

LI Tatsien (LI Daqian)

Mathematician and Professor of Fudan University, China. Member of the Chinese Academy of Sciences (1995—). Fellow of the Third World Academy of Sciences (1997—). Foreign Member of the French Academy of Sciences (2005—). Male.

Born on November 10, 1937 in Nantong, Jiangsu Province, China. Graduated from the Department of Mathematics, Fudan University in 1957 and then has been serving on its teaching staff up to the present. His in-service graduate study at the university finished in 1966. Visiting scholar at Collège de France, Paris, France, from January 1979 to April 1981. Promoted to full professorship in 1980 and becoming Ph. D. Supervisor for pure mathematics and applied mathematics in 1981 and 1983 respectively. Appointed as Dean of Graduate School of Fudan University from 1991 to 1999.

Actively engaged in mathematical research and dedicated to a close combination of basic theory with practical applications, Professor Li has successfully achieved a large number of important results in his research on partial differential equations and their applications:

1. He has established a complete theory on the local solvability for classical solutions and classical discontinuous solutions to the general 1-D quasilinear hyperbolic system.
2. He has made an essential contribution on global classical solutions and global classical discontinuous solutions to 1-D quasilinear hyperbolic systems.
3. He has proposed a simple and unified framework – the global iteration method and a complete result is then de-

rived on the global existence and the life-span of classical solutions to fully nonlinear wave equations for any space dimension $n(1)$ and for any integer order $p(2)$ of the nonlinear right-hand side.

4. He has introduced the boundary value problem with equivalent surface and the homogenization of boundary conditions, and established an integrated theory. A unified mathematical model based on these concepts is formed and highly efficient numerical scheme is designed for various types of resistivity well-loggings. This result has been actually employed by more than 10 domestic oil fields, bringing about better geological interpretation and considerable economic benefits.
5. By establishing the theory on the semi-global classical solution to quasilinear hyperbolic systems, he has solved the problem of exact controllability for 1-D quasilinear hyperbolic systems with general nonlinear boundary conditions. This result gives a complete theory on the exact controllability in the quasilinear case. Successful applications are given to 1-D quasilinear wave equations and to unsteady flows in a tree-like network of open canals.

Professor Li has published more than 190 papers and 16 monographs and textbooks, among which 4 monographs are printed in English in U.S.A., U.K. and France respectively.

He has received domestic prizes and awards, including: one Second Prize and one Third Prize of National Natural Sciences from the state, one First Prize and two Second Prizes of Scientific and Technological Progress from the State Education

Commission, and one First Prize of Scientific and Technological Progress from Shanghai Municipality. Two of his works are awarded as Excellent University Textbooks from the State. One Exceptional Shanghai Award for Teaching Achievements in Higher Education. One First National Award for Teaching Achievements in Higher Education. One Science and Technology Progress Award of Ho Leung Ho Lee Foundation.

At invitations Professor Li has visited over 16 countries and regions, gave invited lectures at more than 50 international conferences, and served as a member or chairman on their scientific or organizing committees.

Professor Li has been appointed as a member, deputy chief editor or chief editor for over 12 domestic mathematical journals and 10 book series, and a member of the editorial board for 14 international mathematical journals.

Professor Li is now the Co-Director of the Institut Sino-Français de Mathématiques Appliquées (ISFMA) since 1998, the President of the China Society for Industrial and Applied Mathematics (CSIAM) since 2000, the Officer-at-large of the International Council for Industrial and Applied Mathematics (ICIAM) since 2003 and the Vice-President of the Shanghai Association for Science and Technology since 1996. He was the Vice-President of the Chinese Mathematical Society from 1996 to 2003 and a member of the Conseil d'Enseignement of the Ecole Polytechnique from 1997 to 2003.