

Emeritus Professor Erich Weigold was interviewed by Fyfe Bygrave on 1<sup>st</sup> of October 2018.

**Biographical introduction:** This audio interview, with Professor Erich Weigold, is part of the Emeritus Faculty's Oral History Program involving retired staff members of ANU who were part of the university in its earlier life. The Oral History Program was initiated and developed by ANU Emeritus Faculty as a contribution to university and community understanding of the beginnings and development of ANU over the past six decades. Emeritus Faculty has a special interest in this period, since the Faculty's membership includes many of the people who helped shape ANU in those early days, to make it the pre-eminent university it is today.



Erich Weigold was Director of the Research School of Physical Sciences and Engineering at the ANU from 1992 to 2002. As revealed in his CV he also occupied many other positions in his time in both Australia and the USA.

**Interview abstract:** Eric Weigold was born in Haifa, Palestine in 1937. In July 1941 Erich and his parents of German descent were transported by troop ship to a war camp in Tatura, Victoria. Following the war his parents were offered settlement in the Barossa Valley in 1946.

Erich attended a Lutheran Primary School and Nuriootpa High School in the Barossa Valley and showed early promise in his studies. His mother was a great support. He was encouraged to study further at university and following his high school education commenced a science degree at the University of Adelaide majoring and excelling in Physics. An early interest in Nuclear Physics and encouragement from Bob Crompton took him to the ANU where he undertook a PhD. He had won a PhD Research Scholarship and the Head of the Nuclear Physics Department at the time was Sir Ernest Titterton. He then remained there for a brief period with an Australian Institute of Nuclear Science and Engineering Scholarship from 1960-1962. Following a relatively brief tenure as Lecturer in Physics at the University of Adelaide Erich was for some 7 years appointed to senior positions in Washington, USA at the Air Force Office of Scientific Research where he was Chief of the Nuclear Physics Division. As exciting as the work was, he and his family decided to return to Australia in 1970. The following 20 years were spent in the Physics Department at Flinders University.

It was especially during this tenure that Erich and his colleagues undertook unique experiments with electron beams incident on atoms and molecules. He pioneered electron momentum spectroscopy, which is a probe of unprecedented power for measuring the electronic structure

of matter. The new microscope that he developed, known as a high-energy coincidence spectrometer, was able to measure the motion of electrons in single atoms, molecules or solids and could also work out how much energy is needed to remove electrons from the substance in question. In this way they were able to map the wave functions of the electrons in the target material as well as their binding energies.

In 1992 Erich returned to the Research School of Physical Sciences and Engineering at the ANU where he was appointed its Director. He continued his research here and was successful at gaining grants for even more sophisticated experimental equipment and enable visits from overseas fellow scientists. Additionally, over the years he has held numerous visiting appointments worldwide and has been widely sought after for advice on many scientific and administrative matters. He is a Fellow of several distinguished Academies, a recipient of numerous medals and prizes and was awarded an Order of Australia AM in 2009 for his range of contributions to Australia.

Erich sees the ANU now as a very different place. Collegiality seems to have been eroded and cross-campus discussions are now difficult. The amount of bureaucracy has grown immensely as have the layers of administration. The then ANU block funding allowed it to make strategic investments in nationally important and unique areas of research such as the Nuclear Physics facility at the ANU

Erich and his wife Joy had 2 children a boy (Adam) and a girl (Charlotte), both born in the USA. Their desire to bring up their children in Australia was a major factor in their decision to return to Australia.