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Teodor Blachut
1915-2004



Teodor Blachut, a world renowned scientist and technological innovator in the field of photogrammetry, died in Ottawa on 17 June 2004 at the age of 89. He was a distinguished Canadian citizen with a grand Polish soul.

Born in Czestochowa, Poland, on 10 February 1915, Teodor graduated in geodetic engineering from the Technical University of Lwow in 1938. The invasion of Poland by Germany and Soviet Union in 1939 interrupted his professional career. In December 1939, he managed an adventurous escape from occupied Poland and joined the regrouped Polish Army in France to continue the fight against the aggressors. After the capitulation of France, his division was interned in Switzerland. Thanks to comparatively liberal conditions in the intern camps, Teodor was able to participate as an instructor in various educational programs. He became a teaching assistant in photogrammetry (a tool for mapping the earth surface from specially processed aerial photographs) and mathematics at the Technical University of Zurich. At the end of the war, Teodor faced the reality that Poland would not regain its freedom as it was left under the control of the Soviet Union. Like hundreds of thousands of other Poles in exile, he decided not to return home. He obtained an engineering position in the Wild Heerbrugg company in Switzerland, which was and is (presently Leica Geosystems) a famous producer of precision instruments for surveying and photogrammetric mapping. Soon, Teodor's skills in instrumentation enhanced his career, and he had the opportunity to become a co-designer of some modern photogrammetric instruments at the Wild factory. Between 1946 and 1950 he travelled to many countries, including Canada, as an instructor and technical advisor on the use of Wild equipment for photogrammetric mapping. He was fluent in English, French, German (including the Swiss-German dialect), Spanish, and, of course, Polish. His linguistic skills helped in his international contacts. At that time, Canada was actively recruiting mapping specialists and efficient techniques to aid in a program to map its vast land. In 1951, at the invitation of the Canadian government, Teodor decided to move to Canada to establish and direct the Photogrammetric Research Section at the National Research Council (NRC) in Ottawa. In this decision, he was supported by Fanni, his charming Swiss-born wife. He assembled a group of outstanding researchers and specialists, many of them from Europe. Under his energetic and able direction his team began to change the world of photogrammetry. The long list of achievements of the Photogrammetric Research Section includes, among others, the development of the photogrammetric analytical plotter, the development of software for analytical photogrammetry, and the development of the stereo-orthophoto approach for three-dimensional mapping. The latter was the topic of Teodor's PhD dissertation, which he defended at the Swiss Technical University in Zurich in 1971.

The research directed by Dr. Blachut concentrated on more than the use of photogrammetry for land mapping. In cooperation with other sections of NRC, the new developments were applied in such areas as medicine (mapping of brain and spine), architecture, archeology, glacier movements, traffic accidents, and in the design of a vision system for the Space Shuttle's Canadian-made arm (Canadarm). Thanks to the developments and innovative applications, Canada has become a world leader in modern photogrammetry. Many scientists from all over the world visited Dr. Blachut's laboratories. He particularly helped young researchers from eastern Europe by arranging post-doctoral scholarships for them. Many of these scholars were invited by Teodor and Fanni to stay in their house for several months at a time. Their hospitality had no limits.

Teodor's scientific work has been documented in over 150 publications and several books. He particularly cherished his book (co-authored with A. Chrzanowski and Y. Saastamoinen) "*Urban*

Surveying and Mapping” (Springer-Verlag 1979), which was published just before his retirement from NRC. The book has been translated into Spanish and Chinese (published by the Beijing Publishing House). The book has served (and still serves) as a major textbook on modern surveying at many universities around the globe. He was the holder co-holder of seven Canadian and six American patents.

Besides the research and development work at NRC, Teodor was very concerned with the comparatively low educational and professional standards of surveying and mapping in Canada in the 1950s. He encouraged improvements to surveying education by publishing papers on the subject. His dreams were fulfilled in 1960 when the first English-language specialization in surveying engineering was established at the University of New Brunswick (currently the world-renowned Department of Geodesy and Geomatics Engineering). To improve the professional status of surveying, Teodor served one term (1962-1963) as president of the Canadian Institute of Surveying (CIS) and served as the editor of the *Canadian Surveyor* the contemporary journal of the CIS, which gained a high international reputation. He was very active in international societies, particularly in the International Society for Photogrammetry and Remote Sensing and in the Pan-American Institute of Geography in History. He led various study groups within those societies.

Teodor’s achievements did not go unnoticed. In the 1960s, he received medals and prestigious awards from the University of Mediolan and from from the American Society of Photogrammetry, and he became an honorary member of the Brazilian Cartographic Society. In 1970, Dr. Blachut became a member of the Canadian Royal Society, the highest honour for scientists. In 1974, the Technical University of Mining and Metallurgy in Kraków, Poland, bestowed on him the title of Doctor *honoris causa*. In 1991 he became a foreign member of the Polish Academy of Arts and Science. Many other scientific and professional institutions around the world offered him honorary memberships.

Upon his retirement in 1980, Teodor did not stop his scientific work and international involvement. He developed the concept of the multi-purpose land cadastre based on ortho- and stereo-ortho-photogrammetry. He worked on and promoted the implementation of this concept to the very last days of his life.

Besides being a very loyal Canadian citizen, Teodor was a very compassionate Polish patriot. He organized a high-level Copernicus celebration in Ottawa and he was involved in the organization of the Museum of the first Polish immigrants (over 150 years ago) at “Kaszuby” in the lake district of northern Ontario. In 1996 he established a foundation of Teodor and Fanni Blachut in Poland to help young Polish researchers to travel to international conferences and participate in international projects. With Teodor’s departure, we lost not only a great scientist but also a man of high moral standards, a man of high family values, and a very close friend of many of us, who could always rely on his friendly advice and help whenever needed.

Teodor is survived by Fanni, his wife of 58 years, three sons, and ten grandchildren.

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(Author’s title given as of the time of writing)