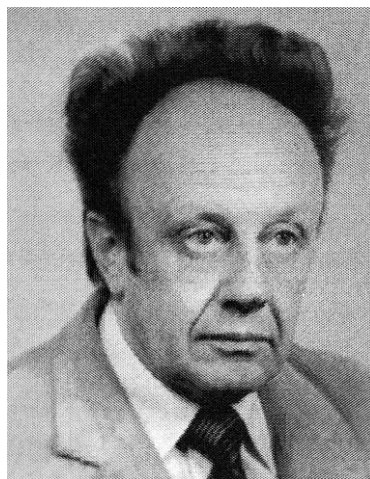




In memory of Professor Władysław Bukietyński (1928–1996)



Thirty years ago, on 30th October 1996, we paid our final respects to Professor Władysław Bukietyński, the father of the academic community of operational research analysts in Wrocław and patron of the annual National Scientific Conference ‘Methods and Applications of Operational Research’ (Pol. Ogólnopolska Konferencja Naukowa im. Profesora Władysława Bukietyńskiego Metody i Zastosowania Badań Operacyjnych – MZBO). The 44th edition of the event – MZBO 2026 – was organised by the University of Economics in Poznań, and took place two weeks prior to the anniversary of his passing.

September 2026 also marked 50 years since the establishment of the Faculty of Management, Computer Science and Finance at the University of Economics and Business in Wrocław, founded by Professor Bukietyński, who was also its first dean during the subsequent terms from 1976 to 1984. This event provided another opportunity to commemorate this outstanding teacher, scholar, originator, organiser, mentor and demanding reviewer. Professor Bukietyński was also the life and soul of social life, a humanist with a love for mathematics, a great wit and master of sharp repartee, and a friend to lean on in difficult moments.

I was fortunate to witness the multiple roles that Professor Bukietyński, also known as Unek, fulfilled. He did not allow us, namely the staff of the Department of Operational

Research (initially named the Department of Mathematical Programming), to address him as ‘Professor’. His reaction was invariable: ‘Do not call me names’.

In fact, I was one of his students. During my studies in 1963–1968 at the Faculty of Engineering and Industrial Economy of the then Higher School of Economics in Wrocław, I became devoted to probability calculus, mathematical and descriptive statistics, and mathematical programming, all of which were taught by Bukietyński, then a holder of a PhD. His didactic *virtuoserie* made me continue my scholarly path in the Department of Statistics (then called the Department of Statistics and Economic Calculus), headed first by Professor Zdzisław Hellwig, and during his extended absence during his tenure in Nigeria by Dr Bukietyński.

The Department of Statistics was established in 1950, at the time when the Higher School of Economics (Pol. Wyższa Szkoła Ekonomiczna – WSE) in Wrocław was founded. The decree of the Council of Ministers of 27th September 1950, transformed the private, vocational Higher School of Commerce (operating from February 1947) into a public educational institution, entitled to grant a Master’s degree in Economics and providing free tuition.

Władysław Bukietyński, thanks to his outstanding knowledge and excellent mathematical skills (he graduated from a mathematics and physics profiled class at the Bolesław Chrobry secondary school in Kłodzko), was appointed Deputy Assistant, and later Junior Assistant in the Department of Statistics, still as a WSE student. The department was headed by Jan Falewicz, a senior lecturer, holding a Master’s degree in engineering, who taught statistics and elements of advanced mathematics. Upon receiving his Master’s degree in 1954, Bukietyński was appointed Assistant Professor at the Department of Statistics, and in 1956, in the newly established Department of Mathematics. There, in 1961, began his long-term scholarly collaboration and friendship with Professor Antoni Smoluk, also a young Master’s degree holder.

Professor Smoluk, in his book entitled *Siedmiu z Ekonometrii. Nauka, historia, anegdoty* [The seven from the Econometrics Department: Science, history, anecdotes], published in 2016 by the WUEB Publishing House, remembers his colleague from those times:

Demanding of himself, he was understanding towards others. His entire life was dedicated to the search for truth, goodness and beauty. He contributed to the creation of the Department of Mathematics at the Higher School of Economics in Wrocław in 1955, and was one of the first three staff members. Gifted with a profound scientific, mathematical mind, he felt most at home in the

world of science. At the same time, he was also a great humanist who experienced poetical visions and was able to ‘paint with words’, exploring the nature of language (p. 14).

