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To the memory of Zoltán Daróczy (1938-2023)

Zoltán Daróczy was born in 1938 as the second child of a notary in Bihartorda. He received a Protestant upbringing and studied very well, so his parents sent him to the Debrecen Reformed College. As a student, he liked literature, history and mathematics. "Mathematics is nothing more than precise speech", he would hear from his high school mathematics teacher, Géza Nagy. Perhaps because of this, Zoltán Daróczy chose the teaching career and, in 1956, he was admitted to the mathematics-descriptive geometry university program of Lajos Kossuth University. Even with a maximum score, he was admitted only after an appeal. The 1956 revolution broke out as soon as the university education began. As a university student, he joined the national guard and thus tried to fight in

a good quarrel. After the suppression of the revolution, education only started again in the spring of 1957. Fortunately, he was not expelled from the university, and finally he was able to graduate with an honors degree in 1961. He had excellent teachers. He learned mathematical analysis, its beauty and the love for it from András Rapcsák and János Aczél. He quickly understood the concept of the anthill epsilon and later, when he was already the chairman of the Department of Analysis, he passed on to generations of teachers what he had learned from his teachers: science, education and humanity. For nearly five decades, Zoltán Daróczy was the dominant and widely liked instructor of the Faculty of Sciences' mathematics teaching and mathematics students. In his lectures, he made his students fall in love with measure theory and real function theory. His special classes were famous, in them he introduced his students to current research questions. He was a true renaissance man, he taught the sciences in a complex way, highlighting the wider connections, but also leaving room for independent thinking.

After completing his studies, he did not get a job at Lajos Kossuth University. However, in one of his first scientific papers he pointed out an inaccuracy of Alfréd Rényi. Thanks to this, Rényi offered him a scholarship at the Mathematical Research Institute. During the one year he spent here, he obtained his university doctorate under the supervision of János Aczél. For one year from 1963, he was a guest lecturer at the Mathematics Institute of the University of Vienna. He worked continuously at our University from 1964. At the age of 29, he became a Candidate of Mathematical Sciences, and at the age of 38 he became a Doctor of Mathematical Sciences and was appointed a university professor. He was elected a corresponding member of the Hungarian Academy of Sciences in 1985, and a full member in 1990.

From 1968, he headed the Department of Analysis for 16 years. During his career, he was the director of the Institute of Mathematics from 1984 for 5 years, the deputy dean of the Faculty of Natural Sciences between 1969 and 1974, and then the dean from 1974 to 1980. In the period before the political regime change, he was the university's deputy rector for three years from 1987, then its rector between 1987 and 1990. He was the founder and for 18 years the head of the Doctoral School of Mathematics and Computer Science from 1990. When he retired in 2008, he received the title of professor emeritus.

At a young age, Zoltán Daróczy achieved his most important results in the study of functional equations in information theory, in connection with the characterizations of the Shannon entropy. His monograph, written together with János

Aczél, presenting these results as well, became the most cited book on the subject. His contribution to the theory of means is also significant. He introduced the concept of deviation means and also achieved fundamental results in the examination of the so-called invariance equations for these means.

János Aczél left Hungary in 1965, but his friendship and cooperation with him was never broken. From there, he led and guided the functional equations and inequalities research group with his advice for more than fifty years, which gained great recognition worldwide. Thanks to his perceptive ability, the researchers and teachers close to him could always focus on the most important questions of the topic. The international relations of the research group broadened in the 1970s, and the members of the group were invited to many important Western conferences from then on. The trips to these, the time spent together, and his understanding and good nature that eased difficulties were memorable. Under his guidance, 14 of his students obtained PhD degrees, most of whom are still active and internationally recognized in teaching and research work. Six of them also obtained the Doctor of Science degree from the Hungarian Academy of Sciences. The successes of his students were more important to him than his own successes. He did everything for their recognition and then rejoiced with them when this happened. He was also very pleased that his son, Bálint followed in his footsteps and chose the career of a mathematician.

The departmental seminars played an important role in the life of the Analysis Department. An important version of these is the Síkfőkút Analysis Seminar, held annually from the mid-80s to the present day. In addition to departmental colleagues and PhD students, their family members could also participate in such gatherings. These events greatly helped the development of human and friendly relations. Zoltán Daróczy and his family were constant participants of these seminars for 40 years. The children, including Orsi and Bálint, played together. We were, and still are, like a big family. Zoli had a kind word for everyone, regardless of age. He was always the center of the company through his humor, empathy and knowledge.

Zoltán Daróczy started playing chess competitively when he was in high school, and during his university years he played in the chess team of the Athletic Club of the University of Debrecen (DEAC). In the 1970s and 1980s, many instructors of the Faculty of Sciences and Faculty of Arts played schnell parties with him and the members of the Department at the chess board, which was always set up. Only now have we become aware of the strong community-forming power of this activity.

In addition to his scientific career, he was also actively involved in the political life of Hungary. In the late 1980s, he joined the reform movements that eventually led to the dissolution of the one-party system and the change of the political regime. In the parliamentary election of 1990, he won a mandate from the regional list of the Hungarian Socialist Party in Hajdú-Bihar county, and four years later he won a seat in one of the individual districts in Debrecen and became a Member of Parliament.

Zoltán Daróczy's domestic recognition is shown by, among others, the Academy Award, the Tibor Szele Memorial Medal, the Albert Szent-Györgyi Award, the Széchenyi Award, and the Middle Cross of the Order of Merit of the Hungarian Republic. His scientific activities were also recognized abroad: In 2008, one of the world's oldest scientific organizations, the Hamburg Mathematical Society, elected him an honorary member. For several decades, he was a member of the Scientific Committee of the International Symposia on Functional Equations.

He maintained not only professional but close human relations with his students and colleagues. He managed the communities entrusted to his leadership with great empathy and competence, and helped the lives of all of us with his advice and love. His reading, education, openness and knowledge were exemplary. With his death, the University of Debrecen and the Hungarian Academy of Sciences lost one of their most excellent teachers, researchers and spiritual leaders.

Charles Dickens wrote in "A Christmas Carol": "It is required of every man [...] that the spirit within him should walk abroad among his fellowmen, and travel far and wide."

This can certainly be said about Zoltán Daróczy.

Our dear Master, dear Zoli!

Thank you for the gift you gave us! Requiescat in pace – Rest in peace.

Zsolt Páles