

# From the Editor

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**M**IT Professor Emeritus Edward Norton Lorenz passed away at the age of 90 in his home in Cambridge, Massachusetts on April 16, 2008.

While working on the celebrated Lorenz system as a major effort in my academic career, I always carried a personal gratitude to him for his breakthrough discovery of chaos in 1963. Nothing seems to have prepared me for writing with deepest sympathy and heartfelt sadness these words of condolence to you today regarding the sudden demise of the Father of Chaos.

Not only the IEEE Circuits and Systems Society, but also the entire nonlinear science community, mourns for the death of this great pioneer and feels the painful loss of a science star.

Laymen knew Lorenz for his discovery of the so-called 'butterfly effect', described in his 1972 paper "Predictability: Does the flap of a butterfly's wings in Brazil set off a tornado in Texas?"; however, professionals knew him much earlier and better for the Lorenz system and Lorenz attractor he coined and documented in his 1963 paper entitled "Deterministic nonperiodic flow." His well-known and memorable 1993 monograph "The Essence of Chaos", in which he wrote "... a man sneezing in China may set people to shoveling snow in New York", pithily introduces the subject to the public. All these sayings point to the very essence of chaos that a tiny change in the initial condition of a chaotic system can have a tremendous dynamical consequence that is literally unpredictable.

Born in 1917 in West Hartford, Connecticut, Lorenz received a bachelor's degree in mathematics from Dartmouth College in 1938 followed by a master's degree, also in mathematics, from Harvard University in 1940. He then worked as a weather forecaster during World War II for the United States Army Air Corps, which led him to pur-

sue higher studies in meteorology. He later earned another master's degree and a Ph.D. in the field from MIT in 1943 and 1948, respectively. Lorenz worked in the Department of Meteorology at MIT since 1948, where he was promoted to a full professor in 1962, then served as the department head from 1977 to 1981, and finally became a professor emeritus in 1987.

The most remarkable honor that Lorenz ever received was the prestigious Kyoto Prize in 1991, for establishing "the theoretical basis of weather and climate predictability, as well as the basis for computer-aided atmospheric physics and meteorology." The Kyoto Prize Committee added that Lorenz "made his boldest scientific achievement in discovering 'deterministic chaos,' a principle which has profoundly influenced a wide range of basic sciences and brought about one of the most dramatic changes in mankind's view of nature since Sir Isaac Newton." As a side note, to highlight the prestige of the award, it is worth mentioning that the first Kyoto Laureate from MIT was Claude E. Shannon, awarded in 1984, for his pioneering work and fundamental contributions in information theory.

Edward Lorenz did not stop his work after he found Chaos or after he received the Kyoto Prize. He had been continuously working as a never-tired and also never-retired scientist. Respectably, according to his daughter Cheryl Lorenz, before saying goodbye to the world, "he finished a paper a week ago with a colleague."

Professor Edward Norton Lorenz has just left us, but he is simply making a new endeavor in searching for a new butterfly in a new world. May God forever bless him as well as all our role models in science and engineering.

A handwritten signature in black ink that reads "G Ron Chen". The signature is written in a cursive, flowing style.

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