



Summers, Dave (1965)
1947 – 2009

Dave Summers was born in Victoria, British Columbia, in August 1947. His parents were both immigrants from Scotland and this coloured his early life – and left a permanent mark on his character.

Summers was a precious child of relatively elderly parents. An older sibling had died in infancy so he was much loved and protected.

One story told of his childhood is that his parents bought a television to see the Coronation in 1953. They then felt that young David was spending too much watching it, so it was disconnected and put away in the cellar, never to re-emerge. Later in the 1950s, Summers discovered "fun" when one of his many aunts visited from the UK and they spent many happy hours secretly playing cards and chequers.

In his early teens, he was already writing poetry that made an impression on those who saw it. It was often suffused with gloom and angst, characteristics that were as true of his works late in life.

He did well at school and subsequently studied physics at the University of Victoria. After graduating in 1969, Summers was accepted on to the MSc degree programme at the university, working on induced magnetic fields in a geophysical context, under the supervision of Professor JT Weaver.

In August 1971, after completing his programme, Summers moved to Britain. After an interlude teaching mathematics at a catholic school in London, he resumed his work on geophysics at Edinburgh University in 1974. He was pursuing the problem of the inversion of geomagnetic induction data.

Have achieved his PhD, he took a number of post-doctoral appointments, most memorably at the University of Goettingen in Germany. His time there was not happy, particularly as he was not averse to asking older members of the academic staff what they had done during the war. As a poet, he was able identify with Heinrich Heine, who had found little to admire at Goettingen University in his time there.

In 1980, Summer's research interests took the turn that would lead to his groundbreaking – and tragically incomplete – work on turbulence. He took up a post-doctoral post in the Architecture Department of Edinburgh University, numerically modelling wind flow around a collection of buildings, with the aim of assisting the design and orientation of buildings in the built environment. This work drew his attention to the problem of turbulence, and how difficult it was proving to the research community.

This work led to a long and fruitful association with Professor Alexandre Chorin of the University of California in Berkeley. Chorin was a pioneer of Vortex Method. Summers first visited Berkeley in 1981 and their collaboration continued for the rest of his life. Summers joined what is now Edinburgh Napier University in 1985 and remained there until his death.

Following many years of collaboration and learning from the ideas of others, Summers developed an understanding of homogeneous turbulence in terms of fluid impulse. Turbulence is of great importance to engineers and the reduction of turbulence is a central preoccupation in many design processes – aircraft, space-shuttles, the transport of fluid in conduits and pipes, the prediction of currents and weather and for the modelling of many industrial processes, such as the prediction of plumes from chimneys and the distribution of effluent from discharge outflows.

It is this universal importance of the field that means that any promising new approach tends to attract substantial resources.

The "turbulence community" was convinced that the resolution of the problem would require large investment in future generations of powerful computers. Summers' notion that a simple understanding of the nature of impulse can contribute significantly to resolving this problem runs counter to this expectation. Summers put it thus: "This climate of expectation has given me a small window of time to develop my ideas in a kind of 'sanctuary' where people watch on, perhaps in a spirit of bemusement."

Summer's fourth paper in this field, developed with colleague Dr. Dave Roberts, is due to appear in the next issue of the Journal of Turbulence. He had plans for future research to develop his ideas but, sadly, this will now be for others to pursue. The key to Summer's success in this area was creativity. This creativity was further expressed in his life away from Edinburgh Napier University. Throughout his life he continued to produce poetry, often linked to his personal life and work. He also fell under the spell of the Russian language and its literature.

He had produced translations of the poems of Boris Pasternak and Aleksandr Blok, translations which combined an understanding of language with the creativity of a poet. His commitment to literature is reflected in his will, which leaves his entire estate to be applied for the benefit of literature in Scotland.

This thought for others was also reflected in his long-term commitment to socialism, expressed through his ongoing membership of the Labour Party, despite the scorn of his friends.

Summers had a large extended family and spent much time researching its history and making contact with his many cousins throughout the world: he was in many ways a classic son of the Scottish diaspora. He had long had a cottage at Parton in Dumfries and Galloway, the location chosen as much for its connection with his hero, James Clerk Maxwell, as for its beauty. Here he escaped from Edinburgh and the rigours of his research to spend time in his garden and working on his poetry. It is here, too, in the beautiful burial ground of Parton Kirk that he was laid to rest, close to the grave of James Clerk Maxwell.

David Summers was a complex man with a disconcertingly dry sense of humour, but – most of all – he was a joy to have known and will be sorely missed by his family, friends and colleagues.

In *Some Hope*, (2009), David wrote: "Before I pass beyond to the join the others, give to me a hint that what was gained was worth the sacrifice and the self-denial and the long, arduous solitary hours, that it wasn't all a tragic wasted effort, that something positive will come of it, a modest contribution to human welfare, so the life as lived was not lived so in vain."

In that year he passed away. Dave had a cottage at Parton in Dumfries and Galloway, a location chosen as much for its connection with his hero, James Clerk Maxwell, as for its beauty. Here he escaped from Edinburgh and the rigours of his research to spend time in his garden and working on his poetry. It is here, in the beautiful burial ground of Parton Kirk that he was laid to rest, close to the grave of James Clerk Maxwell.