



吴宏鑫，中国科学院院士。1939 年生于江苏丹徒，1965 年毕业于清华大学自动控制系控制理论及其应用专业。现任中国空间技术研究院研究员，博士生导师，科技委副主任。中国空间技术研究院和中国航天科技集团公司科技委顾问。2003 年当选为中国科学院院士。

主要从事航天和工业领域的自适应控制和智能控制理论与应用研究。提出了“全系数自适应控制理论和方法”，这是一套完整的系统性和实用性很强的自适应控制理论和方法，对于一类对象在参数估计未收敛到“真值”的过渡过程阶段，能保证系统闭环稳定且具有良好性能。在智能控制方面提出了“特征建模”、“基于对象特征模型描述的黄金分割智能控制方法”、“航天器变结构变系数的智能控制方法”和“基于智能特征模型的智能控制方法”等，为降阶控制器和智能控制器的设计开拓了一条新的道路，对航天器控制和工业控制的发展具有重要理论意义和实用价值。到目前为止，上述理论和方法已在航天控制和工业过程控制等多项实际对象中取得了成功应用。发表论文 70 余篇，专著 2 部。获国家发明奖三等奖 1 项，部级科技进步奖一等奖 1 项、二等奖 5 项。

吴宏鑫教授曾任中国自动化学会第八届理事会常务理事，现任第九届理事会副理事长；曾任第四、五、六、七、八届控制理论专业委员会委员，现为第九届控制理论专业委员会顾问委员；曾任关肇直奖第五、六届评奖委员会委员，现为第七届评奖委员会委员。他长期投身于控制理论专业委员会的各项学术活动和相关工作，为专业委员会和中国控制会议的发展作出了重要贡献。

Professor Hongxin Wu was born in Jiangsu Province in 1939. He graduated from Automatic Control Department of Tsinghua University in 1965. And now, he is a member of Chinese Science Academy, a PhD Supervisor, and a Vice Director of Science and Technology Committee of Beijing Institute of Control Engineering, an advisor of Science and Technology Committee of China Academy of Space Technology and China Aerospace Science and Technology Corporation. He was elected Member of the Chinese Academy of Sciences in 2003.

He is mainly engaged in the study of adaptive control and intelligent control theory and applications in the field of aerospace and industry. He proposed a set of systematic and practical all-coefficients based adaptive control theory and method. For a class of plants to be controlled, this method can guarantee the closed-loop system stable and having good performance even when parameter estimates are not convergent to their true values in the transient process. In the aspect of intelligent control he put forward “characteristic modeling”, “golden-section intelligent control method”, “intelligent control method of spacecraft with variable structure and coefficients”, “intelligent control method based upon intelligent characteristic model” and etc. These new idea and methods open new directions for the design of reduced-order controller and intelligent controller, and are important for the development of spacecraft control and industrial control. Up to now, the above theory and methods have successfully been applied to many practical plants in spacecraft control and industrial process control. He has published more than 70 papers and authored two monographs. He was honored by a Third Prize of the National Award for Inventions, a First Prize and 5 Second Prizes of the Ministerial Awards for S&T progresses.

Professor Wu was the standing council member of the 8th CAA, and is currently the Vice-President of CAA. Member of 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup> TCCT, and now is a member of the Consultant Committee, TCCT. He has been member of Evaluation Committee of Guan Zhaozhi Award since 1998. In more than 25 years, Professor Wu has made important contributions to TCCT and CCC.