

**PROFESSOR DOCTOR, DR. H. C.  
CZESŁAW KAMELA**

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**Czesław Kamela was born on 24 of July 1910 in Dzierzkowice (prov. Lublin). After finishing primary school in Dzierzkowice he continued his education till 1928 in secondary school with humanistic profile in Kraśnik Lubelski.**

**In autumn 1928 he entered Land-Surveying Section of Civil Engineering Department of the Engineering College of Lvov Technical University and in 1932 he gained academic degree of land-surveyor.**

**Between 1933-1939 he worked directly in geodetic production, as it was explained below.**

**Since 1.I.1933 to 1.II.1936 he worked on land integration in Łosie (former county Gorlice ) and Kaçłowa (former county Nowy Sącz ).**

**In April 1935 he passed an exam before Examining Board in Warsaw and became chartered surveyor.**

**Since 1.II. 1936 to 31.X.1936 he worked on correcting the land-books of Zakopane and triangulation network of Spisz.**

**Since 1.XI.1936 to 30.XI.1938 he worked in Land-Classifying Commission in Brześć on Bug and since 1.XII.1938 to 30.VI.1939 he worked in the Department of New Measurements in Lvov in triangulation installation of a part of Tarnopol province and Trembowa and also executing a measurement of linear baseline Trembowla - Iwanówka with Jäderin invar wires.**

**On 1 of July 1939 he started working as a chartered surveyor in the Wood Management "Godula" Firm with a seat in Majdan Drohobycki where till the beginning of the II World War he started to set triangulation net covering a number of counties (Drohobycz, Stryj, Turka near Stryj, Sambor).**

**When the war broke out he volunteered for Polish Army and took part in anti-aircraft defence of Drohobycz.**

**Later he was interned to Hungary, from where in the beginning of 1940 he got through to Polish Army in France and was assigned to the 2nd Regiment of Light Artillery in the 2nd Division of Infantry, together with which he took part in fights with Germans near Belford and Swiss border. On 20 of June 1940 together with his division he was interned to Switzerland. After organizing university camps for interned soldiers, he was selected a lecturer of land-surveying and mathematics in Winterthur. He conducted classes in mathematics for students of Civil Engineering Department, Mechanics Department, Electric Department and Agriculture-Forestry Department. He also conducted lectures and classes in land-survey for students of Civil Department. At the same time he was increasing his knowledge at the Federal Engineering College in Zurich in the field of geodesy under the direction of Prof. Dr F. C. Baeschlin, in astronomy under the direction of Prof. Dr W. Brunner, in geophysics under the direction of Prof. Dr F. Gassmann, in photogrammetry under the direction of Prof. Dr M. Zeller and in mathematics under the direction of Prof. Dr. W. Saxer.**

Also under the direction of Prof. Dr F. C. Baeschlin as a professor conferring a degree he was preparing his doctor's thesis, taking the doctor's degree in 1945 for his thesis entitled "Comparison of Accuracy of Determining the Latitude, Longitude and Azimuth from Astronomic Measurements with those Values Obtained from Triangulation".

Between 1945 and 1947 he was preparing thesis qualifying for assistant - professorship which was concerned with the research of the figure of the Earth. He was working under the direction of Prof. Dr F. C. Baeschlin.

Furthermore, Czesław Kamela actively participated in the organizing professional courses for the soldiers who were interned in Switzerland, particularly the courses on drainage systems in agriculture in Matzingen. He cooperated in the publishing of professional magazines, such as: "Agricultural Problems "; "Bulletin of Soldiers-Engineers Interned to Switzer Land"; "Rebuilding". He also cooperated with YMCA preparing a manual entitled "Land-Surveying" (Geneva, 1943) - as a help for captives. The 2nd edition of the book appeared in 1945 and it was partially sent to Poland.

He also published papers in the "Collection of Research Works of Poles Interned to Switzerland". On the whole he published 12 research works in Switzerland. During his stay in Switzerland he also went through the geodetic practice in the Geodetic Office in Zurich, and he worked for the firm "Kern and Co" in Aarau for 8 months.

In July 1947 he managed to come back to Poland. Since 1.IX.1947 he started to work in the Warsaw University of Technology as a lecturer in the Department of Higher Geodesy (Prof. Edward Warchalowski was a director of it). At the same time he worked in the Scientific Research Geodetic Institute (till 1.VII.1951).

