



The Abdus Salam  
**International Centre  
for Theoretical Physics**  
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# **ADVANCED SCHOOL AND WORKSHOP ON FIBRE OPTICS: LIGHT IN ACTION FROM SCIENCE TO TECHNOLOGY**

**28 September – 1 October 2015**

*(Alice, Eastern Cape, South Africa)*

## **PURPOSE AND NATURE**

The aim of the activity is to connect scientists from across Africa on a topic in which there is a critical mass of researchers and which will have a high impact on scientific and economic development for the continent.

Fibre optics brings together diverse fields, from the basic science on optics and light transport, to material design, through to application in communication and sensors. As such, it is a topical field the world over and one of the few topics of critical mass in African photonics research. With the pressure to do science with applications ever more present in developing countries, this topic lends itself to high impact science.

## **VENUE**

Alice is the home of the U. Fort Hare, a venerable African institute responsible for the education of many of the continent's leading figures, e.g., Nelson Mandela. It has recently started a new programme in optics and lasers. Lectures will take place at the university campus, while participants will be accommodated in nearby Hogsback, a small, quaint mountain town a short drive away.

## **TOPICS**

- 1. The science of fibre optics: design, non-linear effects, exotic materials etc.**
- 2. Optical fibres for communication, including mode division multiplexing, polarisation, entanglement in fibres, etc.**
- 3. Optical fibres for sensing, including design and applications of sensing devices.**
- 4. Photonic crystal fibres**

## **SPEAKERS**

**Others to be announced. Please refer to the website for updates:**

**John DUDLEY** (Institute FEMTO-ST, France)  
**Michael DUPARRE** (University of Jena, Germany)  
**Melanie MCLAREN** (University of the Witwatersrand, South Africa)  
**Alex HEIDT** (University of Southampton, UK)  
**Andrew LEITCH** (Nelson Mandela Metropolitan University, South Africa)  
**Johan MEYER** (University of Johannesburg, South Africa)  
**Mourad ZGHAL** (University of Carthage, Tunisia)

## **PARTICIPATION**

Application to the School and Workshop is open to scientists from all countries that are members of the United Nations, UNESCO or IAEA. As it will be conducted in English, participants should have an adequate working knowledge of that language. Although the main purpose of the Centre is to help researchers from developing nations through a programme of training activities within the framework of international cooperation, students and 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 who are nationals of, and working in, a developing country, and who are not more than 45 years old. Such support is available only for those who attend the entire activity. There is no registration fee.

## **HOW TO APPLY FOR PARTICIPATION**

The Online Application can be accessed at the activity website: <http://indico.ictp.it/event/a14237/>

Comprehensive instructions will guide you step-by-step on how to fill out and submit the application form.

**Secretariat:**  
**Telephone: +39-040-2240555 - Telefax: +39-040-224163 - E-mail: [smr2697@ictp.it](mailto:smr2697@ictp.it)**  
**ICTP Home Page: <http://www.ictp.it>**

October 2014



**INTERNATIONAL  
YEAR OF LIGHT  
2015**



**University of Fort Hare**  
*Together in Excellence*

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**DEADLINE**

**28 June 2015**