Dave E. Johnson 1944–2008

Dave Johnson was particularly well known in the physics community for his ability with mathematical modelling to determine the best beam characteristics for a particular accelerator—a complex and crucial set of calculations that defines the design and character of the entire machine.

Dave earned a first degree in physics from the University of California, Berkeley, in 1966 and a PhD in high-energy physics from Iowa State University in 1972. He started his career at Fermilab, where he became part of the central design group that did the preliminary planning for the Superconducting Super Collider (SSC). He was a senior scientist and deputy head of the Accelerator Department of the SSC laboratory from autumn 1989 until January 1995, and he was jointly responsible for the technical design, management, schedule and budget ($2.4 billion) of the 87 km circumference collider.

After the US Congress terminated the SSC project, Dave worked on the close-down procedures for the SSC laboratory. He spearheaded a programme to capture and archive the 200 GB technical software and data library assembled during the SSC project, and to link this repository to the web. He then worked with the Texas National Research Laboratory Commission on design review and analysis for a regional medical technology centre.

The field of high-energy physics is inextricably bound to the employment of state-of-the-art computer hardware and software. As a result, Dave acquired an integrated view of computer systems, flowing from high-level, large-project management goals to the concise understanding of the microcode required to achieve the massive transfer rates necessary for 10 MB/s data capture. He developed a computer-based lattice design using state-of-the-art computer modelling codes for Particle Beam Lasers Inc, and undertook a computer systems security analysis for the International Thermonuclear Reactor for Science Applications International Corporation. In addition, he developed a web server, internet applications and security study for Texas Instruments, as well as consulting on several projects for the Los Alamos National Laboratory. He was also co-founder and vice-president of system development for InterTech Resources Development Inc, a company developed to establish and manage large-scale scientific and computer-related collaborations between scientists in the former Soviet Union and US industry.

In his private life, Dave was a gourmet cook who especially enjoyed French cuisine. He actively monitored science blogs and answered questions about various scientific matters, mainly physics, and he was an active online gamer. He was also interested in nature and took trips to the Arctic and Antarctic. He created and maintained a stunning 200 gallon, salt water aquarium and was a devoted dog owner. He was also the owner of an old Mitsubishi sports car that he loved and rebuilt.

He is survived by one brother, Richard, and Richard’s three children. His colleagues and friends.