

**In Memory of Professor Anatol Gosiewski**



On the 7th of May 2005 Prof. Anatol Juliusz Gosiewski passed away. He was a person of great merit with many years' service for the Institute of Control and Computation Engineering of the Faculty of Electronics and Information Technology of Warsaw University of Technology, a great man, devoted academic teacher and scientist.

Born on 27th of February 1928 in Warsaw, he graduated from the Faculty of Electrical Engineering of the Warsaw University of Technology. After receiving his M.Sc. degree in the field of electrical measurement he continued his studies as a Ph.D. student at the Chair of Electrical Measurement of the Faculty of Electrical Engineering of the Warsaw University of Technology. Since 1956 Professor worked at the Chair of Automation and Telecommunication of the University (presently Institute of Control and Computation Engineering). He earned his Ph.D. degree in technical studies in 1959 at the Faculty of Electrical Engineering, and in 1972 he attained the degree of Doctor of Science (habilitation) at the Faculty of Electronics of the University. He became the Professor

of Technical Studies in the same year. Since 1992 he was employed by the Warsaw University of Technology as a Tenured Professor. Despite his retirement in 2001, Professor Gosiewski continued his cooperation with the parent institute.

In 1957 he participated in six-month training in scientific institutions of Moscow and Leningrad, and in 1961 at the Case Institute of Technology in Cleveland, USA. The Professor's scientific research concentrated on: general control theory, theory and applications of optimal control, multi-dimensional systems, selected mathematical topics (extremal problems), and recently the dynamics and control of industrial robots. Considering his major achievements one should mention that his was the first Polish doctoral dissertation on optimality theory and that he introduced the concept of the mathematical model to the Polish scientific community. Moreover, he investigated global sensitivity of optimal control systems (the topic of his D.Sc. thesis), analyzed time-suboptimal control, elaborated a discrete observer of continuous linear systems and a new frequency domain method of multi-dimensional control system synthesis, analyzed the damaging influence of transport delays on the functioning of multi-dimensional control systems and synthesized compensators partially reducing this bad influence, introduced quantitative measures of controllability, observability and non-reducibility of stationary linear systems. In the last years his research focused on problems of robotics and was related to the analysis of dynamic interactions present in robot manipulators. This led to the formulation of new control algorithms.

Professor Gosiewski organized and supervised several large research projects, among them: Development of Control Theory, Programming and Dynamics Models for Industrial Robots and Manipulators; Methods of Modeling Anti-Tank Missile Control on an Analogue Machine; Design of an Optimizing Unit and a Modernized Controller for an Arc-Furnace in a Steel-Mill; Temperature Stabilization System in the Xenon Bubble-Chamber; Investigation of Dynamic Properties and Design of Tracking Controller for IRb-6/60 Robots. All those activities besides deepening our understanding of control problems also had a side effect - integration of the control community through exchange of views and conduct of joint research activities.

Professor was also active in education. He delivered many interesting lectures dealing with: Control Theory, Optimal Control, Robot Control and Dynamics and Linear System Control. He was the first to introduce humanistic subjects, beside the discussion of specialist problems, into engineering diploma seminars. Under His supervision 19 Ph.D. and about 60 M.Sc. theses were completed. Professor was particularly very proud of his former Ph.D. students.

It should be pointed out that Professor Gosiewski was invited on various occasions to many foreign universities and other scientific institutions to deliver lectures, speeches and conduct research. He also held significant positions at the University, Faculty and Institute. Between 1984 and 1986 he was the Vice Dean of the Faculty of Electronics of WUT. He also was the supervisor of Ph.D. studies in Control and Computer Science (1971-2003). In the period from 1966 to

1970 Professor Gosiewski was the head of Control Theory Division at the Chair of Control and Telemechanics. He also served various institutions external to the Warsaw University of Technology. He was a member of the Central Committee for Scientific Title and Degrees (1994-1997) and Chairman to Automation and Robotics Section in the State Committee for Scientific Research (1991-97). Moreover, he was a member of two Scientific Committees: of the Industrial Research Institute for Automation and Measurements and of the Systems Research Institute of the Polish Academy of Sciences. Professor Gosiewski was first the Secretary and later (1988-91) the President of the VIth Division of Warsaw Scientific Society. For his work he received many distinctions.

Professor was an exceptionally kind person, open towards people and their views. Many will remember him as a great and eager participant of discussions who also encouraged others to undertake intellectual effort. He devoted much time to teach undergraduate and Ph.D. students, not only imbibing them with his professional knowledge, but also encouraging them to broaden their horizons. Professor Gosiewski put much effort into preparation of his lectures which resulted in their popularity with the students. He made complicated issues and mathematical transformations easy to grasp, thanks to his ability to clarify and explain to students various problems, sometimes even reaching philosophical foundations. Attending his lectures was a true pleasure. He also encouraged his collaborators to undertake interesting projects, helping them later in the realisation of their research.

Privately he was interested in history, especially contemporary, cinematography and the history of movies. Since 1962 he was a member of the Society of Authors ZAiKS. With the death of Professor Anatol Gosiewski we lost a friend and a great teacher.