At that time, he was preparing his PhD dissertation *O niektórych teoretycznych problemach statystycznej analizy popytu* [On some theoretical problems of the statistical analysis of demand], which he defended in 1963.

In 1965, Bukietyński and Smoluk moved to the Department of Statistics, and their shared scientific passions yielded several articles, e.g. *O pewnej klasie funkcji liniowo niezależnych* [On a certain class of linearly independent functions] (1968) and *Uwagi o generatorach liczb pseudolosowych opartych na ciągach Fibonacciego* [Notes on pseudorandom number generators based on Fibonacci sequences] (1969), published in the *Prace Naukowe* [Scientific Works] WSE series. Over a decade later, they authored together an important publication, widely discussed in the economic community, titled *O tym, że równowaga jest ważniejsza niż optymalność* [On equilibrium being more important than optimality] (1982).

The school of mathematical programming officially emerged in Wrocław in the context of the University’s institutes reform carried out in 1969. It entailed the establishment of five institutes comprising 29 sections, one of which was the Institute of Methods of Economic Calculus (later the Institute of Economic Cybernetics). The Institute consisted of eight sections, one of which was the Section of Mathematical Programming, managed by the then Dr Bukietyński, who was at the same time nominated Deputy Director of the Institute and served as Assistant Professor. The staff members of the Section of Mathematical Programming included: Ryszard Jasiński, MSc, Stanisław Krawczyk, MSc, Ewa Konarzewska, BEng, MSc, and Urszula Królik, BEng, MSc. Ryszard, Stanisław and myself, exactly in that order, became the first PhD students supervised by Bukietyński, studying different classes of mathematical programming methods and their application in decision-making processes. In my case, this regarded the problems of multicriteria programming. My supervisor took particular pride in the fact that my PhD dissertation from 1975, later published as a book entitled *Programowanie przy wielorakości celów* [Multi-objective programming] (PWN 1980), became the first monograph dedicated to problems of vector optimisation in Poland, and one of the first in the world.

Professor Bukietyński was at that time working on transforming certain problems of optimisation into tasks of discrete programming, important from the perspective of economic practice. This was the subject of his post-doctoral dissertation *Niektóre problemy optymalizacji dyskretnej* [Selected problems of discrete optimisation] from 1975, which

defined a certain general class of tasks of the dynamic selection. His paper *O pewnym zagadnieniu optymalizacyjnym* [On a certain optimisation issue] provided a simplified algorithm, allowing for an approximate solution to a generalised selection task, where the generalisation stems from incorporating the timing of subsequent acts of choice. In July 1976, then holding the office of Dean of the new Faculty of Management and Computer Science at the Oskar Lange Academy of Economics, Władysław Bukietyński was granted a post-doctoral degree in Economics, specialising in Econometrics, and in 1979 was nominated Associate Professor.

Despite his many duties as the faculty dean, member of the Rector's Commission for International University Cooperation, and member of the Academic Council for Scientific Research Sections, the Professor managed to pursue his scholarly interests. He achieved this goal by running weekly science seminars and working within scientific research teams to study issues submitted by different economic entities.

The seminars in the Department of Mathematical Programming (which in 1981 became the Department of Operational Research) were conducted in an extraordinary atmosphere created by Professor Bukietyński, who greatly enjoyed the seminar format and lively debates. He was uniquely suited for team work, which yielded a monograph titled *Programowanie matematyczne* [Mathematical programming] (Wydawnictwo Akademii Ekonomicznej we Wrocławiu 1976, 1981), which he edited, and a textbook, *Programowanie matematyczne. Zbiór zadań* [Mathematical programming. A collection of problems] (Polskie Wydawnictwo Ekonomiczne 1980)], co-edited with Dr Stanisław Krawczyk. He was known for his surprising and inspiring ideas, as well as for his sharp academic criticism. As noted by Professor Smoluk in his book mentioned above: 'He liked scholarly order and was of a pedantic nature'. Professor Juliusz Siedlecki, the successor of Professor Bukietyński as head of the Department of Operations Research, described him in his memoirs published in the *Przegląd Statystyczny* (1997, vol. 44, no. 2) journal in the following words:

He favoured instant intervention whenever the presentation of ideas made by seminar participants was unclear or erroneous. By asking for explanations or pointing out mistakes made by the presenter, he was often able to suggest a correct resolution to the discussed issues. Whilst being impulsive in scholarly debates, he remained lenient with regards to others' mistakes; however, he showed no mercy to those who obstinately persisted in their errors.

