Wolfgang Schnell died on 2 October after an illness that he endured with great courage and lucidity. He was one of CERN's pioneers. After gaining a physics degree from the University of Heidelberg he worked at the Max-Planck Institute there, before joining the Proton Synchrotron (PS) construction team in 1954. He made numerous and significant contributions to accelerator physics and technology throughout his career.

Working in the group led by Chris Schmelzer, Wolfgang achieved a breakthrough in 1959 during the running-in of the PS, which was suffering from substantial beam loss during acceleration with the radio-frequency (RF) programming based on the magnetic field. With his phase-lock feedback system the beam went immediately to 24 GeV with hardly any losses. He later proudly showed his younger colleagues that the electronics of his system was built inside a coffee tin.

Wolfgang then became a member of the design team that studied the next generation of CERN accelerators after the PS -- namely the Super Proton Synchrotron (SPS) and the Intersecting Storage Rings (ISR). He contributed significantly to both.

He proposed a travelling-wave structure for the 300 GeV SPS to accelerate the particles, which are already nearly relativistic at injection energy. A system of four such structures is still used in the SPS, faithfully accelerating protons since 1976 and ions since 1990.

The ISR was the first proton–proton collider. It was constructed in the late 1960s and operated from 1973 to 1983. Wolfgang led the design and construction of the RF system, including the many improvements implemented during the lifetime of the ISR. Examples of the novel ideas that he introduced are the missing-bucket scheme, based on a suggestion of Arnold Schoch, which increased the stacked beam current by a factor of 1.5, and equipping the vacuum chamber with clearing electrodes. He was responsible for the running-in and performance improvements of this tricky accelerator, which eventually stored up to 40 A of protons for each colliding beam in colliding mode and reached beam lifetimes exceeding many months. The final luminosity was 35 times the design value.

During this period Wolfgang discovered the transverse Schottky signal, a type of noise generated by the random transverse motion of the particles. This was immediately used to obtain some indication of the betatron frequencies of the DC beam, which previously could not be measured.

The discovery of this signal led to another of Wolfgang’s unique accomplishments: the resurrection and first experimental proof of the stochastic cooling of beams, based on the concept invented by Simon van der Meer in 1968 but considered to be without a practical application. It opened the door to antiproton cooling and, consequently, to proton–antiproton collisions, a technique that was highly successful in the SPS and remains so in the Tevatron at Fermilab.

In 1983 the ISR was shut down in favour of the Large Electron–Positron (LEP) collider and Wolfgang was a leader of the initial study group for this unique facility. He went on to be the driving spirit of the LEP RF group, which constructed the world’s largest and most complex RF system. This was based on copper cavities coupled to spherical storage cavities that lowered the power consumption by a factor of 1.4, another of Wolfgang’s original ideas. Also in 1983 he and Steve Myers presented the first paper on the parameters of a future proton–proton collider in the LEP tunnel – now the Large Hadron Collider – and participated in the brainstorming about CERN’s future in 1985 chaired by Carlo Rubbia. It was then that he proposed an attractive, more practical variant of a two-beam scheme for ability to solve the most complex RF and beam-dynamics problems by the simplest means based on his deep insight was proverbial. He was always approachable to the young people to whom he was a patient tutor and mentor. He kept in close contact with his technicians and workshop staff to follow the latest developments and to keep his feet on the ground.

Many will be proud to have been part of one of his teams and to have had the honour to work with him. He will be sorely missed. His colleagues and friends.