# 6th African School on Electronic Structure Methods and Applications (ASESMA 2020)

### 1 - 12 June 2020 ICTP - EAIFR, Kigali, Rwanda

The aim of the School is to introduce young African researchers and students to the theory of electronic structure and other atomistic simulation methods, with an emphasis on the computational methods for practical calculations.

### **Description:**

The African School series on Electronic Structure Methods and Applications is planned on a biennial basis from 2010 to 2020. Previous schools were held in Cape Town, South Africa (2010), Eldoret, Kenya (2012), Johannesburg, South Africa (2015), Accra, Ghana (2016), and Addis Ababa, Ethiopia (2018).

The School will also cover basic and advanced topics and applications of these methods to the structural, mechanical and optical properties of materials.

The School will include hands-on tutorial sessions based on public license codes (including, but not limited to, the Quantum Espresso package).

During the second week students will be asked to split up in teams and work on specific projects under the guidance of the lecturers and mentors.

### **Topics:**

- Electronic structure theory
- Density functional theory and functionals
- Phonons
- Magnetism
- Molecular dynamics
- Ab-initio molecular dynamics
- Optical spectroscopies
- Machine learning and data science

Further information: http://indico.ictp.it/event/9094/ smr3449@ictp.it

#### **Directors:**

- O. AKIN-OJO, EAIFR, Rwanda
- G. GEBREYESUS, University of Ghana, Ghana
- S. GRIFFIN, LBNL, U.S.A.
- R. MARTIN, Stanford University, U.S.A.
- S. NARASIMHAN, JNCASR Bangalore, India
- N. SERIANI, ICTP, Trieste, Italy

#### **Local Organizers:**

O. AKIN-OJO, EAIFR, Rwanda S. NDENGUE, EAIFR, Rwanda

## Workshop Speakers:

- O. AKIN-OJO, EAIFR, Rwanda
- G. AMOLO, TU Kenya, Kenya
- M. GATTI, ETSF, LSI CNRS, Palaiseau, France
- G. GEBREYESUS, University of Ghana
- J. JUNQUERA, University of Cantabria, Spain
- R. MAEZONO, JAIST, Ishikawa, Japan
- A. MARINI, ISM, Rome, Italy
- R. MARTIN, Stanford University, U.S.A.
- S. NARASIMHAN, JNCASR Bangalore, India
- L. REINING, Ecole Polytechnique, France
- A. SCHLEIFE, UIUC, U.S.A.
- N. SERIANI, ICTP

### **ICTP Scientific Contact:**

## How to apply:

Online application: http://indico.ictp.it/event/9094/

Female scientists are encouraged to apply.

#### Grants:

NAS YOU

A limited number of grants are available to support the attendance of African selected participants. There is no registration fee. Female scientists are encouraged to apply.

## Deadline: 5 March 2020



United Nations Locational, Scientific and Cultural Organization









Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics

