

9th African Laser Centre Student Workshop



University of Stellenbosch

24 – 26 November 2016

University of Stellenbosch, RSA



Announcement and call for abstracts

Dear Colleagues

I would like to draw your attention to the 9th African Laser Centre (ALC) Student Workshop on laser-based research to be held in Stellenbosch at the Wallenberg Research Centre from 24 to 26 November 2016. The South African Government will sponsor the 9th Annual ALC Student Workshop 2016, in collaboration with the University of Stellenbosch this year. The Workshop is aimed at ALC grant holders, students working on ALC projects and based at a South African university and a limited number of students working on South African Department of Science and Technology (DST) supported national Rental Pool laser research projects. It is hoped that a reasonable number of grant holders, students from each ALC-funded project and selected Rental Pool research projects will be able to attend.

The purpose of the Workshop is to give grant holders and students the opportunity to present the research results from their ALC-funded projects, and to engage in discussions with colleagues and students from other institutions.

The format of the Workshop will be as follows:

- Each project leader will have the opportunity to introduce the project, followed by a student presentation (Total time allocated 20 minutes).
- Additional project presentations in the form of posters.
- A limited number of rental pool student presentations will also be accommodated.
- Two keynote speakers will also address delegates.

The fact that the Workshop is limited to ALC associated researchers and students will encourage interaction between grant holders and students.

Full details regarding the Workshop may be found at: http://academic.sun.ac.za/physics/websites/alc_workshop_2016. In order to apply for participation in the Workshop, an abstract and an application form must be submitted for review. Please note the deadline for **abstract** and **application** submission is **2 September 2016**. The abstract **acceptance outcome** will be **30 September 2016**.

On behalf of the Workshop Organising Committee I trust you will publicise this workshop amongst your students. We look forward to the participation of ALC grant holders, with ALC projects, and South African students associated with DST supported laser Rental Pool projects.

Please note: The 9th ALC Workshop will be followed by an **ALC Workshop on Laser Imaging** held by the Laser Research Institute, University of Stellenbosch **28 - 30 November 2016**. If you want to combine the two events please see the announcement added to this document.

Should you have any questions, please do not hesitate to contact the Workshop Secretariat at e-mail: pew@sun.ac.za or telephone +27-21-808-3366.

Yours sincerely

Erich Rohwer
(Workshop Chair)
University of Stellenbosch

Announcement

ALC LASER IMAGING WORKSHOP, STELLENBOSCH 2016

28 - 30 November 2016, Laser Research Institute, University of Stellenbosch.

The course will focus on basic principles of laser based imaging techniques using cw and pulsed lasers as illumination sources. This will include linear and nonlinear optical imaging modalities in wide-field and scanning microscopy. The constraints and physical limitations of specific imaging techniques will be highlighted as well as modern techniques to overcome these limitations. These include the use of spatial light modulators to achieve super resolution imaging as well as their application in lensless imaging techniques such as ptychography.

Delegates will get experimental experience in nonlinear optics, wide-field microscopy, optical tweezer and nonlinear microscopy.

Relevant theory and experimental work will be done to gain experience in the various techniques.

During the workshop there will be an opportunity for attending students to present a poster on their research in order to stimulate discussion between students and research groups, to identify potential shared interests.

The aim of the workshop therefore is

- To provide training in the use of lasers and related equipment in microscopy.
- To provide insight into experiments and potential experiments in laser microscopy.
- To introduce modern microscopy techniques such as ptychography.
- To highlight the use of traditional high resolution methods in modern science.
- To highlight inter and cross disciplinary projects that are possible in the SA and African context.
- To provide participants with knowledge required to define possible joint projects.
- To provide a platform for the development of joint projects.

Please fill out the attached application form **below** and return ASAP to the Secretariate at pew@sun.ac.za. Closing date 2 September 2016. We will try to cover the costs of those who are selected to attend the workshop. In order to accommodate a maximum number of delegates in the available accommodation facility you **must be willing to share a room**.

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