

Workshop on R for Genomics and Data Mining : 24th Feb - 1st March 2019

Casuarina Hall, India Habitat Centre
Lodhi Road, New Delhi-110003

Day 01: Workshop Launch

Time: 5pm

Venue: Board Room, NIPGR

4:00 pm	Bus From IHC to NIPGR
	Bus will be available at Gate No. 3 IHC at 3:45pm
5:00 pm to 5:30 pm	Registration, Meet and Greet, Tea and Refreshments
5:30 pm	Welcome Address Gitanjali Yadav, DBT-Cambridge Lecturer, NIPGR University of Cambridge
	Opening Ceremonies Lamp Lighting, Introductions and Remarks by Guests
5:45 pm	Remarks By Program Coordinator Prof. Howard Griffiths, Dept of Plant Sciences, University of Cambridge
	TIGR2ESS Inter-FP Talks by PIs (5 minutes each) Ms. Rose Eichenberger, Program Manager Ms Aakriti Wanchoo, Program Manager, India Ms. Chhaya Bhanti, Vertiver Dr. Padmaja (ICRISAT) , Shreya Sinha, Anuprita Shukla
6:00 pm – 7:00 pm	Dr. Gitanjali Yadav, NIPGR University of Cambridge Dr. Alison Bentley, NIAB, Cambridge, U.K Dr. Cameron Petrie, University of Cambridge Dr. Shailaja Fennel, University of Cambridge Dr. Richard Sidebottom, University of Cambridge Dr. Ramanjit Johal, Panjab University Dr. Lara Allen, Centre for Global Equality, U.K
	Remarks By Trainers & Guests Prof. Peter Murray Rust, Dept of Chemistry ContentMine, Cambridge. Dr. Ashley Sawle, Cancer Research U.K [CRUK], Cambridge Dr. Alpan Raval (Wadhvani AI, India)
7:00 pm	Round Table Introductions Workshop Participants Other Guests
7:30 pm – 9:00 pm	Dinner at NIPGR
9:00 pm	Bus Departure for IHC IIC

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Monday, Feb 25 2019 (Day 02)

9:00 am to 9:15 am	Introduction to Session and Instructors. Dr. Gitanjali Yadav, DBT-Cambridge Lecturer. NIPGR Uni of Cam Dr. Ashley Sawle, CRUK, Cambridge, U.K
9.15 am to 10:30 am	Before We Start! Setup Instructions, Check Data and Set up Data Organisation in SpreadSheets
10:30 am to 11:00 am	Coffee Break
11:00 am to 1:00 pm	Session 1: Overview of R and RStudio
1:00 pm to 2:00 pm	Lunch
2:00 pm to 4:00 pm	Introduction to R Indexing, Sub-setting Data Frames, Factors
4:00 pm to 4:30 pm	Coffee Break
4:30 pm to 5:30 pm	Working with Tabular Data in R Variables, Vectors and Data Types. Missing Data.

Tuesday, Feb 26 2019 (Day 03)

9:00 am to 10:30 am	Recap & Complete Working with Tabular Data in R
10:30 am to 11:00 am	Coffee Break
11:00 am to 1:00 am	Session 2: Data Manipulation using the R package dplyr
1:00 pm to 2:00 pm	Lunch
2:00 pm to 4:00 pm	Session 3: Data Visualisation using the R package ggplot2
4:00 pm to 4:20 pm	Coffee Break
4:30 pm	DEPARTURE TO NIPGR
5:30 pm	Musical Concert: 'Kabir and Other Mystics of India' Shabnam Virmani is a filmmaker, singer and artist in residence at the Srishti Institute of Art, Design and Technology, Bangalore. She plays a 5-stringed tambura herself and will sing a unique repertoire of folk songs of Kabir and other mystic poets from 15 th century India, with English translations for academicians, at the interface of Kabir and Buddhism.
8:00 pm	Dinner at NIPGR
9:00 pm	Transport for Return to IHC from NIPGR

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Wednesday, Feb 27 2019 (Day 04)

9:00 am to 10:30 am	Quick Recap of Day 03 : Plotting with ggplot2
10:30 am 11:00 am	Coffee Break
11:00 am to 11:15 am	Introduction to Session 4 and Instructors Dr. Alison Bentley, NIAB, Cambridge, U.K Dr. Tirthankar Bandyopadhyay, NIPGR, New Delhi, India (CINTRIN)
11:15 am to 1:00 pm	Session 4: Generating Genetic Maps for Basic QTL Mapping
1:00 pm to 2:00 pm	Lunch
2:00 pm to 3:00 pm	Session 5: Association Mapping for Crops in R Lecture: Using Association Mapping for Interrogating Plant Nitrogen Response
3:00 pm to 3:30 pm	Coffee Break
3:30 pm to 5:30 pm	Hands-on Exercises for Association Mapping in R

Thursday, Feb 28 2019 (Day 05)

9:00 am to 9:15 am	Introduction to the Session and Instructors Dr. Alison Bentley, NIAB, Cambridge, U.K Dr. Sigrid Heuer, Rothamsted Research, U.K (CINTRIN) Dr. Rakesh Srivastava, ICRISAT, Hyderabad, India (CINTRIN)
9:15 am to 10:30 am	Session 6: Genes Regulating Physiological Responses Lecture: Understanding heat tolerance in cereals Exercise: Using Ensembl to identify Genes, Gene structure and conserved domains for designing allele specific primers.
10:30 am 11:00 am	Coffee Break
11:00 am to 1:00 pm	Session 7: Population Genetics Approaches Lecture: Work at ICRISAT on Genetics and Genomics to accelerate genetic gains in dryland cereals. Exercise: Population Genetics with SNP Data
1:00 pm to 2:00 pm	Lunch
2:00 pm to 4:00 pm	Grant Writing Workshop (Jaquaranda Tree, Bangalore)
4:00 pm to 4:30 pm	Coffee Break
4:30 pm to 5:30 pm	Career Crafting Workshop: "Career Choices in Science"

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Friday, March 01 2019 (Day 06)

9:00 am	Introduction to Session and Instructors. Dr. Peter Murray Rust, ContentMine University of Cambridge Ambarish Kumar, Amit Yadav, Vinita Mehlawat (NIPGR, New Delhi)
9.15 am to 9:30 am	Lecture: Text and Data Mining from Scientific Literature Machine Checks, Software Setup
9:30 am to 10:30 am	Session 8: ContentMine Open Source software Running an Example Exercise – Ocimum (Basil)
10:30 am 11:00 am	Coffee Break
11:00 am to 11:30 am	Creating and Using JSON Dictionaries Countries, Organisations, Species Names, Gene Names, Phytochemicals
11:30 am to 12:00 pm	Assignment of Group Based Exercises Group Based Exercises
1:00 pm to 2:00 pm	Lunch
2:00 pm to 3:30 pm	Flash Presentations by Group Representatives
3:30 pm to 4:00 pm	Coffee Break
4:00 pm to 5:30 pm	Closing Ceremony Closing Address Vote of Thanks Feed Back from Participants Workshop Closure

Optional Events During The Workshop (Free of Cost)

5pm on Feb 25, 2019	Informal Social Evening – Meet & Greet Venue: NIPGR (Dinner Included)
7pm on Feb 25, 2019	Photography & Sustainability (Toby Smith and Gitanjali Yadav) Venue: IHC Amphitheatre
5pm on Feb 26, 2019	Cultural Evening: Kabir and Other Mystics (Shabnam Virmani) Venue: NIPGR (Dinner Included)