The Abdus Salam
**International Centre
for Theoretical Physics**
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UNESCO
United Nations
Educational, Scientific and
Cultural Organization

IAEA
International Atomic Energy Agency

ICSU CODATA

RDA RESEARCH DATA ALLIANCE
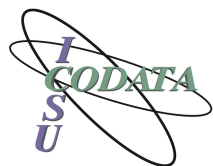
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**The Association
of Commonwealth
Universities**

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Global Open Data
for Agriculture & Nutrition

GEO GROUP ON
EARTH OBSERVATIONS

RDA RESEARCH DATA ALLIANCE EUROPE

The CODATA-RDA
School of Research Data Science
1 - 12 August 2016

The Abdus Salam International Centre for Theoretical Physics, in collaboration with **CODATA**, **RDA** and **TWAS**, is organising a short course in the data science approaches and skills that are essential for 21st century research. The CODATA-RDA Research Data Science Summer School will be held at the ICTP, Trieste, Italy from 1st to 12th August 2016.

The ever-accelerating volume and variety of data being generated is having a huge impact on a wide variety of research disciplines, from the sciences to the humanities. The international, collective ability to create, share and analyse vast quantities of data is having a profound, transformative effect. This 'Data Revolution' offers great opportunities for students with modern data skills, both in conducting their research and in entering a jobs market where those skills are in demand.

Contemporary research – particularly when addressing the most significant, transdisciplinary research challenges – cannot be done effectively without a range of skills relating to data. This includes the principles and practice of Open Science and research data management and curation, the use of a range of data platforms and infrastructures, large scale analysis, statistics, visualisation and modelling techniques, software development and annotation and more. We define 'Research Data Science' as the ensemble of these skills.

The school will provide students with an introduction to the 'Research Data Science' skills necessary for modern research. In particular, students will engage with the following topics:

- Software Carpentry,
- Data Carpentry,
- Open Research Data
- Analysis,
- Visualisation,
- Computational Infrastructures

The mode of learning will be based on lectures plus extensive hands-on experience gained in labs with tutor support.

PARTICIPATION
Scientists and students from all countries that are members of the United Nations, UNESCO or IAEA may attend the workshop. The workshop will be conducted in English. Students are expected to have a basic understanding of Statistics, namely how to compute summary statistics such as means, variances and hypothesis tests. Students and post-doctoral scientists from developed countries are welcome to attend although the main purpose of the workshop is to help early-stage graduate students from developing countries. Limited funds are available for participants who are nationals of, and working in, a developing country and who attend the entire workshop. Otherwise travel and subsistence expenses of the participants should be borne by the participant, their institution or a third party grant. Candidates are expected to make every effort to secure (full or partial) support for their travel. There is no registration fee.

HOW TO APPLY FOR PARTICIPATION:
An Online Application Form can be accessed through the Workshop website:

http://indico.ictp.it/event/7658/

Once in the website, comprehensive instructions will guide you step- by-step on how to fill out and submit the Application Form.

ACTIVITY SECRETARIAT:

Organisers
Andrew Harrison
University of Essex/RDA
Hugh Shanahan
Royal Holloway, University of London/RDA
Simon Hodson
CODATA (ICSU Committee on Data for Science and Technology)
Romain Murenzi
(TWAS)

Local Organisers
Ivan Girotto
(ICTP)
Clement Onime
(ICTP)

Invited teaching teams
Software Carpentry,
Data Carpentry,
The Digital Curation Centre
Colin Gillespie
(University of Newcastle)
Andy South
Jan Aerts
(University of Leuven)
Tim Head
(EPFL)
Roger Barlow
(University of Huddersfield)

DEADLINE FOR REQUESTING PARTICIPATION

18 April 2016

The online registration form and more information can be found at
http://indico.ictp.it/event/7658/