

AWARDS, HONOURS AND ACHIEVEMENTS

- Honorary DSc degrees from the University of Pretoria (UP) (2002) and the University of the Witwatersrand (Wits) (2006) for distinguished and significant scientific research.
- Vice-President of the International Council for Science (2002 – 2005)
- Bill Venter Award for Best Book in the Natural Sciences (1983 – 1986)

DEFINING MOMENT

When the Dean of Science supported him and changed the rules to allow him to continue studying geography, setting his course for a distinguished career as climatologist.

WHAT PEOPLE MIGHT NOT KNOW

He is an accomplished carpenter who spends a good deal of time in his workshop.

SCIENTIST, ADMINISTRATOR AND LEADER OF NOTE

Peter Tyson is a world-renowned and highly respected climatologist who was rated by the National Research Foundation (NRF) as a world leader in his field. He has devoted much of his research career to the complex challenges of identifying and understanding the nature and consequences of climate and climate change, regionally and globally.

Peter Tyson was born and grew up in Johannesburg and attended Parktown Boys' High School. While he did not consider himself to be an exceptional pupil at school, he excelled as an undergraduate student at Wits. Intending to become a science teacher, he planned to major in mathematics and chemistry, with physics and geography as additional first-year subjects. At the end of his first year, however, he came top of the geography class and so decided to continue with Geography II as an additional subject. Unfortunately, Geography II had timetable clashes with his other subjects and so he approached his professor, Stanley Jackson, also the Dean of Science, for help. Jackson agreed that Tyson could register on condition that he taught himself all the practical work as he wouldn't be able to attend the practical classes. This he did (learning at the same time how to work and study on his

own) and went on to take Geography III because of his interest in climatology.

While studying for his Honours degree in climatology, Tyson was appointed a lecturer at the then University of Natal in Pietermaritzburg, now part of the University of KwaZulu-Natal (UKZN). He moved to Pietermaritzburg and faced the daunting task of developing and teaching a variety of courses while completing his master's and doctoral degrees in the minimum time allowed through Wits. During this period, he was also married (another defining moment, he says), before moving back to Wits as a senior lecturer. Three years later, aged 29, he was appointed to the position of Professor of Geography and Environmental Studies, succeeding his mentor Stanley Jackson. Tyson was the third professor to hold that position at Wits since the inauguration of the Department of Geography in 1917, and at the time was one of the youngest professors to have been appointed at Wits.

His career moved along two intertwined paths – that of scientist and also senior university administrator and leader. As a scientist he led his department for many years and he also directed and undertook research in the Climatology Research Group at Wits for 25 years, producing an impressive number of publications and conference papers as well as teaching and undertaking research in universities around the world.

As a senior administrator, he served as the Dean of Science, a Deputy Vice-Chancellor (twice), the Vice-Principal and the Acting Principal over a period of 20 years – all the while consistently maintaining his highly productive research, teaching and postgraduate supervision.

Professor Tyson was also involved in several leadership roles at the Council for Scientific and Industrial Research, the Foundation for Research Development (now the NRF), and the Water Research Commission. Internationally, he was involved in the International Council for Science, now the International Science Council (ISC). While Vice-President of ISC, Tyson organised the First International Young Scientists' Conference on Global Change for young scientists under the age of 35. A thousand applications for participation were received for 100 places and a selection panel (including young scientists) identified the





participants. This proved to be a life-changing experience for many of the young scientists. This ISC conference model has since been implemented in a variety of different scientific disciplines and countries for similar international and national conferences to encourage the work of young scientists.

His research interests covered a broad spectrum across the atmospheric sciences and included work on how temperature gradients between the Drakensberg, the Natal Midlands and the sea induce local winds to blow from the mountains to the sea by night and sea to mountains by day, how urbanisation induces climate change and urban heat islands modify the environment of the lower atmosphere, how South African rainfall has varied over the period of meteorological record, and how the climate of southern Africa has changed over the last 26 000 years. A major aspect of his research in the years immediately before his retirement concerned atmospheric chemistry and the transport of dust and pollution over southern Africa and between Africa and Australia and New Zealand.

The research outputs to which his work led are substantial. They include nine books (including *Climatic Change and Variability in southern Africa*, which won the Bill Venter Award for the best book published in the natural sciences from 1983 to 1986), 170 published papers and chapters in books, and presentations at 60 local and 72 international conferences.

Apart from his scientific and university commitments Peter Tyson leads an active family life with his wife Jeannette and their three children – all excellent tennis players. Tennis occupied much time in the Tyson family, as did reading, travelling and doing things together.

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A. Academy of Science of South Africa (ASSAf) Publications

C. ASSAf Policymakers' Booklets

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Academy of Science of South Africa (ASSAf)

Academy of Science of South Africa (ASSAf)

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