



The Abdus Salam
International Centre for Theoretical Physics

African Regional College on Science at the Nanoscale

19 - 30 November 2007

Cape Town, South Africa

A regional school on science and technology at the nanoscale will be held at the iThemba LABS, Cape Town, South Africa from 19 to 30 November 2007. The School will be jointly sponsored by the Abdus Salam International Centre for Theoretical Physics (ICTP), the International Center for Materials Research (ICMR), Santa Barbara, the US-Africa Materials Institute (USAMI), Princeton, the African Laser Centre (ALC), Pretoria, [iThemba LABS - National Research Foundation](#), and the Nanosciences African Network (NANOAFNET).

In recent years it has become possible to manipulate matter at an atomistic scale. The research into ways to perform such manipulations and to carry out measurements, as well as the attempts to understand the basic physics underlying the observed phenomena, has rapidly grown into a very active interdisciplinary scientific domain. Today, research on nanoscale phenomena is strongly supported in most developed countries due to the important benefits expected from the introduction of nanoscale devices in technological areas such as electronics, micromechanics and biomedicine. However, progress in these areas is necessarily linked to advances in the comprehension of the fundamental physical processes taking place at the nanoscale, as well as to cross-disciplinary efforts aimed at unifying languages and concepts from chemistry, materials science and condensed matter physics and various fields of engineering. In this respect, nanoscale phenomena represent an ideal bench for the development of new concepts and new trends in basic science.

The field of nanoscience is evolving so rapidly, that the gap between achievements in basic research and technological applications has shrunk considerably. It is, therefore, very desirable to bring researchers from developing countries in contact with this domain of science and stimulate them to be an active part of this field. Making this kind of contact possible is the main target of the College. Furthermore, research in nanoscience is not too expensive, and its dependence on the skills of people, and not necessarily on large infrastructures, makes this field particularly suitable for trying to reduce the technological gap between underdeveloped and developed countries.

Among the topics of the College are:

Nanotubes and their Applications

Scanning Probe and Atomic Force Microscopy

Organic and Inorganic Light Emitting Devices

Both experimental and theoretical aspects as well as computer simulations will be covered.

Nanobiology

Functional Materials

Nanophotonics

PARTICIPATION

The College is aimed for students and young researchers from Africa. However, scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the College. As it will be conducted in English, participants should have an adequate working knowledge of this language.

Although the main purpose of the College is to help research workers from developing countries, a limited number of students and post-doctoral scientists from developed countries are also welcome to attend.

As a rule, travel and subsistence expenses of the participants should be borne by the home institution. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited funds are available for some participants. Such support is available only for those who attend the entire duration of the College. Given the regional character of the initiative, applications coming from African countries will be privileged. There is no registration fee.

For applicants from the SADC region (Southern African Development Community: Tanzania, Zambia, Malawi, Mozambique, Zimbabwe, Swaziland, Lesotho, Botswana, South Africa, Namibia, Angola, D.R. Congo, Mauritius as well as Rwanda and Burundi). Applicants should consult the webpage: <http://www.africa-nanocollege.tlabs.ac.za> and submit the application to the secretariat: Naomi Haasbroek: Head of the Library & Information Services, iThemba LABS, PO Box 722, Somerset West 7129 South Africa, Tel: +27 021 843 1259, Fax: +27 021 843 3525, E-mail: nanocollege@tlabs.ac.za

For applicants from all other countries: The Application Form can be downloaded from the activity's Web page below, which will be constantly updated. The form should be completed and returned hard copy (not via e-mail) as indicated. The secretary is: Ms. Milena Poropat, The Abdus Salam International Centre for Theoretical Physics, Strada Costiera 11, 34014 Trieste, Italy (tel. +39-040-2240541 - fax +39-040-224163 - e-mail: smr1874@ictp.it)
ICTP Home Page: <http://www.ictp.it/>

The deadline for receipt of applications is: 31 July 2007.

http://cdsagenda5.ictp.trieste.it/full_display.php?smr=0&ida=a06272

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(* = to be confirmed)

DEADLINE

for requesting participation

31 July 2007