ITU Centres of Excellence Network for Europe

The Abdus Salam International Centre for Theoretical Physics

FACE-TO-FACE Training Course on

CODATA/RDA Research Data Science Summer School

Trieste, Italy
August 12-16, 2019

COURSE OUTLINE

COURSE DESCRIPTION

Title	CODATA/RDA Research Data Science Summer School
Objectives	This course introduces selected topics from Research Data Science and hands-on exercises are provided to develop/build a range of data related skills and competence including data analysis techniques
Dates	August 12-16, 2019
Duration	5 days
Registration deadline	July 12, 2019
Training fees	USD 500
Course code	19WS24307EUR-E

LEARNING OUTCOMES

To understand the basic principles of creating dynamic visualisation for effective communication..
To understand the basics of Machine Learning, Recommender systems and Artificial Neural Networks
To perform data analysis using Recommender systems and Artificial Nueral Networks
To understand and perform large scale data analysis using High Throughput Computing (HTC) and Cloud Computing .

TARGET POPULATION

The training course is designed for:
- Electrical engineers
- Telecommunications engineers

- Professionals and Scientists
- Regulators
- Telecom Operators
- Networks Operators

TUTORS/INSTRUCTORS (preliminary)

NAME OF TUTOR(S)/INSTRUCTOR(S)	CONTACT DETAILS
R. Barlow, University of Huddersfield, UK	giuseppe.larocca@egi.eu
E. Okereafor, Big Data Academy, USA	ekpe@okorafor.com
H. Shanahan, Royal Holloway University London, UK	Hugh.Shanahan@cs.rhul.ac.uk
R. Quick, Indiana University, USA	rquick@iu.edu
Giuseppe La Roca, European Grid Initiative	giuseppe.larocca@egi.eu
Clement Onime, ICTP	onime@ictp.it

EVALUATION

We will evaluate practical exercises and a final exam with multiple choices for grading using the following weights:

$G = 0.6 \times M + 0.4 \times I$

Where: M – written exam/multiple choice grade, I –practical exercises grade

TRAINING SCHEDULE AND CONTENTS / AGENDA

Date for 1st day	Time	Topics/Activities
08/12/2019	8:30am – 1:00pm	Visualisation
	1:00pm – 2:00pm	Lunch break
	2:00pm – 5:00pm	Visualisation and Information security
Date for 2nd day	Time	Topics/Activities
08/13/2019	8:30am – 1:00pm	Machine Learning
	1:00pm – 2:00pm	Lunch break
	2:00pm – 5:00pm	Recommender systems
Date for 2nd day	Time	Topics/Activities
08/14/2019	8:30am – 1:00pm	Artificial Neural Networks
	1:00pm – 2:00pm	Lunch break
	2:00pm – 5:00pm	Artificial Nueral Networks
Date for 2nd day	Time	Topics/Activities
08/15/2019	8:30am – 1:00pm	Computational Infrastructure: High Throughput Computing (HTC)
	1:00pm – 2:00pm	Lunch break
	2:00pm – 5:00pm	Computational Infrastructure: Cloud Computing
Date for 2nd day	Time	Topics/Activities
08/16/2019	8:30am – 1:00pm	Computational Infrastructure roundup

| | 1:00pm – 2:00pm | Lunch break |
| | 2:00pm – 3:00pm | Closing ceremony |

METHODOLOGY

The course will include Instructor-led presentations, case studies, practical/hands-on exercises and assignments.

COURSE COORDINATION

Course coordinator:	ITU coordinator:
Name: Clement Onime Email address: onime@ictp.it	Name: Jaroslaw Ponder, Head ITU Europe office Email address: jaroslaw.ponder@itu.int

REGISTRATION AND PAYMENT

ITU Academy portal account

Registration and payment should be made online at the ITU Academy portal.
To be able to register for the course you **MUST** first create an account in the ITU Academy portal at the following address:
https://academy.itu.int/index.php/user/register.

Training registration

When you have an existing account or created a new account, you can register for the course online at the following link: https://academy.itu.int/index.php/training-courses/full-catalogue/codatarda-research-data-science-summer-school

You can also register by finding your desired course in our training catalogue https://academy.itu.int/index.php/training-courses/full-catalogue.

Payment

1. On-line payment
A training fee of USD 500 per participant is applied for this training. Payments should be made via the online system using the link mentioned above for training registration at https://academy.itu.int/index.php/training-courses/full-catalogue/codatarda-research-data-science-summer-school.

2. Payment by bank transfer
Where it is not possible to make payment via the online system, select the option for offline payment to generate an invoice using the same link as above. Download the invoice to make a bank transfer to the ITU bank account shown below. Then send the proof of payment/copy of bank transfer slip and the invoice copy to Hcbmail@itu.int and copy the course coordinator. **All bank transaction fees must be borne by the payer**.
Failure to submit the above documents may result in the applicant not being registered for the training.

3. Group payment
Should you wish to pay for more than one participant using bank transfer and need one invoice for all of them, create an account as **Institutional Contact. Institutional Contacts** are users that represent an organization. Any student can request to be an institutional contact or to belong to any existing organization.

To do this, head to your profile page by clicking on the **"My account"** button in the user menu. At the bottom of this page you should see two buttons:

a. If you want to **become an institutional contact**, click on the **"Apply to be an Institutional Contact"** button. This will redirect you to a small form that will ask for the organization name. After you fill the name of the organization you want to represent, click on **"continue"** and a request will be created. An ITU Academy manager will manually review this request and accept or deny it accordingly.

b. If you want to **belong to an existing organization**, click on the **"Request to belong to an Institutional Contact"** button. This will redirect you to a small form that will ask you to select the organization you want to join from an organization list. After you select the correct organization, click on **"continue"**, a request will then be created. The Institutional Contact that represents that organization will manually accept or deny your request to join the organization.

ITU BANK ACCOUNT DETAILS:

Name and Address of Bank:	UBS Switzerland AG Case postale 2600 CH 1211 Geneva 2 Switzerland
Beneficiary:	Union Internationale des Télécommunications
Account number:	240-C8108252.2 (USD)
Swift:	UBSWCHZH80A
IBAN	CH54 0024 0240 C810 8252 2
Amount:	USD 500
Payment Reference:	CoE-EUR 24307-P.40595.1.09

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4. Other method of payment

If due to national regulations, there are restrictions that do not allow for payment to be made using options 1 & 2 above, please contact the ITU coordinator for further assistance.

CERTIFICATES

Each fully registered participant who will successfully complete the course, based on the evaluation, will receive an ITU Certificate after the course.