Obituary

Professor Kiyoji Asai (1923–2012)

With deep sorrow, we inform you that Professor Kiyoji Asai passed away suddenly at a hospital due to kidney problems on April 24, 2012. He was 89 years old.

Professor Kiyoji Asai was born in Osaka on January 28, 1923. He graduated from Osaka High School of Technology, which was the predecessor of Osaka Prefecture University, in September 1943. He joined the Nakashima Aircraft Company. After World War II, he joined the Ministry of Communications and Transportation (later known as the NTT Corporation). In April 1948, he enrolled in the bachelor’s program in the Faculty of Engineering at Osaka University. After graduating, he joined the school of Electrical Engineering at Osaka City University. His research interests included systems engineering and control engineering and worked specifically on learning control models and adaptive control models. His research examined human-centric engineering problems, including ergonomics, fuzzy systems, adaptive control and learning control.

In March 1967, Professor Asai had the opportunity for a one-year residence at Professor Lotfi A. Zadeh’s laboratory, at the University of California, Berkeley, just after the paper on fuzzy sets was published in International Journal of Information Control in 1965.

After returning from Professor Zadeh’s laboratory, Professor Asai actively employed a fuzzy set approach to learning control models and adaptive control models as well as fuzzy automata theory. In the 1970s, he published several memorable papers co-authored with Dr. Seizo Kitajima, a lecturer at Osaka City University who passed away in his 30s. Parallel to Professor Asai’s research on fuzzy sets, he organised the “Science of Fuzziness” research group in the Kansai area of Japan. This research group played a central role in the development of fuzzy sets research studies in collaboration with the research group on “Fuzzy System Research” organised in the Tokyo area by Professor Yoshiro Terano (deceased, Professor Emeritus at the Tokyo Institute of Technology). These two research groups led the fuzzy sets and systems research activities in Japan, making Osaka City University one of the central sites for fuzzy systems research at the time.

In 1969, Professor Asai moved from Osaka City University to Osaka Prefecture University as a full professor. At Osaka Prefecture University, his laboratory became a centre of excellence for fuzzy systems research. Dr. Hideo Tanaka (deceased, Professor Emeritus at Osaka Prefecture University) joined the laboratory in 1969 after completing his doctor degree at Osaka City University under Prof Asai’s supervision. Their group was responsible for many well-known fuzzy systems research results.

Professor Kiyoji Asai’s research consisted of three major groups: (1) human-centric engineering including ergonomics, (2) control engineering and (3) systems engineering including fuzzy systems. He was not only an excellent researcher but also a top educator who encouraged many students to successfully pursue their research.

Professor Asai supervised a number of PhD students, including Dr. Hideo Tanaka, Dr. Seizo Kitajima, Dr. Tetsuji Okuda (Professor Emeritus, Osaka Institute of Technology), Professor Keisuke Noma (Ryukoku University), Dr. Junzo Watada (Professor, Waseda University), Dr. Koji Izumi (Professor, Hannan University), Dr. Hidetomo Ichihashi (Professor, Osaka Prefecture University), Dr. Shigeyoshi Tsutsui (Professor, Hannan University), Dr. Isao Hayashi (Professor, Kansai University), Dr. Masahiro Inuiguchi (Professor, Osaka University), and others. Many of these researchers play pivotal roles in research and education in academia today.

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In March 1985, Professor Asai retired from Osaka Prefecture University. From April 1985 to March 1994, he joined the Osaka Institute of Technology and was a visiting professor at Broadcasting University until September 1994. At Osaka Institute of Technology, he supervised several PhD students, including Dr. Yukio Kodono (Professor, Osaka International University). After concluding his contribution to Osaka Institute of Technology, he participated in the founding of Fukuyama Heisei University, where he worked as a professor until he was nearly 80 years old.

Professor Kiyoji Asai contributed to academia as an advisory committee board member of the Japan Association of Automatic Control Engineers (later known as the Institute of Systems, Control and Information Engineers), the Japan Industrial Management Association and the Japan Ergonomics Society. He was an editorial board member of International Journal of Fuzzy Sets and Systems since August 1984.

He played a central role in founding the Japan Society for Fuzzy Theory and Systems with Professor Toshiro Terano and others. When the society was founded in June 1989, he became its first president and contributed significantly to the development of the society.

Professor Asai took the post of chairman and member of many governmental and municipal committees. To promote research on fuzzy systems, he took a post as a committee member in the Science and Technology Agency of the Japanese government. He was the recipient of the Fuzzy Contribution Award in 1994. Demonstrating his continued contributions to the development of academia and industry, in autumn 1989, Professor Asai was awarded the Order of the Rising Sun, Gold Rays with Neck Ribbon.

Personally, there are a number of episodes that demonstrate Professor Asai's personality, although he did not talk much about his private life. Professor Asai was a devout Christian from his early years, and he began attending a Protestant church during his university student days. A regular churchgoer, he attended the same church for more than 60 years, until the end of his life. His favorite hobby was writing Haiku poems, but he was modest about his poetry. He was an unassuming person who never expressed his anger at anyone.

Professor Asai published approximately 100 journal articles and more than 10 books. The following list presents some of his achievements.

When friends pass away, we realise the life is finite and irreversible. We are saddened by Professor Kiyoji Asai's sudden departure.

May he rest in peace in his eternal life!

Hideo Tanaka (Professor, Emeritus; Osaka Prefecture University)
Junzo Watada (Professor; Waseda University)
Hidetomo Ichihashi (Professor; Osaka Prefecture University)

Note that Professor Hideo Tanaka also passed away on May 16, 2012.
Our deepest sympathies go out to his friends and family. We know they endure the burden of this loss.

**Selected publications on fuzzy systems by Professor Kiyoji Asai**


