northwest of the capital. In 1959, he entered Oxford University and then went on to graduate work at Cambridge.

Signs of illness appeared in his first year of graduate school, and he was diagnosed with ALS, also known as Lou Gehrig's disease after the New York Yankee star who died of it. The disease usually kills within three to five years.

According to John Boslough, author of "Stephen Hawking's Universe," Hawking became deeply depressed. But as it became apparent that he was not going to die soon, his spirits recovered and he bore down on his work. Brian Dickie, director of research at the Motor Neurone Disease Association, said only 5 percent of those diagnosed with ALS survive for 10 years or longer. Hawking, he added, "really is at the extreme end of the scale when it comes to survival."

Hawking married Jane Wilde in 1965 and they had three children, Robert, Lucy and Timothy.

Jane cared for Hawking for 20 years, until a grant from the United States paid for the 24-hour care he required.

He was inducted into the Royal Society in 1974 and received the Albert Einstein Award in 1978. In 1989, Queen Elizabeth II made him a Companion of Honor, one of the highest distinctions she can bestow.



This May 31, 2015 photo shows Professor Stephen Hawking in London. Hawking, whose brilliant mind ranged across time and space though his body was paralyzed by disease, died early Wednesday, March 18, 2018, a University of Cambridge spokesman said. He was 76.(Philip Toscano/PA via AP)

He whizzed about Cambridge at surprising speed—usually with nurses or teaching assistants in his wake—traveled and lectured widely, and appeared to enjoy his fame. He retired from his chair as Lucasian Professor in 2009 and took up a research position with the Perimeter Institute for Theoretical Physics in Waterloo, Ontario.

Hawking divorced Jane in 1991, an acrimonious split that strained his relationship with their children. Writing in her autobiographical "Music to Move the Stars," she said the strain of caring for Hawking for nearly three decades had left her feeling like "a brittle, empty shell." Hawking married his one-time nurse Elaine Mason four years later, but the

relationship was dogged by rumors of abuse.

Police investigated in 2004 after newspapers reported that he'd been beaten, suffering injuries including a broken wrist, gashes to the face and a cut lip, and was left stranded in his garden on the hottest day of the year.

Hawking called the charges "completely false." Police found no evidence of any abuse. Hawking and Mason separated in 2006.

Lucy Hawking said her father had an exasperating "inability to accept that there is anything he cannot do."

"I accept that there are some things I can't do," he told The Associated Press in 1997. "But they are mostly things I don't particularly want to do anyway."

Then, grinning widely, he added, "I seem to manage to do anything that I really want."

**More information:** Hawking's website: [www.hawking.org.uk](http://www.hawking.org.uk)

© 2018 The Associated Press. All rights reserved.

Citation: Stephen Hawking, best-known physicist of his time, has died (2018, March 14) retrieved 27 April 2024 from <https://phys.org/news/2018-03-stephen-hawking-best-known-physicist-died.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.