

Obituary for Professor Bai Yilong

Professor Bai Yilong passed away in Beijing at 9:21 a.m. on May 9, 2024 at the age of 83 after illness. He was a renowned Chinese scientist in mechanics, academician of the Chinese Academy of Sciences (CAS), member of the European Academy of Sciences (EURASC), member of the 10th and 11th National Committee of the Chinese People's Political Consultative Conference (CPPCC), former vice director of the Institute of Mechanics, CAS, and former president of the Chinese Society of Theoretical and Applied Mechanics (CSTAM).

Prof. Bai made remarkable contributions in the field of nonlinear mechanics, particularly in areas such as explosion, deformation damage and catastrophic failure in solid materials. He proposed the theory of thermo-plastic shear bands, which is acknowledged by the international academic community as "Bai's criterion". He developed a statistical micromechanics theory of damage and failure, making pioneering contributions to the dynamic behavior of materials. He introduced new ideas on evolution-induced catastrophes, making significant contributions to the needs of major national projects. Prof. Bai was the recipient of the National Natural Science Award (second class), Ho Leung Ho Lee (HLHL) Foundation, Zhou Peiyuan (Chou Peiyuan) Award, John Rinehart Award

from the TMS Society of the United States, and Tan Kah Kee Science Award.

Prof. Bai was a strategic scientist and outstanding leader in Chinese nonlinear mechanics. He served as director of the State Key Laboratory of NonLinear Mechanics (LNM), the 6th president of CSTAM, and chairman of the 23rd International Congress of Theoretical and Applied Mechanics (23rd ICTAM). He organized major research projects in nonlinear mechanics and led the planning of China's development strategy on mechanics, greatly enhancing the status of our country's nonlinear mechanics in the international academic community.

Prof. Bai served as a role model for researchers and practitioners. He devoted himself to scientific research and explored the frontiers of mechanics. He had a selfless passion for lifting others up and nurturing a group of high-level experts in mechanics. His legacy transcends academic boundaries and will continue to inspire generations to come.

The passing away of Professor Bai Yilong is a huge loss to the International mechanics community as well as Institute of Mechanics, CAS. His vision and pursuit of excellence in scientific research will forever influence many scholars. He will always be remembered by people!