

MIROSLAV FIEDLER (7.4.1926–20.11.2015)

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Miroslav Fiedler, an outstanding Czech mathematician, Professor Emeritus of the Czech Academy of Sciences, member of the Learned Society of the Czech Republic, and a honorary member of the Union of Czech Mathematicians and Physicists died on November 20, 2015 at the age of 89 years. In 1955, M. Fiedler became the first to be awarded the CSc. degree (equivalent to the PhD.) from the Central Institute of Mathematics of the Czechoslovak Academy of Sciences. In the same year, he published his first paper in the Czechoslovak Mathematical Journal, and until his death he stayed scientifically and personally connected to this journal. Since 1961 M. Fiedler served the Czechoslovak Mathematical Journal as a member of its Editorial Board, as a Deputy Chief Editor during 1972–1978, as Editor-in-Chief during 1979–2010, and as Deputy-in-Chief Editor during 2011–2015. He was an author or coauthor of 24 papers in the Czechoslovak Mathematical Journal (see the references [1]–[24] below). These papers include his most influential and cited publications on algebraic connectivity of graphs [8] (with 330 citations in MathSciNet, 1076 citations in WOS and 2664 citations in GoogleScholar), on eigenvectors of nonnegative symmetric matrices [5] (with 126 citations in MathSciNet, 350 citations in WOS and 938 citations in GoogleScholar), and on matrices with non-positive off-diagonal elements and positive principal minors co-authored with Vlastimil Pták [24] (with 91 citations in MathSciNet, more than 460 citations in WOS and 812 citations in GoogleScholar).

A special edition of the Czechoslovak Mathematical Journal was planned for April 2016 on the occasion of M. Fiedler’s ninetieth birthday. The collaborators of M. Fiedler as well as active researchers in the areas in which he worked were invited to submit papers for this special volume honoring our renowned colleague and respected friend. In memory of his life and achievements several colleagues from the Institute of Mathematics and the Institute of Computer Science created a memorial webpage at the link <http://www.cs.cas.cz/fiedler> and invited friends and col-

laborators of Mirek Fiedler to leave tributes, stories and pictures. In what follows we would like to share some of our personal reminiscences.

Professor Fiedler was a prolific mathematician whose pioneering research in many areas of mathematics sparked international interest. In linear algebra, he worked tirelessly on matrices of class P (matrices possessing all positive principal minors of all orders), Hadamard products of certain classes, and generalized inverses. He explored special matrices, including the Toeplitz, Hankel, and Monge matrices. His research embraced creativity with an elegance of presentation. He possessed a genuine joy in discussing ideas with colleagues and an attentive audience.

On the personal side Mirek enjoyed classical music, especially opera. Once when Mirek visited me, we were listening to a piano sonata of Mozart and at one point, Mirek said “each note is like a pearl”. That comment today could be a metaphor for Professor Fiedler’s written legacy. (Tom Markham)



Figure 1. Thomas Markham, Miroslav Fiedler, Pál Rózsa and Frank Hall—meeting on the occasion of M. Fiedler’s 80th birthday.

In all of my encounters with Professor Fiedler, who regularly reminded me to call him Mirek, he manifested a love for mathematics, its ideas, its processes and its practitioners. Despite the vast differences in our ages, our status and our respective

command of matrix theory, he always treated me as both a personal acquaintance and as a colleague. His talks and his conversations were always about something greater than his own work, and he always seemed eager to encourage less prominent mathematicians to do research. I have always enjoyed his collegial smile and his thoughtful interest in my efforts. I will miss seeing him at matrix theory conferences. I am sure that his family's sense of loss is infinitely deeper than mine. (*Jeff Stuart*)



Figure 2. Reception in Villa Lanna on the occasion of M. Fiedler's 85th birthday.

It was a huge honor and privilege to work closely with Mirek since 2010. I have such wonderful memories of Mirek. He was an exceptionally kind person, a dear friend, a tremendous inspiration, and a great mathematician. Mirek was remarkable in his creativity, tenacity, knowledge of mathematics, and wealth of new ideas. He indeed loved to solve problems! I am thankful for the time that I had with Mirek and the whole family during these past years. (*Frank Hall*)

I met Mirek Fiedler for the first time in 1993 when he was appointed Professor Emeritus and affiliated also with the Institute of Computer Science of the Czech Academy of Sciences. Besides his intensive and ongoing international collaboration with many colleagues abroad he started to regularly attend the Seminar of Applied

Linear Algebra and the conferences and winter schools (Milovy 1997 and 2002, Harachov 2007) organized by the Department of Computational Methods. He had fully integrated into our working environment and after the death of his long-term collaborator and friend Vlastimil Pták in 1999 he became an intrinsic doyen of our department. It was a pleasure to meet and talk to him even on such ordinary meetings as our everyday coffee breaks, not mentioning annual Christmas parties or other unforgettable social events, where he participated until almost recent days (see photo in Figure 3 taken in 2013). Not a long time ago, the Mathematical Institute and Institute of Computer Science organized a celebratory seminar on the occasion of his 85th birthday (see Figure 2). We also keep in our collection one of his first photos in Figure 4 that he posted on the bulletin board with the childhood photos of all department members.



Figure 3. Christmas party of the Department of computational methods, 2013.

Everyone who ever had a chance to meet him will certainly confirm that Mirek was a very modest and unassuming person. Despite his increasing age, he intensively worked, frequently traveled abroad, and invited foreign visitors. Nevertheless, he was extremely hesitant to ask for any help. People usually blame the bureaucratic





Figure 4. One of the first child photos of M. Fiedler.

procedures that accompany such activities but it was often the only way how to find out that Mirek might need some help or support from the department!

Until his very last days, Mirek was interested in studying the properties of special classes of matrices. I am extremely glad that I could participate in this research noticing the relationship between  $G$  matrices and  $J$ -orthogonal matrices during a seminar talk at the institute given by Frank Hall on one of his numerous visits in the last several years. The outcome of this collaboration is our joint paper that we have finished last summer. Although having contributed, Mirek already very weak in those days proposed that he doesn't feel comfortable to become a co-author. Therefore, we are very grateful that this work can appear in the Special Issue dedicated to his memory. (*Miro Rozložník*)

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