

Computer pioneer celebrates his ninetieth birthday

Professor Sir Maurice Wilkes FRS, the former head of the Computer Laboratory who celebrates his ninetieth birthday on 26 June, is not alone among scientists in retaining an office at his old department and enjoying an honoured position at official events. But who else could claim not only to have set up an internationally renowned university department, but also to have been instrumental in creating a discipline that in fifty years has transformed the globe?

Wilkes was both the first head of the lab, in the days when it was misleadingly called the Mathematical Laboratory, and the leader of the team which built EDSAC, the first digital computer to go into general use and the direct ancestor of every PC and mobile phone. The initials stand for Electronic Delay Storage Automatic Calculator.

Born in the Midlands in 1913, Wilkes came to Cambridge in 1931 to read maths at St John's College before undertaking a doctorate in physics. 'I'd always intended to be an experimental physicist,' he says, 'and the mathematics tripos was one of the recognised ways to become a practical physicist'.

In 1937 he joined the newly formed Mathematical Laboratory, but the war intervened before the department could be properly established. Wilkes, who says that he 'didn't want to fool around in Cambridge during



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the war', worked on the development of radar.

When he returned to the University in 1945 he found himself in charge of the Mathematical Laboratory. 'It was a very good thing for a young man in his late twenties,' he remembers, with characteristic understatement. After a visit to the United States in 1946 he decided that his new department should be working on digital computers, and within three years had successfully overseen the

construction of EDSAC and run its first program.

EDSAC was important because it was not just used by mathematicians. As Wilkes points out, 'when we got the machine running we pretty soon opened it up to others'. One early user was John Kendrew, who was researching the structure of the blood protein myoglobin. 'Kendrew exploited the computing facilities to the full', says Wilkes, and he acknowledged the computer's importance

when accepting the 1962 Nobel Prize in Chemistry.

Wilkes remained head of what eventually became the Computer Laboratory until 1980, and was responsible for many innovations in the discipline of computer science, as well as for establishing the lab's formidable research reputation. He retired in 1980, to be succeeded by his former student, Roger Needham, who died earlier this year. It was Needham's renown that five years ago brought Microsoft Research to Cambridge.

After six years working for the computing firm DEC in the United States, Wilkes returned to Cambridge and the Olivetti Research Lab (later the AT&T Laboratory) on Trumpington Street. There he continued to research and publish until 2002, when the lab was closed and he moved back to the Computing Lab. 'I lost my office', he says. 'They heard about it here and fixed me up.'

While he has achieved great things over a long and distinguished career, Wilkes is aware of one important factor behind his success. 'Everybody needs a lot of luck,' he says, 'but if you can use the luck wisely then so much the better. My whole career has been just one stroke of luck after another.'

He is still active in the life of the lab, and admits to having 'some technical stuff going on, as well as a few chores'. One activity which clearly does not count as a chore is his support for the recently established alumni society, the Cambridge Lab Ring, which aims to bring together all those who have done computing degrees in Cambridge over the decades.

He also, although he wouldn't wish to admit it, helps keep the lab in touch with its long history. The knowledge that he is still part of the team inspires students and researchers as they work to extend the boundaries of the discipline that Wilkes has done so much to create. ■

For more information about the Cambridge Lab Ring, see www.camring.ucam.org/



Acme of achievement. Sir Maurice Wilkes on good form at the opening of the new Computer Laboratory in West Cambridge on 1 May 2002 – and unveiling one of the lab's most precious relics from pioneer days

SIMON MOORE