纪念冯康先生

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FengKang, China's leading applied mathematician, died suddenly on August17, inhis 73rd year, after a long and distinguished career that had shown on sign of slowing.

Feng's early education was in electrical engineering, physics, andmathematics, abackground that subtly shaped his later interests. He spent the early 1950s at the Steklov Institute in Moscow. Under the influence of Pontryagin, he began by working on problems of topological groups and Lie groups. On his return to China, he was among the first to popularize the theory of distributions.

In the late 1950s, Feng turned his attention to applied mathematics, where his most important contributions lie. Independently of parallel developments in the West, he created a theory of the finite element method. He was instrumental in both the implementation of the method and the creation of its theoretical foundation using estimates in Sobolev spaces. He showed how to combine boundary and domain finite elements effectively, taking advantage of integral relations satisfied by solutions of partial differential equations. In particular, he showed how radiation conditions can be satisfied in this way. He oversaw the application of the method to problems in elasticity as they occur in structural problems of engineering.

In the late 1980s, Feng proposed and developed so-called symplectic algorithms for solving evolution equations in Hamiltonian form. Combining theoretical analysis and computer experimentation, he showed that such methods, over long times, are much superior to standard methods. At the time of his death, he was at work on extensions of this idea to other structures.

Feng's significance for the scientific development of China cannot be exaggerated. He not only put China on the map of applied and computational mathematics, through his own research and that of his students, but he also saw to it that the needed resources were made available. After the collapse of the Cultural Revolution, he was ready and able to help the country build again from the ashes of this selfinflicted conflagration. Visitors to China were deeply impressed by his familiarity with new developments everywhere.

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Throughout his life, Feng was fiercely independent, utterly courageous, and unwilling to knuckle under to authority. That such a person did survive and thrive shows that even in the darkest days, the authorities were aware of how valuable and irreplaceable he was.

In Feng's maturity the well-deserved honors were bestowed upon him—membership in the Academia Sinica, the directorship of the Computing Center, the editorship of important journals, and other honors galore.

By that time his reputation had become international. Many remember his small figure at international conferences, his eyes and mobile face radiating energy and intelligence. He will be greatly missed by the mathematical sciences and by his numerous friends. — *Peter Lax, Courant Institute of Mathematical Sciences, New York University.*