Stanford PROFILES

Edison Tse

ASSOCIATE PROFESSOR OF MANAGEMENT SCIENCE AND ENGINEERING

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Bio

Professor Tse received his BS, MS, and Ph.D. in Electrical Engineering from Massachusetts Institute of Technology. He is the Director of Asia Center of Management Science and Engineering, which has the charter of developing executive training programs for executives in Asian enterprises, conducting research on development of the emerging economy in Asia and establishing research affiliations with Asian enterprises, with a special focus in Greater China: China, Hong Kong, and Taiwan.

In 1973, he received the prestigious Donald Eckman Award from the American Automatic Control Council in recognition of his outstanding contribution in the field of Automatic Control. He had served as an Associate Editor of the IEEE Transactions of Automatic Control, and a co-editor of the Journal of Economic Dynamics and Control, which he co-founded. In recent years he dedicated his research effort in dynamic entrepreneurial strategy and transformation of Chinese production economy to innovation economy. He developed a significant theory on innovation synergistic to Chinese culture and its application to China industry transformation. Over the years he has made valuable contributions in the field of engineering, economics, and business creation and expansion. He has published over 180 papers on his research activities. Since March 2003, he has been teaching his new found theory on China innovation and Industry Transformation to high level Chinese government officials and Chinese executives.

Since 2007, he co-directed a Stanford Financial Engineering Certificate Program in Hong Kong that upgrades the quality of managers and traders in the financial institutions in Hong Kong. Since 2009, he co-directed a Stanford program on Regional Industry Transformation and Public Administration that was attended by city officials from various cities in China, and directs a Stanford program on Chinese Industry Transformation and Innovation that was attended by executives from Chinese enterprises. Prof. Tse is the author of over 150 articles in the fields of systems and control. He received the 1973 Donald P. Eckman Award for outstanding achievement in the field of automatic control. Prior to joining the Stanford faculty, he worked at Systems Control, Inc., where he formulated and solved numerous problems in defense, electric power, forecasting and marketing.

At Stanford, he has developed computer integrated systems to support fishery management policy decisions, management and control of the manufacturing enterprise, and industrial competitive analysis and product development. He is currently conducting research on building core competence within an enterprise to gain competitive advantage. He established the Journal of Economic Dynamics and Control and is now a member of its Advisory Board. His national society memberships include the Econometric Society, IEEE, ORSA, and TIMS. Tse developed a framework for analyzing dynamic competitive strategy based on a dynamic model of grabber-holder dynamics that describes the forces that would shape the formation of an ecosystem supporting an exciting vision. Within such a framework, he developed dynamic strategies for firms entering an emerging market, latecomers that want to wedge into a matured market, and firms that need to turn danger into opportunities. Tse's recent interests are in extending the theory to analyzing the dynamic competition in network economy, regional technology center development, and applying the theory of dynamic strategies to the wireless, airport, real estate, and financial industries in China.

Academic Appointments

Associate Professor, Management Science and Engineering

Program Affiliations

Center for East Asian Studies

Professional Education

BS, MIT (1970)
MS, MIT (1970)
PhD, MIT (1970)

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