

## TADASHIGE ISHIHARA 1920—2008

Prof. Tadashige Ishihara passed away from pneumonia on December 17, 2008 at the hospital in Amagasaki where his son was working as a doctor. He was 88 years old. Prof. Ishihara was born on March 24, 1920 at Hokkaido. He finished Sakai junior high school under the old system of education at Sakai, Osaka and after that, he went on to Osaka high school and later graduated from Osaka Imperial University in 1942. World War II had broken out, and he applied for the navy the following month. He became a mathematical teacher at the Naval Engineering School and worked for the technological Institute of the Navy where he was put in charge of numerical calculation for various projects. At the end of the war in September 1945, he was promoted to the position of Lieutenant. Next month, in October, he was brought on as staff at the Faculty of Science, Osaka Imperial University. Here, his research career began. He was promoted to a full-time lecturer at Osaka University in April 1957 and six years later he became an Associate Professor at the Faculty of General Education at Osaka University. During his work at the university, he took on the job of teaching and studying mathematics.

In March 1962, he received a doctoral degree of Science from Osaka University. The title was "On the structure of S-space", which was appeared in *Osaka Math. Jour.* (1961) p. 251-264. Following this he became a Professor in the Faculty of Engineering, University of Osaka Prefecture. Here, he made many contributions to the development of this University until March 1983 when he left his job on reaching the age of retirement. For instance, while at the University, he diligently made an effort to establish the Department of Mathematical Sciences and at last succeeded in forming the department in March 1971. In a short four years, the Faculty had established a graduate course in Mathematical Sciences. Upon retirement, the university awarded him the title of Professor Emeritus and praised him for his many achievements during his years at the University. He was then invited to be a professor in Osaka Electro-Communication University, where he trained students.

In his specialty he produced 39 papers and 3 books as follows: (1) study on fundamental conception formation for dynamics and mathematics (1,2,8 in List of Publications of Tadashige Ishihara, hereafter abbreviated "List".) (2) theory of distribution and hyperfunction, treatment for diverge integral due to functional and study on applied functional analysis region for generalized Laplace transformation (List 3-7, 9-11) (3) the cut-off process in the universal Hilbert space and application to quantum field (List 12-19) (4) study on a stabilization of nonlinear systems (List 20) (5) relationship between optimal problem and restricted boundary (List 21,22) (6) coding problem (List 23,24) (7) optimal control of systems with distribution functions with parameters (List 25) (8) reverberations in nural network (List 26-35, book 2) (9) analysis of development economy of the less-developed countries (List 36-39). His leading research addressed many of the inherent mathematical problems in various fields. Additionally, he actively promoted the development of applied mathematics.

*Mathematica Japonica* was written in a western-language as was the *Mathematical Society Journal*. It was a mathematical journal with a long history that was published by Prof. Tatsujiro Shimizu in Osaka University in 1948. However, the journal was forced to reduce its

publication. Dr. Ishihara tried to revive it and made an earnest effort to introduce papers in applied fields from all over the world that were previously not commonly received in Japan. Currently this journal publishes six times a year and has introduced various papers to the academic world. Recently, in particular, the journal has been introducing excellent papers in, for example, statistics, OR, and information science. From January 1976 until his death, as Managing Editor he was devoted to its publication. Certainly, his contribution to society was large. In recent times, as the research environment has changed and financial constraints are greater, we are inspired by Professor Ishihara's vision of mathematical sciences.

Professor Ishihara always felt that universities should address social problems including the plight of the Earth's poor. In particular, he had devoted himself to the economic problem of the people in Nepal and in November 1983, when he retired from the university, he was given a letter of thanks from the Central Statistics Bureau in Nepal. His motto seemed to be "For the Welfare of the Humankind Promoting Mathematical Sciences" as in the cover in "Notices" published in our society. His dream remains alive in our minds. He was decorated with the Third Order of Merit with the Order of the Rising Sun, Gold Rays with Neck Ribbon on April, 29 1994 by the Japanese Government.

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