

## Frederick Michael Larkin

Michael Larkin was born in England in 1936 and took his B.Sc. in honours Mathematics at Imperial College, London, England. From 1957 to 1969 Michael worked in government and industry research laboratories in England with stints at the Atomic Energy Labs at Harwell and Culham interrupted by a two year interlude at Rolls Royce. During this period, he worked extensively with digital and analogue computers in modelling theoretical design of nuclear systems. Although most of this work was classified he did publish four papers on topics in numerical computation and graphics.

Michael joined the Computing Centre at Queen's in 1969 as a consultant in Numerical Methods and Applied Mathematics. His role was to help researchers across the campus make effective use of the computing facilities for scientific computing. Through his efforts, Queen's acquired the state-of-the-art numerical libraries then available and Michael encouraged their use by providing the backup service to users who encountered difficulties. During this period Michael's interest in research blossomed and he produced five major papers in approximation theory. At the same time his interest in the academic programs at Queen's grew and he became a part time lecturer in the Department of Computing and Information Science, assisting with curriculum design and teaching in the numerical analysis area.

In 1974, Michael joined the Department on a full time basis as an Associate Professor. He received tenure in 1977 and was promoted to Full Professor in 1980. He taught at all levels of the curriculum and

continued his active interest in research. In addition, he took a keen interest in University affairs, serving as a Member of the Senate, as a Member of the Steering Committee of the Graduate School and, briefly, as Vice-Chairman of Graduate Studies. Within the Department he served as Chairman of Graduate Studies and as a member of our Curriculum Committee.

Michael had many outside interests as well. He was an avid downhill skier in winter and a sailor in the summer. He had a deep interest in music, which he passed on to his son, Matthew, and his harmonica and tin flute playing entertained us at many departmental gatherings. Michael exhibited a zest for life that we all admired.

I would like to finish by saying something about Michael's research work. He worked in isolation at Queen's in that few graduate students and fewer faculty members were aware of the nature of his research contributions to the field.

Essentially, all numerical methods rely on the use of local approximation of functions to achieve their goals. The classical approximation techniques, based on Taylor series expansions, are the foundation of almost all present day practical methods. Michael pioneered the idea of using a probabilistic approach to give an alternative local approximation technique. In some cases this leads to the classical methods, but in many others leads to new algorithms that appear to have practical advantages over more classical methods. This work has finally begun to attract attention and I expect that the importance of his contributions will grow in time. Michael was a self

February 11 1982

made researcher. He had no formal mathematics beyond the B.Sc. level, yet he was able to make fundamental contributions at the highest levels of applied mathematics. His curiosity about how the world around him worked was evident to all who knew him well.

The Faculty and the Department have lost a true scholar and are the poorer for his passing.