

Stephen Hawking celebrates 70th birthday

January 8 2012, by Jacqueline Pietsch

British scientist Stephen Hawking celebrated his 70th birthday Sunday, an age many experts never expected the motor neurone disease sufferer to reach.

When Hawking was diagnosed with the debilitating condition aged 21, he was given only a few years to live.

But despite spending most of his life in a wheelchair and able to speak only through a computer, the theoretical physicist's quest for the secrets of the universe has made him arguably the most famous scientist in the world.

"I'm sure my disability has a bearing on why I'm well known," he once said. "People are fascinated by the contrast between my very limited physical powers, and the vast nature of the universe I deal with."

To mark his birthday, Hawking was to make a speech to friends and colleagues and host a symposium on "the state of the universe" at Cambridge University, where he has worked for decades.

Much of his work has centred on bringing together relativity (the nature of space and time) and <u>quantum theory</u> (how the smallest particles in the universe behave) to explain the creation of the universe and how it is governed.

In 1974, aged just 32, Hawking became one of the youngest fellows of Britain's prestigious Royal Society. Five years later he became Lucasian



Professor of Mathematics at Cambridge, a post once held by <u>Isaac</u> <u>Newton</u>.

His fame moved beyond academia in 1988 with the publication of his book "A <u>Brief History of Time</u>", which explained the nature of the universe to non-scientists, and sold millions of copies worldwide.

Hawking's stardom was later cemented in cameos in "Star Trek" and "The Simpsons", where he tells the rotund <u>Homer Simpson</u> that he likes his theory of a "doughnut-shaped universe", and may have to steal it.

As Hawking's age advances, he could be at risk of losing his famous computerised voice due to the gradual loss of muscle control in his cheek, his personal assistant said ahead of his birthday.

"His speech has got slower and slower and on a bad day he can only manage about one word a minute," Judith Croasdell said in the Daily Telegraph.

"We think it may be because of the deterioration in his check muscle. We are looking to improve the situation and he needs to test out new technology."

Martin Rees, Britain's Astronomer Royal and a former president of the Royal Society, who first met Hawking when they were both research students, marvelled at his longevity.

He admitted that when they first met, "it was thought he might not live long enough to finish his PhD degree."

His survival made him a "medical marvel," Rees said, but stressed that it was his work that would prove his lasting legacy.



"His fame should not overshadow his scientific contributions because even though most scientists are not as famous as he is, he has undoubtedly done more than anyone else since Einstein to improve our knowledge of gravity."

Hawking was just 21 when he was diagnosed with amyotrophic lateral sclerosis (ALS), a form of motor neurone disease that attacks the nerves controlling voluntary movement.

Brian Dickie, research director of the MND Association, says most sufferers live for less than five years, adding: "The fact that <u>Stephen Hawking</u> has lived with the disease for close to 50 years makes him exceptional."

Hawking admitted he felt "somewhat of a tragic character" after diagnosis, but he soon returned to work, securing a fellowship at Cambridge, and married Jane Wilde, with whom he had three children.

Professor Kip Thorne, the acclaimed US <u>theoretical physicist</u> who will speak at the symposium on Sunday, said his illness had been instrumental to his work.

"When Stephen lost the use of his hands and could no longer manipulate equations on paper, he compensated by training himself to manipulate complex shapes and topologies in his mind at great speed," he said.

"That ability has enabled him to see the solutions to deep physics problems that nobody else could solve, and that he probably would not have been able to solve, himself, without his newfound skill."

Hawking's birthday will also be marked by a new exhibition celebrating his achievements which opens at London's Science Museum on January 20.



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