THE CHINESE UNIVERSITY OF HONG KONG

TWENTY-FOURTH CONGREGATION

Conferment of the Degree of Doctor of Science, honoris causa

A Citation

Professor Hua Luogeng

Mathematics is the Queen of Science, whereas number theory is in turn the Queen of Mathematics. Number theory is therefore commonly regarded as transcending all other branches of knowledge, fit for being adored at great heights but not suitable for earthly applications. However, Professor Hua Logeng is just one of those rare mathematicians who is capable of not only scaling the heights in this field but also of relating his findings to practical problems. The monograph "The Application of Number Theory to Numerical Analysis" published by him and Professor Wang Yuan four years ago was a rare masterpiece set precisely along this direction. A year later, he again amazed his colleagues at the international conference on number theory held in Durham, England, by an exposition on the application of the Fibonacci sequence in number theory to numerical integration . Professor Hua is indeed a master whose creativity is not bound by existing horizons, who yet always has his feet firmly on the ground and is ready to roll up his sleeve for mundane tasks at hand.

Professor Hua is renowned for number theory, but his mastery of the entire field of mathematics really encompasses a much wider field. His first monograph "Additive Prime Number Theory" was published thirty-five years ago, and immediately attracted considerable attention. Since then he had authored numerous papers and monographs in many areas, including number theory, classical groups, harmonic functions, complex functions of several variables, partial differential equation sets and numerical integration, and many became classics in the field. It was therefore no mere accident that he had earned such a position of distinction in mathematics. He was appointed to the Chair of Mathematics at Tsinghua University, Southwest Associated University and Beijing University in China, University of Illinois in U.S.A. and Birmingham University in England, and to the Vice-Presidency of the University of Science and Technology in China. Currently Director of the Institute of Mathematics as well as the Institute of Applied Mathematics of Academia Sinica, and the President of the Chinese Society of Mathematics, Professor Hua was also recently elected Overseas Members of the U.S. Academy of Sciences.

Professor Hua has been a tireless research worker all his life, and has continued his academic pursuits through times of turmoil. Recently, in his seventies, he published yet another article in the Proceedings of the Royal Society to discuss the possibility of simplifying the axioms of spatial relativity by making use of the four-dimensional unit sphere.

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A prolific scholar of the strictest standard, Professor Hua is also a zealous educator and populariser of mathematical methods for practical applications. During the past two decades he has devoted himself to educating the public in operations research, global programming and similar fields of applied mathematics. To this end, he has crisscrossed the country, visiting upwards of hundreds of schools, communes, factories, mines and making innumerable contributions towards the education of young talents, the solution of practical problems large and small, cutting waste and improving productivity for the nation. China is a great nation with a long history, but its natural resources need further development, and its manpower yet requires more efficient utilisation, to both of which Professor Hua has devoted an immense amount of energy, which would surely leave its indelible mark on the modernization of China.

Being from a needy family, Professor Hua had a hard early boyhood, which did not allow him even to finish secondary education. It is therefore with pride that he announced the three great events which happened to him when he visited the University of Nantes in France in 1979: he received an honorary degree, gave a speech in Putonghua outside of China, and enjoyed his very first birthday party given by colleagues in mathematics. Well, long ago when I was still an undergraduate in the United States I did have the good fortune of making the acquaintance of Professor Hua, then a visiting scholar at the Institute of Advanced Study at Princeton. At that time, just beginning to be recogised, and at the height of his youth, he was keeping company with such eminent scholars in the world as Albert Einstein, and felt totally at home with them. It is indeed amazing that I am standing here today, 35 years later, to extol the great contributions made by Professor Hua towards mathematics and towards China. This surely would also be a memorable moment in my life.

Although it is with much regret that Professor Hua cannot be here today in person because of illness, we may be relieved somewhat in seeing his son Dr. Hua Jun Dong in our midst, who has in addition brought the good news that Professor Hua is now rapidly recovering.

Mr. Chancellor, may I now request your Excellency to award Professor Hua Luogeng the degree of Doctor of Science, honoris causa.

December 9, 1982.