

# Wolfgang Fuchs

*May 19, 1915 — February 24, 1997*

Wolfgang Fuchs, Professor of Mathematics, Emeritus, died February 24, 1997, at his home in Ithaca, surrounded by his loving family. His life was celebrated at a remarkably joyful memorial service on March 8, 1997 in the chapel of Anabel Taylor Hall, with more than 200 people in attendance.

Wolfgang was born on May 19, 1915 in Munich, Germany. His parents foresightedly sent him to England in 1933. He enrolled at Cambridge University, receiving his B.A. degree from St. John's College in 1936 and his Ph.D. degree in 1941, under the supervision of A.E. Ingham. Between 1938-50, Wolfgang held academic positions in Aberdeen, Swansea, and Liverpool. He came to the Cornell Mathematics Department as a Visiting Associate Professor in 1948 and returned as a permanent member of the faculty in 1950. Except for leaves, he stayed at Cornell for the rest of his life. He received a Guggenheim fellowship in 1955, was promoted to Professor in 1958, and served as department chair from 1969-73. He was a Fulbright-Hays Research Fellow in 1973-74 and a Humboldt Senior Scientist in 1978-79. Although he officially retired in 1985, he remained active in the Mathematics Department until his death.

Wolfgang's mathematical training was in complex function theory, but he had broad mathematical interests and often applied sophisticated function theoretic techniques to questions from other areas of mathematics. For example, his 1946 paper in the *Journal of the London Mathematical Society* definitively settled a question in the theory of approximation that had been studied by several mathematicians. One of them, Ralph P. Agnew, was then chairman of Cornell's Mathematics Department. Agnew's admiration for this paper played an important role in bringing Wolfgang to Cornell in 1948.

Wolfgang's joint paper with the world-famous number theorist, Paul Erdős, published in 1956, was one of his favorites. Applying complex function theory to number theory, the authors showed that a certain property of the sequence of squared whole numbers (1, 4, 9, 16, etc.) is in fact a "law of nature" and is shared by all increasing sequences of positive whole numbers.

Wolfgang's best known mathematical research was concerned with the value distribution of meromorphic functions, whose modern theory began with Rolf Nevanlinna's work in the 1920s. In 1955, Wolfgang's friend Albert Edrei, a professor of mathematics at Syracuse University, attended a Cornell mathematics picnic and, with Fall Creek Gorge as backdrop, encouraged Wolfgang to undertake a joint research program in Nevanlinna

theory. In a collaboration lasting nearly twenty years, Edrei and Fuchs raised the theory to a new level, developing techniques that have become the standard way to handle the subject, and bringing it to another generation of students and colleagues. When Nevanlinna died, Wolfgang was the obvious choice to deliver the address devoted to Nevanlinna theory at the memorial conference in Zurich.

While the classical Cambridge tradition could be seen in most of Wolfgang's work, he was always looking for new talent and encouraging a broad view of mathematics. His three monographs, which have already been influential for decades, include significant topics that he did not often use in his own work but have been useful to many others. He made early and important contacts with complex analysts in China, Armenia, Russia and Germany. He brought many visitors to Cornell, and his mentoring led to much collaborative work. Until the last several months of his life, Wolfgang was always at the center of conversation at conferences, where in later years his talents were often used to give surveys and even to write poems (one of which is now in a second printing).

While Wolfgang was usually a gentle and genial colleague, he was not afraid to speak out when so moved. He helped to organize a large group of mathematicians to protest the 1989 situation in China, and for many years tried to provide support and publicity for oppressed mathematicians there, in Eastern Europe and elsewhere. He warmly supported Amnesty International.

In 1943, Wolfgang married Dorothee Julie Rauch von Traubenberg. She survives him, as do their children, Annie, John, and Claudia; and their grandchildren, Storn and Cody Cook and Lorenzo and Natalia Fuchs McClellan.

Wolfgang and Dorothee's home was always a special place to visit. They created a warm and enthusiastic atmosphere that reached far beyond the mathematical or academic communities. One of its key ingredients was Wolfgang's exceptionally positive attitude toward life.

Wolfgang's life was a celebration. He was interested in everything, read avidly, traveled eagerly, and concerned himself deeply with friends and family. Times spent together with him and Dorothee were always fascinating. One always learned from him. He enthusiastically shared historical information from periods ancient to contemporary, related travel adventures, told life stories of relatives and friends from his past. In discussions relating to difficult tomes, such as *Tristram Shandy*, he would politely listen without patronizing, and then proceed to quote esoteric passages that he had probably not seen for at least fifty years. When he traveled to a country whose language was unfamiliar to him, he would study it in order to be able to converse directly with colleagues and acquaintances.

Even towards the end of his life, when he was not well, he was undaunted in his zest for living. On a cruise from Amsterdam to Vienna, one stop was a beer hall where the noise level was, for some of the assembled tourists, painful. Wolfgang was the first person on the dance floor. He invited the tour director to some vigorous turns, accompanied by a raucous German band. He enjoyed the music, the clowning of the floor show performers, the beer — everything. On that same trip, lunch and dinner always seemed to include a course with whipped cream, which his prescribed diet forbade. He would initially push the cream aside, and then little by little it disappeared with whatever else was on his plate. Chocolate was also not allowed. But he loved it and even hid chocolate bars from Dorothee. The first thing he offered a friend after he returned home from heart surgery was a chocolate bar! He had an impish, happy-go-lucky attitude — along with a serious, inquiring mind that retained everything he read or heard. During his last illness, and his last stay in the hospital, he wrote from memory, and gave to Dorothee, a note containing the following passage from Book Five of Spenser's, *Faery Queen*.

What if some little pain the passage have  
That makes frail flesh to fear the bitter wave  
Peace after Warre, Port after stormy seas  
Death after life do greatly please.

Wolfgang made his death as joyous an experience as his life. He is often quoted by his family, which came together to celebrate his life as he lay dying, "I did not know that dying could be so much fun."

*David Drasin, Sonya Monosoff Pancaldo, Clifford J. Earle*