

Obituary

Dmitri Sharov

It is with an enduring sense of grief that we report the loss of one of the brightest minds in the CFD world, namely Dmitri Sharov.

Dmitri was born on 1 September 1965 in St Petersburg (at this time still named Leningrad). His father was an official in the Russian Navy, and his mother a teacher. By the 8th grade his special ability in mathematics was already recognized and he attended the special mathematical high school, from which he graduated with honor in 1982. His education continued at the St Petersburg Technical University, from which he graduated in 1998 with an honor MS in Physical Engineering in Aerodynamics and Thermodynamics. His first contact with CFD took place during this time while he started working, as an intern, in Prof. Andrey Fursenko's group.

After graduation, Dmitri chose to stay as a postgraduate and started work on a new topic: the development of a 2D unstructured grid method based on local adaptive refinement/derefinement and upwind high-order schemes for unsteady compressible flow computations and shock wave flow simulations. These years were very productive and he advanced the field of shock wave simulations. According to one of his advisers, Prof. Peter Voinovich, his thesis, entitled 'Numerical Simulation of Shocked Gas Flows via Unstructured Adaptive Grids' was 'brilliant for a postgraduate student'.

Dmitri got married in 1987. In 1990, his daughter was born. By this time the Soviet Union was collapsing and Dmitri started looking for a safe place to live and work. His daughter was in need of a very particular eye operation, which could not be provided in the Soviet Union. During 1992–1994, Dmitri visited Prof. Ko Fujii at ISAS, Japan, a number of times as a senior researcher. Finally, he and his family decided to move to Japan. In 1994, he started work as an assistant professor at Tohoku University, Sendai, Japan, with Prof. K. Nakahashi. During this time he developed the tetrahedral grid generator 'TU TetraGrid', a hybrid prismatic/tetrahedral grid generator for viscous flows, and an unstructured implicit flow solver. These years were perhaps the happiest years for him and his family. His daughter had a successful operation and her vision recovered. The safe life in Japan after all the unstable years in Russia gave him peace of mind and allowed him to work more productively. He published many articles and was seen at many conferences. In 1997, Dmitri started work at Fujitsu Ltd. as a research engineer, and the family moved to the Tokyo area. During this time, he developed an unstructured grid flow solver using low-speed preconditioning, an unstructured surface grid generator using STL and IGES CAD data, and a PC-based visualization toolkit. Given that the positions in Japan were temporary and that the situation in Russia was not improving, Dmitri and his family decided to move to the U.S.A. He became a research scientist with the group that he had always wanted to work with—the CFD group at Science Applications International Corporation.

During his last years, he continued to work on pre-processing, flow solvers, parallelization and visualization.

As a colleague, the loss of Dmitri is enormous. He was a brilliant man, with a solid education, who made contributions in many areas of computer simulation, namely, pre-processing, grid generation, solvers, mesh adaptivity and post-processing. What was most admirable in him was his determined stoicism. It is part of human nature to be able to invent any number of excuses not to do something. Dmitri never knew of these excuses. Once an idea had been put forth, or a task given, he would retreat like a magician into his room, and emerge, two weeks later, with the solution.

We will miss his sharp mind, his indestructible sense of humor, his incessant curiosity and most of all his friendship. He died of leukemia at the age of 36.