Faces & Places

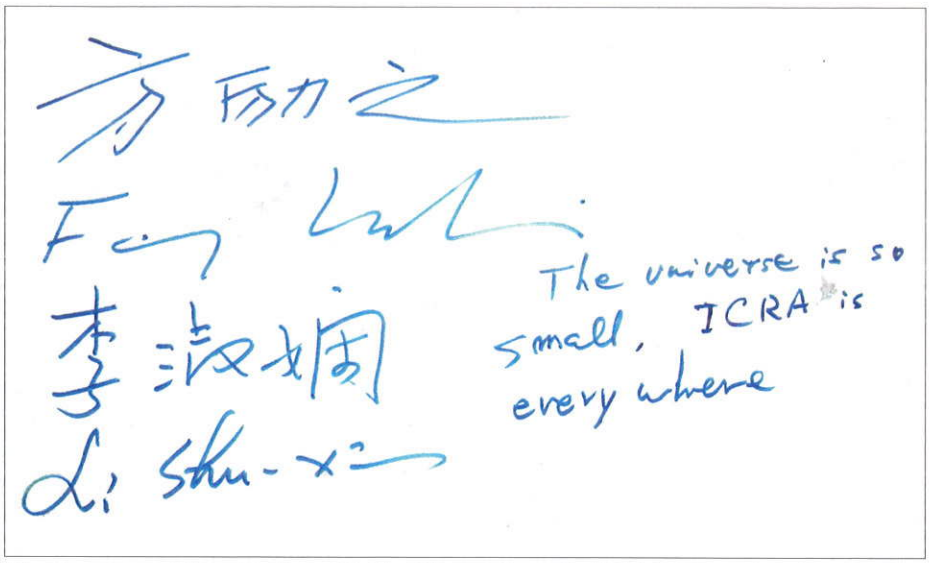
Fang Lizhi 1936–2012

Fang Lizhi (also Li-Zhi), astrophysicist and cosmologist, passed away on 6 April in Tucson, where he had lived for more than 20 years, teaching in the department of physics at the University of Arizona. He introduced relativistic astrophysics and cosmology to China and played an important role in the democracy movement of the 1980s and the development of international relations.

Relativistic astrophysics and cosmology was born in 1967 with observation of the first pulsar, following the discovery of the cosmological background radiation in 1965. It was a by-product of the launch of the space age by John F Kennedy, the development of NASA, and the inspired work of three small groups of highly motivated scientists at Princeton, Cambridge and Moscow. After nine years of collaboration with John A Wheeler in Princeton, one of us (RR) had the good fortune to enter China in 1979 and meet Fang Lizhi and his wife, and scientific collaborator, Li Shu-Xian. Lizhi had already been marked as a dissident at the age of 36, by writing a paper "A cosmological solution in scalar-tensor theory with mass and black body radiation", which was in stark conflict with the principal dogma purporting an everlasting universe.

A long-lasting friendship developed between Remo and Lizhi. They delivered a joint lecture series in numerous universities of China, many of which bore the scars of the cultural revolution. This resulted in a small red book defining the new field of research, priced at 0.99 yuan, which became as revered among physics students as the other small red book. It is still in print today in China (Taiwan) and it is hoped that in the near future, a new edition will be available in China (Mainland).

In 1983 Lizhi and Remo succeeded in organizing the first international scientific meeting in China: the Third Marcel Grossmann meeting in Shanghai. On this occasion, with help of the president of the China Association of Science and Technology, Zhuo Pei Yuan, they succeeded in promulgating a paradigm shift in the Chinese way of life: the motto "Friends from all over the world are welcome" became "Scientists from all over the world are welcome". This allowed, among other things, the participation of Israeli scientists in this scientific celebration of the ideas of Albert Einstein.



The signatures of Fang Lizhi and Li Shu-Xian on the wall of ICRA, University of Rome, photographed in April 2012. (Image credit: ICRANet Archive.)

After a tumultuous period in the years 1989–1990, Lizhi and Li Shu-Xian settled in Tucson and continued their scientific work, as well as participation in international academic activities. In 2005 Lizhi and Remo co-founded the International Center for Relativistic Astrophysics (ICRANet), an international organization to "promote international scientific co-operation and undertake research in the field of relativistic astrophysics". The ICRANet Members are today four states – Armenia, Brazil, Italy and the Vatican – as well as the University of Arizona, the University of Stanford and ICRA, at the University Rome.

Lizhi became the president of the steering committee, while Riccardo Giacconi was, and continues to be, the first president of the Scientific Committee. The activities promoted by ICRANet include the Galileo Xu Guan Qi (GX) meetings, held yearly in China and in the West alternately, with a maximum of 137 participants each from China and from the West. GX1 was held in Shanghai, GX2 in Nice and GX3 in Beijing. Lizhi saw ICRANet connect China and the West in terms of experience and knowledge about the universe, with exchanges among scientists independently of their creed, political and social status.

A few weeks ago, one of us (JR) walked into Lizhi's office and asked when he was moving back to China to pick up where he had left off. This remark had been prompted by a health issue: Lizhi had been suffering from the Arizona Valley fever (*Coccidioidomycosis*) and a move out of the desert is a possible response to the many complications that can follow. Lizhi thought for a long time, and it seemed that the answer was, "I think, tomorrow", but it was never spoken.

● *Johann Rafelski, Department of Physics, University of Arizona, and Remo Ruffini, ICRANet and University of Rome "Sapienza".*