In 1949 he introduced the thesis qualifying for assistant-professorship, entitled "Determination of the Geoid from Gravimetrical Measurements" and he was selected as an assistant professor in the section of Higher Geodesy. On 1.X.1955 he was appointed an associate professor and on 1.IV.1966 - a full professor.

After the death of Prof. E. Warchalowski (6 of March 1953), Czesław Kamela became a director of the Department of Higher Geodesy in the Warsaw University of Technology. He acted as a director till the reorganization of the University and creation of Institutes (1.X.1970).

Between 1952 and 1954 he acted as a vice - dean in the Faculty of Geodesy and Cartography. From 1954 to 1956 he was a plenipotentiary of Rector having full powers to act as Rector. Between 1953 and 1959 he was a secretary of the Senate, between 1964 and 1969 and from 1973 to 1978 he acted as a dean of the Faculty of Geodesy and Cartography in the Warsaw University of Technology.

He took a part in the execution of the organizational reforms in the Faculty when in 1954, 12 departments with 20 sections were called up, among them Department of Higher Geodesy with its 3 Sections: Fundamental Geodetic Measurements, Gravimetry and Theory of the Figure of the Earth and Geodetic Geophysics.

A special stress must to put on the fact, that Czesław Kamela worked out the first Polish geodetic and land-surveying manuals after the war. At that time lack of manuals was a serious problem of the Polish educational system. In 1950 he published "Land-surveying Manual" (parts I and II, about 720 pages) and later between 1951-1952 the academic manual entitled "Geodesy " (parts I-IV~ about 1620 pages) and in 1953 "Geodesy for Technicians" (about 360 pages). Prof. Czesław Kamela was also the first Polish author of the manual concerned with the physical geodesy. Two volumes of it (about 800 pages) came out in 1954 and 1955.

Moreover, he supplemented with two chapters of the Prof. E. Warchalowski manual entitled "Precise Levelling" and took an active part in preparations for printing.

All those manuals, published in the first 10 years of the Polish People's Republic, contributed to the education of a number of specialists who participated in the rebuilding of the country.

Between 1947 and 1980 in the Faculty of Geodesy and Cartography Prof. Czesław Kamela conducted lectures on: geodesy, special measurements, gravity potential's theory, physical geodesy, geophysics. He also conducted seminars on: higher geodesy and higher geodesy for candidates for a doctor's degree.

For many years he lectured on higher geodesy (geometrical part), physical geodesy and geophysics in the Military Technical Academy. For 2 years he lectured on higher geodesy in the Faculty of Mining Geodesy of Academy of Mining and Metallurgy in Cracow. He also lectured on higher geodesy in the Faculty of Geodesy and Agricultural Development of Agriculture - Technical Academy' in Olsztyn. He also took a part in the organization of the Faculty of Geodesy on the Agriculture – Technical Academy in Olsztyn. On 31 of May 1975 during the celebrations of 25 anniversary of this Academy he was awarded a title of "doctor honoris causa" of Agriculture - Technical Academy in Olsztyn. He was particular about the high level of Master's theses in the Department of Geodesy. According to the foreign scientific workers opinion, who visited the Department, many of those theses represented the level of doctor's theses.

Prof. Czesław Kamela took a care of the development of the Departments library and also the development of the Astro - Geodetic Observatory in Józefosław near Warsaw.

Being an assistant professor in the Department of Geodesy directed by the Rector Prof. E. Warchalowski, Czesław Kamela was striving to buy 4 - pendulum apparatus "Askania" with which the pendulum measurements of the Polish gravimetric net and gravimetric base - line for calibration of the static gravimeters were executed. The investigations were directed by Dr Zbigniew Ząbek and other scientific workers of the Department. In the International Geophysical Year 1957/58 Dr Z. Ząbek and Dr Janusz Śledziński together with others co-workers of the Department of Geodesy established the gravimetric connection between B. Dobrowolski's Station in Antarctica and gravimetric fundamental point in the Warsaw University of Technology.

During his 33 years of research and didactic work in the Warsaw University of Technology Prof. Czesław Kamela educated and prepared for research and professional work numerous body of students. At 1980 Prof. Czesław Kamela was retired from WUT and has continued didactic work in Military University of Technology (Warsaw) till his death at 1992.

He supervised a great number of master's theses (about 200), 17 doctor's theses and 8 qualifying for assistant - professorship.

