In Memoriam: David S. Johnson

We note with sadness the passing of a colleague and friend, David S. Johnson, on March 8 of this year. Since 2014 David had been on the faculty at Columbia University; prior to that he was head of the Algorithms & Optimization Research department at AT&T Labs-Research, having joined AT&T Bell Laboratories in 1973.

David's extensive and important contributions to research in algorithm design and analysis, and to the theory of NP-Completeness, are well known and widely celebrated. Here he is especially remembered for his contributions to experimental algorithmics, both as an author and as an advocate, working to increase both the quality and quantity of research in this field.

David authored several experimental papers including average-case analysis of bin packing algorithms, heuristics for the traveling salesman problem, and applications of simulated annealing to a variety of NP-hard optimization problems. These papers are notable for their attention to rigorous experimental methodology and their influence on algorithm analysis. His "Theoretician's Guide to the Experimental Analysis of Algorithms" is a must-read for anyone doing work in this field.

He was instrumental in establishing the DIMACS Implementation Challenges and had served as one-man steering committee and frequent co-organizer ever since the first one in 1990. Also in 1990 he started the annual Symposium on Data Structures and Algorithms (SODA), which explicitly mentions experimental methodology and application-oriented analyses in its call for papers. He served for many years on the steering committees of the Algorithm Engineering and Experiments (ALENEX) meetings and of the *ACM Journal on Experimental Algorithmics*. He co-organized Dagstuhl Seminars on experimental algorithmics and algorithm engineering in 2010, 2013, and 2016. And he was generous mentor to scores of young researchers and experimentalists who met him through visitor programs at AT&T Labs-Research or at DIMACS.

This research community owes him an enormous debt. He will be deeply missed.

Catherine C. McGeoch
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