Ákos Seress
24 November 1958 – 13 February 2013

(Photograph courtesy of Mrs Sherry Seress)

It is with deep regret that we mark the passing of our colleague and friend Ákos Seress. He lost his brave battle with an aggressive form of cancer, and died in February. Ákos Seress was an outstanding mathematician whose work had a major impact on Group Theory and Combinatorics.

Ákos Seress is best known for his achievements in algorithmic group theory, and this was the theme of his invited lecture at the 2006 Madrid International Congress of Mathematicians. He is famous for his definitive monograph on permutation group algorithms, the culmination of both a series of joint papers on the subject with Babai and Luks, and also his pioneering implementations of these fast algorithms in the GAP computer system. Ákos Seress also made major contributions to the theory underpinning matrix group algorithms, including the statistical theory of finite simple groups. His vision of a flexible group computational system that adapts to different kinds of group representations was realised in a system developed with Neunhöffer, now available in GAP, and presented at ISSAC 2006 (International Symposium on Symbolic and Algebraic Manipulation).

Ákos's recent work on Majorana algebras provides a stunning example of the fundamental breakthroughs he regularly achieved by combining his exceptional computational and theoretical skills. (The Majorana algebras generalise the Griess–Norton algebra, the automorphism group of which is the Monster, the largest sporadic simple group.) Ákos's paper *Construction of 2-Closed M-Representations* received the Distinguished Paper award at ISSAC 2012 and was described in the accompanying citation as a paper 'of an outstanding groundbreaking importance' that 'marks a turning point in Majorana Theory'.

Ákos was born and educated in Budapest and it is not surprising that his first research interest was combinatorial mathematics. Indeed his Erdős number is one — witnessed by his joint paper with Erdős in 1986. Ákos wrote his PhD thesis in 1985 in Combinatorics at Ohio State University under the supervision of Dijen Ray-Chaudhury, and remained there on the faculty at OSU, becoming professor in 2000.

Ákos had worked with many mathematicians in the Centre for the Mathematics of Symmetry and Computation (CMSC) at the University of Western Australia on regular research visits for more than a decade before his Australian Research Council Professorial Fellowship allowed him to become a full-time member of the CMSC from July 2010. Since then Ákos collaborated and published with almost all members of the CMSC, and we miss immensely his friendship and our enthusiastic mathematical interactions with him. It was at the CMSC that Ákos began his collaboration with Harald Helfgott, which led to his publication in the Annals of Mathematics of a long-sought bound on the diameter of the alternating and symmetric groups, a tour de force in the study of the geometry of finite simple groups. There will be numerous joint papers with Ákos Seress appearing for years to come.

It is with great sadness that we say farewell to our friend and colleague Ákos Seress. Our condolences go to his wife Sherry and his son Laszlo, who quickly became part of the CMSC community at UWA. Ákos will be remembered by the many mathematicians around the world with whom he came into contact.

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