The group of Prof. Czesław Kamela's students includes Professors: Prof. Zbigniew Ząbek, Prof. Lubomir Baran, Prof. Jerzy Bokun, Prof. Janusz Śledziński, Prof. Maria Szacherska and a number of assistant professors: Dr Józef Cieślak, Dr Weneda Dobaczewska, Dr Ireneusz Pawłowicz, Dr Tadeusz Wyrzykowski, Dr Edmund Bilski and many others.

During his supervision of the Department of Geodesy (1953-1970) he stressed the necessity of going through courses of studies in the famous research centres in foreign countries, especially helpful for young research workers. Prof. Czesław Kamela reviewed a number of doctor's and post -doctoral theses in the field of geodesy and geophysics and also he gave his opinions of a number of applications for the appointment of assistant professors, associate professors and full professors.

In 1957 "Physical Geodesy" (volume I and II) was published in English language and in 1960 "Precise Levelling" was published in English, also.

In 1969 "Precise levelling" (first edition) was edited by M.Sc. Ferdynand Włoczekowski. One of the authors of this book was Prof. Czesław Kamela. The second completed and changed edition of this book was edited in 1993 after the Professor's death.

In 1971, 1975 and 1978 the book with a title "Geodesy" vol. I. was published (about 760 pages). The authors were Prof. Kamela and Dr Mieczysław Lipiński. Besides, between 1965 and 1980 Prof. Czesław Kamela published a number of scientific papers.

Prof. Czesław Kamela's research works are always strictly connected with the actual requirements of surveying and geodetic production. His works on observational methods construction, adjustment of fundamental geodetic networks and utilization of gravimetry in geodesy must be specially emphasized. Between 1948 and 1949, together with asst. Prof. Błażej Dulian, he established the number of Laplace's bases and stations in Polish astronomical - geodetic net. He also showed the necessity of utilization of gravimetric measurements in the fundamental horizontal and vertical geodetic networks.

He presided over the groups, which were to work out modernization of astronomical geodetic net and precise levelling net. Between 1947 and 1980 he actively participated in the scientific redaction and description of technical instructions.

Between 1947 and 1974 he was a member of the Committee of Studies Programme where he stressed the necessity of humanization of geodetic studies and also of an improving subjects like: geology, agriculture, law subjects and geodynamics.

For many years Prof. Czesław Kamela has been a member of Geodetic Committee of Polish Academy of Sciences, for 2 terms of office he was a vice-president of this committee. For 6 years he has been President of the National Committee of International Union of Geodesy and Geophysics.

He was a member of Scientific Council of the Institute of Geodesy and Cartography, Geodetic - Cartographical Council, Scientific Council of Geophysics Institute of Polish Academy of Sciences, Scientific Council of the Space Research Centre of PAS, Scientific Council of the Naval College, Scientific Council of the Space Flights Planetarium in Olsztyn. He was a member of Scientific - Technical Council of the National Enterprise of Geophysics Explorations in Warsaw and the Council of Chief Technical Organization.

Moreover, he belongs to a number of scientific and scientific - technical societies. He was a member of Polish Geophysics Society (for some time he acted as a vice-president), Polish Geological Society, Polish Surveyors Association (he was a honorary member of this organization). He also belonged also to the Polish Teacher's Association, Polish - Swiss Society, Polish - French Society, Association of Fighters for Liberty and Democracy and many others.

Several times Prof. Czesław Kamela was awarded the number of titles and medals (the Gold Cross of Merit, the bronze and the silver medals for Merits for a Country's Defences, Medal of 10th Anniversary of Polish People Republic, Medal of Victory and Liberty and many others).

Prof. Czesław Kamela took part in six congresses of the International Union of Geodesy and Geophysics (1957 in Toronto, 1960 in Helsinki, 1963 in Berkeley, 1967 in Zurich, 1971 in Moscow, 1975 in Grenoble). He also participated in few international symposia devoted to three-dimensional geodesy, gravimetry, modern distance measurements, tectonic movements, adjustment of the European triangulation network, geodetic calculations etc. Furthermore, he participated in few International Congresses of Geodesists (1949 in Lausanne, 1960 in Rolland-Delft, 1963 in Wien and 1976 in Stockholm).

During his 33 years of research and didactic work in the Warsaw University of Technology he educated and prepared for research and professional work numerous body of geodesists.