Our seminars focused on methods and applications of the broadly understood Operations Research, a scientific area which was then intensely developed. The meetings attracted growing numbers of participants, among whom were new members of the Department's staff, PhD candidates supervised by the Professor, including those from other universities of economics (mainly the Academy of Economics in Katowice). Professor Bukietyński was profoundly dedicated to educating young scholars, as confirmed by 16 PhD degrees granted to his students. The seminars often stretched out in time and turned into social gatherings where we could share the knowledge and literature forbidden in the period of the Polish People's Republic regime; for example, we listened to the banned Russian songs of Vysotsky, who opposed the Soviet regime. Unek spoke excellent Russian (also German), spent six months in St Petersburg (then Leningrad) on a scholarship, and had an expert knowledge of Russian literature. We, his colleagues, often wondered about this, knowing that his father who was a judge in Brest-on-the-Bug (the Professor's birthplace) and among the Polish officers murdered by the Soviets in Katyń.

Professor Bukietyński was highly open to collaboration with the business sector, which often served as a testing ground for models and algorithms we prepared together. The Professor conducted over 20 such research projects, including those for the meat, timber, copper and electromechanics industries. In the late 1980s and early 1990s, the team working at the Department of Operations Research completed two long-term projects whose vital element was the implementation of IT technologies in supporting decision-making processes. These projects were: CPBP 10.9.VI.6 (1986–1991), *Optymalizacja komputerowa i jej wykorzystanie do zarządzania w warunkach reformy gospodarczej* [Computerised optimisation and its use for management in conditions of economic reform], headed by Professor Władysław Bukietyński, and CPBP 10.7/15 (1987–1991), *Zaprojektowanie, oprogramowanie i uruchomienie podsystemu optymalizacji operatywnych planów produkcji wyrobów mięsnych* [Design, programming and implementation of a subsystem of the optimisation of operational meat production planning], conducted by Ewa Konarzewska-Gubała, BEng, PhD. In the mid-1990s, the scope of research carried out in the Department of Operational Research was expanded by two important areas of theory and application, namely methods of neuron networks and their application, and methods of managing quality, in line with the concept of total quality management.

International collaboration was another important and highly valued aspect of Professor Bukietyński's academic and organisational activity. From 1984 to 1990, he was the Deputy Rector for development and international cooperation, maintaining constant and mutual

contacts with the University of Munster, where in 1987, he delivered a series of lectures as Visiting Professor. Other members of his team performed the same role: Professor Stanisław Krawczyk at the University of Marburg (in 1991, 1993 and 1995), and Doctor Ewa Konarzewska-Gubała at the University of Richmond, Virginia (1994). As a team, we were very active within the international academic community, participating in numerous congresses, symposia and seminars in Poland and abroad, always with the strong support of our mentor. I can recall the circumstances related to my application to participate in the International Conference on Multiple Criteria Decision Making in Kyoto. I was invited there by the organisers who covered the costs of my visit, however I had to apply to our University to finance the journey to Japan. Deputy Rector Bukietyński accepted my request, congratulated me on the invitation, but at the same time I was denied the permission of the Polish United Workers' Party (PZPR) Secretary at the University. Upon hearing the news, Professor grabbed the phone and threatened the Secretary with resignation from his post of Deputy Rector. I went to the conference and it was excellent.

Professor Władysław Bukietyński, for some simply Unek, left us suddenly thirty years ago. Yet, he is still with us, remembered for his mathematician's soul and an unwavering dedication to truth and perfection in all academic endeavours.

Associate Professor Ewa Konarzewska-Gubała