

HONORARY GRADUATE

Jacques Pierre Friedrich Sellschop

Jacques Pierre Friedrich (Friedel) Sellschop was born in Luderitzbucht in South West Africa, now Namibia, on 8 June 1930. He attended Christian Brothers' College in Pretoria and went on to obtain a Bachelor of Science degree (*cum laude*) from the University of Pretoria in 1949 and a Master of Science degree (*cum laude*) from the University of Stellenbosch in 1952.

He spent the next two years at the Bernard Price Institute for Geophysical Research of this university, where he met and worked with one of South Africa's most illustrious scientists, Basil Schonland.

In 1954 Friedel Sellschop took up a Shell Petroleum Company scholarship at St John's College, University of Cambridge. While he was carrying out research at Cambridge, the position of Director of the newly established Nuclear Physics Research Unit at Wits was advertised. He was offered the position, occupying the post in January 1958 at the age of twenty-eight following the completion of his Doctor of Philosophy degree at Cambridge. In 1959 he was appointed Professor of Nuclear Physics - the first chair of its kind in South Africa.

With his customary vigour and enthusiasm, Professor Sellschop rapidly established the Nuclear Physics Research Unit as an internationally recognised research centre in its field. A vintage Cockcroft-Walton accelerator was obtained from the University of Cambridge and a further linear accelerator from De Beers Diamond Research Laboratories in the early 1960s. A team of young researchers was assembled and a steady stream of research publications began to flow.

One of the highlights of this early period was a major pioneering project on solar neutrino detection in an underground laboratory at ERPM gold mine. This was carried out in collaboration with the Nobel laureate, Frederick Reines, of Case Western Reserve University of the United States.

During the 1970s, a 6 MV tandem Van de Graaf accelerator was purchased by the Unit, which provided a fresh impetus for nuclear physics research and heavy ion physics. It is still in operation today.

In addition to establishing basic research in nuclear physics at Wits, Friedel Sellschop broadened the activities of the Unit to include interdisciplinary research, particularly in areas related to the earth sciences. He built up strong international collaboration in a number of research areas. Diamond physics has featured prominently in his research efforts, particularly over the past fifteen years. In the early 1980s the Foundation for Research and Development awarded Professor Sellschop an A-rating for his outstanding research achievements and in recognition of his established leadership position in his field. The Nuclear Research Physics Unit was renamed the Wits - CSIR Schonland Research Centre for Nuclear Sciences, one of the only two such centres of excellence in the country at the time.

In 1979 Professor Sellschop was elected Dean of the Faculty of Science at Wits and in 1984 became Deputy Vice-Chancellor (Research). In addition to his work as Deputy Vice-Chancellor, Research Director and Professor of Nuclear Physics, he has served on numerous national and international committees. He has played an important role on the Committee of University Principals and has served on the Senate, Collegium and Council of the Foundation for Research Development, as a member of the Board of the Council for Scientific and Industrial Research and as President of the South African Association for the Advancement of Science and the Joint Council of Scientific Societies of South Africa. He is currently Chairman of the South African Institute of Physics. He is a Council member of the Academy of Science of South Africa,

Vice-Chairman of the Royal Society of South Africa and special adviser to the Minister of Arts, Culture, Science and Technology.

Professor Sellschop has published extensively and has served on organising committees and as an invited speaker and plenary lecturer for many international conferences.

For his achievements Friedel Sellschop has received numerous honours and awards, including the John FW Herschel gold medal of the Royal Society of South Africa and the De Beers gold medal of the South African Institute of Physics. In Germany he has been awarded the research prize of the Max Planck Society and the Alexander von Humboldt Fellowship. Honorary doctorates have been conferred on him by the University of Frankfurt am Main in Germany and by the University of Cape Town.

The University is proud and privileged to be able to express its deep appreciation of the outstanding achievements of a distinguished scholar, as a researcher in nuclear science, as a scientific leader and as an administrator, one who has brought lustre to this institution and to the Republic of South Africa, by conferring on Jacques Pierre Friedrich Sellschop its highest degree, that of Doctor of Science *honoris causa*.