

Manifesto, Anneke Erasmus

Re: Nomination for student representative on SAIP council (2021)

My name is Anneke Erasmus. I am a PhD student in the field of photonics at Stellenbosch University. Currently I am serving as the student representative on the Photonics division of the SAIP. By serving as a student representative, I would further represent all students on the council of the SAIP. I view this role as student representative as serving to be a voice of the students on the council. The elected representative is to be a bridge of communication between the students and other members of the council.

During my postgraduate studies I have served on multiple student society committees. These include the Stellenbosch Physics Department's Postgraduate student committee, the Optical Society (OSA) and SPIE student chapters, and I am currently the co-chair of the Stellenbosch Laser Student Chapter. I have had the opportunity to plan and participate in various outreach activities: performing physics demonstrations and engaging with high school students about physics. Serving on these committees has given me leadership experience, taught me problem solving, and how to communicate effectively. I believe in celebrating women in physics, demonstrated by my helping organize WiPiSA departmental lunches in the past. The skills that I have learnt and people I have met through these experiences will help me to serve the students I would represent in this elected role.

If I were elected, I would be available to listen to all students, ensuring that their concerns are heard and assisting in resolving the matters where possible. I would aim to have information regarding student funding and bursaries effectively communicated to all students. I would pursue career development opportunities for students. This includes an aim to make information regarding opportunities for students after graduation, in industry as well as academia, accessible to all students. These aims would have a positive impact on students by broadening their network of opportunities for their current studies and future.

I value being an active member of societies and committees and in doing so, giving back to the physics community. I would be honored for the opportunity to represent all students of SAIP on the council.

Curriculum Vitae of Anneke Erasmus

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LinkedIn profile: <https://www.linkedin.com/in/anneke-erasmus-207b32124/> August 2021

Education

Current studies	PhD Laser Physics
Research thesis topic	<i>Optical tweezing for microscopy and Mie scattering methods</i>
Institution	Stellenbosch University
Advisors	Prof EG Rohwer, Dr PH Neethling, Dr GW Bosman
Expected date of completion	2022
January 2016 – March 2018	MSc Laser Physics (cum laude)
Research thesis topic	<i>Optical tweezers for advanced microscopy</i>
Institution	Stellenbosch University
Advisors	Prof EG Rohwer, Dr PH Neethling, Dr GW Bosman
January 2015 – December 2015	BSc (Hons) Laser Physics
Institution	Stellenbosch University
January 2011 – December 2014	BSc Nuclear, Radiation and Therapy and Laser Physics
Institution	Stellenbosch University

Work Experience

• **Tutor**

I was a tutor and assisted with practicals for various first year physics and applied mathematics modules at Stellenbosch University between 2016 and 2020.

• **Student vacation work** at National Laser Centre – CSIR, Pretoria, Jan-15

I completed two weeks of student vacation work in the laboratory of Prof Hermann Uys.

Awards

- *Poster 1st Prize funded by PB Spectroscopy UK Ltd.*, African Laser Centre (ALC) Workshop on Laser tissue interaction and laser imaging (November 2018)
- *Best Technology Achievement*, South African Institute of Physics Photonics division (2016)
- Golden Key International Honour Society (2016 – current)

Courses completed

Learning Facilitation Training Short Course: Level 1 and 2

Stellenbosch University, (Jul-18, Nov-19)

Membership to Organizations and Institutions

- SAIP Student member of Photonics division current
- Stellenbosch Laser Student Chapter 2015 – current
 - Co-chair on chapter committee 2017 – 2019, 2021
- Optical Society (OSA) student member 2015 – current
- SPIE (International Society for Optics & Photonics) student member 2015 – current
- Stellenbosch University Physics Dept. Postgrad. Committee 2017 – 2018, 2020
- South African Spectroscopic Society student member 2018

Conference proceedings

Erasmus A, Bosman GW, Neethling PH, Rohwer EG. Using optical tweezers to measure the forces exerted by molecular motors in onion cells. Proc. SAIP2018, 129–34 (2018).

Selected conferences and workshops attended

Conference attended	Institution hosting	Date	My contribution
OSA Siegman International School on Lasers	OSA virtual event	Jul-21	Student attendee
OSA Siegman International School on Lasers	Rochester University	Jul-19	Mie scattering of white light from an optically trapped particle (poster)
African Laser Centre (ALC) Workshop on Laser tissue interaction and laser imaging	Laser Research Institute, Stellenbosch University, South Africa	Nov-18	Measuring intracellular forces using optical tweezers (poster)
IONs South Africa 2	University of Witwatersrand, South Africa	Oct-18	Measuring intracellular forces using optical tweezers (poster)
PhD Capacity Development Workshop (Alaina G. Levine)	Stellenbosch University, South Africa	Aug-18	Student attendee
South African Institute of Physics Annual Conference	South African Institute of Physics, South Africa	Jun-18	Using optical tweezers to measure the forces exerted by molecular motors in onion cells (oral presentation)
South African Institute of Physics Annual Conference	South African Institute of Physics, South Africa	Jul-16	Integrated optical tweezer and fluorescence microscope (oral presentation)
Summer School: Particles, Strings and Cosmology	Universität Hamburg, Germany	Jul-17	Student attendee
Photonics West Conference, San Francisco	SPIE (International Society for Optics & Photonics)	Jan-17	Student attendee

Computer Skills

I have experience in: MatLab, Python, and Mathematica, LaTeX, and MS Office.

Language skills

English, Afrikaans – Native