FRIEDRICH HIRZEBRUCH

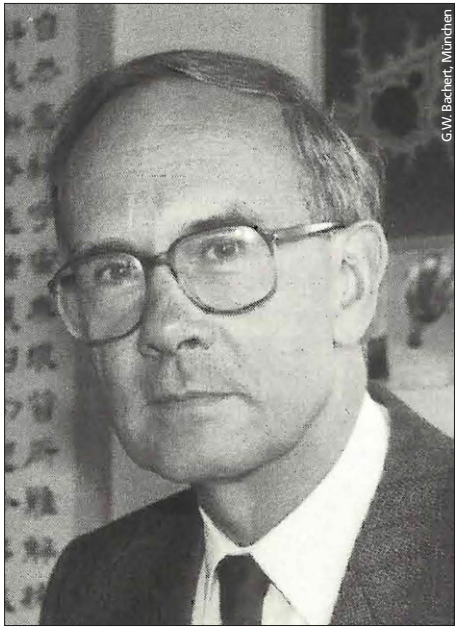
Professor Fritz Hirzebruch, who was elected an Honorary Member of the London Mathematical Society on 16 June 1975, died on 17 May 2012, aged 84.

Sir Michael Atiyah writes: Fritz Hirzebruch was the outstanding German mathematician of the post-war years and was responsible for rebuilding German mathematics after the havoc of the Nazi regime. He was born in Hamm in 1927 and educated at the University of Münster, where his teacher was Heinrich Behnke. Conscripted briefly towards the end of the war he was taken prisoner by the Americans, before returning to his studies. After a year in Zürich with Heinz Hopf he spent a few years in Princeton before being appointed at a very young age to a full Professorship at Bonn, where he stayed till the end of his life.

He first made his name with his formula for the signature of a $4k$-dimensional manifold. This led on to his famous generalization of the Riemann-Roch theorem in algebraic geometry, one of the main achievements of the revolution in the subject brought about by sheaf theory. It rested heavily on the theory of Chern classes which, with Borel, he had done much to clarify.

Over the years Fritz built up mathematics in Bonn, ending eventually with his own Max Planck Institute. This served as a major international centre attracting active mathematicians from all over the world. It played a particularly important role in countries such as Japan and the (former) Soviet Union.

A key annual event was the Arbeitstagung, which grew from a handful of visitors in 1957 (including Grothendieck and myself) to several hundred a few years later. These meetings were flexible, with no pre-set programme, and covered whatever was most topical at the time. The areas were diverse and reflected Fritz's own wide interests, but they ranged from all kinds of geometry to number theory and in due course theoretical physics. Many



Friedrich Hirzebruch

graduate students had their first taste of serious mathematics at these meetings.

I myself first met Fritz in 1954 and we became close friends and collaborators. One of our joint enterprises was the development of topological K-theory, which evolved naturally from the Arbeitstagung, and which led on to many other things.

Fritz had a great love of algebraic number theory and was fascinated by the connections between that subject and geometry. One of his most beautiful results was the resolution he found for the cusps of Hilbert modular surfaces, relating it to the periodic continued fraction of quadratic irrationals. Much of his work in this direction was joint with his former student Don Zagier, who in due course succeeded him as a director of the MPI.

He was a lucid thinker, speaker and writer. Clarity both of content and of style was important. This, as well as his personal qualities, no doubt explains his remarkable and apparently effortless success in administration.

Fritz was the first President of the European Mathematical Society, a member of the German order Pour le Mérite and a Wolf Prize laureate. Among his many honours were a degree from Oxford, Foreign Membership of the Royal Society and an Honorary Fellowship of the Royal Society of Edinburgh.

I and the hundreds of visitors who came to Bonn every year have fond memories of the friendly hospitality provided by Fritz and his wife Inge.

Isaac Newton Institute
for Mathematical Sciences

QUANTIZED FLUX IN TIGHTLY KNOTTED AND LINKED SYSTEMS

3–7 December 2012

in association with the Newton Institute programme
Topological Dynamics in the Physical and Biological Sciences
(16 July – 21 December 2012)

International Scientific Committee: Natalia G. Berloff (DAMTP, Cambridge), Jason Cantarella (University of Georgia), Anne-Christine Davis (DAMTP, Cambridge), Thomas W. Kephart (Vanderbilt University), Paul Sutcliffe (Durham University) and Tanmay Vachaspati (Arizona State University).

Many systems contain flux tubes which tighten due to their own tension. This workshop will study all aspects of tightly knotted and linked systems which support quantized flux tubes. The systems studied will range over, but not be limited to, superconductors, cosmic strings, and gauge theories, such as quantum chromodynamics. Some topics to be considered will be:

- the energy spectrum of knots and links;
- mathematical and physical aspects of tightening;
- relaxation to local and global minima;
- topological aspects of stability related to helicity, quantized helicity and their generalizations;
- curvature corrections, distortion and other physical corrections;
- topology change and the dynamics of flux tube decay, from quantum reconnection and tunneling to monopole-anti-monopole pair production;
- universality aspects of tightly knotted/linked systems of quantized flux, from knotted flux tubes in superconductors to glueballs in QCD.

Further information and application forms are available from the website at www.newton.ac.uk/programmes/TOD/todw04.html. Closing date of the receipt of applications is **31 July 2012**.