The first time I met Pat was in December 1976 at a party attended by people from the UK Atomic Energy Authority in Harwell. A lively young chap started pulling my leg about being from 'that fun NAG thing,' declaring they had better software. That well-known NAG library was and is my baby! We had a joking discussion, and it was quickly clear we would become friends.

Pat achieved his degrees from the University of Oxford, and he was an excellent mathematician. In 1977 he started to work at Oak Ridge Laboratory in Tennessee as a numerical analyst consultant.

Pat gained outstanding experience at Oak Ridge, travelling all over the States to Universities, major Government Laboratories and big companies, providing solutions to challenging problems.

In September 1984, he moved to Norway to establish a Centre for Computer Science at the Christian Michelson Institute in Bergen. The Centre subscribed to the NAG library, and Pat and I renewed our friendship. He was an excellent lecturer and teacher who expressed himself clearly in elegant English, gifts enabling him to edit technical mathematical journals.

In 1986, he was invited to join IBM as Head of the newly created Bergen Scientific Centre, and became active in the Scientific and Technical Community in Norway, the Nordic countries and beyond. His mathematical grasp and technical-solving abilities in scientific computation, latterly including visualisation, were well-known and valued.

He increasingly wanted to run his own company, and the decision of IBM to close their technical centres, including that in Bergen, encouraged him to establish Bergen Software Services International (BSSI) which, in his words 'Offered advanced mathematical and computational modelling to solve complex problems for the automotive, oil and gas industries.' With an able technical group around him, he developed a successful international consulting business, particularly in England, the USA and South Korea, sometimes involving NAG. He enjoyed the stimulation of solving challenging scientific problems and meeting many people.

In the late 1980s, he was invited to join the IFIP Working Group 2.5 on Numerical Software, made up of leading international numerical analysts and mathematicians, which meets at least once annually. Pat invariably attended the Group meetings, held all over the world: we jointly organised group meetings in Norway and Oxford.

Pat and Berit got together in the autumn of 1986. Initially Pat travelled alone to England and regularly stayed with Gill and me in Ramsden from the early 1990s. He loved making fruit cakes, so he usually came in early December to buy the fruit and marzipan (with Gill) for the Christmas cake. He also enjoyed the occasional drive through the Cotswolds in one of Julian's classic sports cars, and buying DVDs to watch during his visits. And the books! He was such an avid reader he carried a small library with him. Berit came with Pat in January 1996. We enjoyed having them both, and so a pattern was set of Pat coming alone in December and again with Berit in January.

The 2008 visit was particularly special. The whole family came, Anniken with Morten, Olav and Astrid. I married Pat and Berit in Ramsden Church January 10 th 2008. It was a glorious occasion, with a wonderful party afterwards.

Olav came again with his grandparents in 2013, and Astrid in 2016. Pat was visiting us in August 2015 on the day my late wife Gill died.

Pat and I organised a Working Group meeting for IFIP WG 2.5 at the NAG offices in Oxford 2-4 August, 2016.

He loved his books. Early last year he forgot to take a particular book for a three weeks respite care in a nursing home. 'Berit', he said, 'It's in the 3 rd bookcase, 4 th shelf from the bottom, 3 rd book from the left.' And of course, it was. Highly intelligent, strongly motivated and prudent.

Pat was one of my closest friends. He was always excellent company, even when grumpy. He had enormous energy and zest for life, was an outstanding manager and a successful entrepreneur. He loved Berit and his family, and they him. Pat is greatly missed.

Brian Ford

19 th December 2020