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SAIP Silver Jubilee: Dr Christine M Steenkamp

Dr Christine Steenkamp is awarded the Silver Jubilee Medal for 2009 for her outstanding contributions to laser spectroscopy in South Africa. Her achievements are all the more remarkable in view of the fact that her scientific output of an excellent standard occurred in the field of experimental physics, where no research infrastructure was available when she started out her career.

She was responsible for the design and construction of most of the apparatus currently being used in her investigations. She constructed and used a unique vacuum ultra violet laser source, and has used it to investigate super-cooled CO molecules. Rotationally resolved spectra of electronic excitations could be studied using this source. For the first time measurements of the spectra of the rare CO isotopomers could be obtained in a laboratory. This is of great interest to the astrophysics community, since such information is required to interpret results obtained from space station observations of interstellar space. Two publications in the Astrophysical Journal including follow up work in the Journal of Molecular Spectroscopy testify to the relevance of this research. Together with a PhD student she continues the project owing to the international interest in the unique laser facility that she has constructed.

The quality of her work attracted the attention of Prof Carl Wieman, Nobel laureate in 2001, who, subsequent to a visit to South Africa, invited her to join his group in Boulder, Colorado for an extended research visit in 2004/5. This has led to a new experimental initiative, supported by the African Laser Centre, where Christine started a project aimed at laser cooling of atoms. Under her supervision, an MSc student has produced an excellent thesis.

Her achievements, however, go far beyond the publications and presentations at international and national conferences. She has been able to inspire students to become involved in research at the Laser Research Institute in Stellenbosch. Her experimental skills and her ability to handle theoretical aspects of the work have become well known amongst her peers, and her leadership has lead to the establishment of a team of students and colleagues. Her influence has made an impact within the Lasers, Optics and Spectroscopy Specialist Group of the SAIP where she has become a well known and respected member of the research community. She has contributed considerably to initiatives of the African Laser Center and the African Institute for the Mathematical Sciences, both initiatives aimed at establishing and improving science research in Africa. Here, her pioneering spirit and ability to do excellent experimental science with meager resources has demonstrated her creativity. Her ability to work as a team member while leading an initiative makes her contributions highly effective.

The unique qualities of Christine Steenkamp have been acknowledged at various stages of her short career, as is evident from the long list of awards appearing in her CV. Here we note that in 1997 she was the recipient of the Stellenbosch University Chancellor's Award. In 2003 she was one of three national recipients of the Women in Science Fellowships awarded by the Department of Science and Technology. Her research achievements are recognized by her peers and she has received support for her research from the NRF through the Thuthuka program, the National Laser Centre, as well as the African Laser Centre.

Christine's personality and career represent the type of role model that the South African Institute of Physics can proudly identify with. She is indeed inspiring a new generation of young physicists. She is the obvious candidate to be awarded the Silver Medal in this year 2009, the most prestigious award bestowed by the Institute to young researchers under the age of 35 years.

CB Van Wyk cash prize

This Silver Jubilee Award is augmented by a cash prize of R5000.00 donated by Prof CB van Wyk, who was the key driver in the founding of the SAIP in 1955, and was its second president form 1957 to 1960.

I wish to mention that in 2007, Prof CB van Wyk very generously donated R50 000 to the SAIP Council to use this money to recognise excellence in physics. The Council decided to augment the Silver Jubilee Award in a sustainable way by allocating R5000.00 for the 2009 prize. On behalf of the SAIP Council and all the members of the SAIP, I wish to express my sincere appreciation to Prof CB van Wyk for his generosity and for his continued commitment to excellence in physics.

It is my pleasure on behalf of Prof CB van Wyk and on behalf of the SAIP Council to hand over a cheque of R5000.00 to Dr Christine Steenkamp as an augmentation to her Silver Jubilee Award.

Nithaya Chetty President SAIP