

Exclusively for Participants from North-Eastern States

# Workshop on

## Design of Experiments and Statistical Modelling

Conducted by

Indian Statistical Institute, Hyderabad  
and

National Institute of Technology (NIT), Sikkim

25<sup>th</sup> to 28<sup>th</sup> March 2015

### Venue and Timing

Lecture Hall  
National Institute of Technology  
Ravangla, South Sikkim  
(0900 to 1630)

### Registration

28<sup>th</sup> Feb. 2015 : Last date for submission of  
filled registration form  
2<sup>nd</sup> March 2015 : Last date for Confirmation  
of Registration



### Resource Persons



#### Indian Statistical Institute, Hyderabad

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## About the Workshop

This workshop is being organised with an objective to help Faculty Members, Researchers and Professionals of North-Eastern States to acquire the theoretical as well as applied knowledge of Design of Experiments (DOE) and Statistical Modelling Methods to enable them to transfer/apply the knowledge in their respective fields in an effective manner. The growing emphasis on manufacturing sector and need for innovative ideas to further the scientific temper which in turn will assist in strengthening the research for design & development of new products & processes is the need of the hour. The workshop is conceived to provide the latest developments in the field of DOE and modelling.

## Workshop Coverage

- Need for Designed Experiments & Optimization
- Statistical Preliminaries
- Basic Statistics, Probability and Distributions
- Inferential Statistics
- Fundamentals of DOE & Simple Designs
- Factorial & Fractional Factorial Designs
- Dr. CR Rao Orthogonal Array Designs
- Robust Designing using Taguchi Methods
- Graphical Data Analysis
- Regression Modelling and Diagnostics
- Statistical Modelling and Optimization
- Response Surface Methodology & Mixture Designs
- Multi-Response Optimization
- Overview of Design for Six Sigma (DFSS)

**Venue** : National Institute of Technology (NIT), Ravangla Sub-Division, South Sikkim - 737 139

**Target Participants** : Faculty Members, Scientists, Research Fellows, Industrial Executives working in R&D and Quality functions etc.

**Faculty** : The workshop will be conducted by Senior Faculty members of Indian Statistical Institute with over 30 years of experience in teaching, research and industrial consultancy. They have done extensive research in the area of Design of Experiments, Taguchi Methods etc. and guided a number of studies in research establishments, public & private sector industries.

**Travel, Stay & Local Hospitality (Only for Outstation Participants of NE States)** : Selected outstation participants (other than Ravangla) will be paid II Class (Sleeper) Train/Bus return fare in the shortest route from residence or organization to the venue. Modest (twin sharing) Lodging & boarding facility will be provided to the selected outstation participants (who have opted for) near the venue. All selected participants (local and outstation) will be provided the workshop course kit, lunch & tea/coffee with biscuits.

**Registration** : Mail the completed registration form (with attachments) as early as possible to

[gmuralirao@isihyd.ac.in](mailto:gmuralirao@isihyd.ac.in) and [gmuralirao@gmail.com](mailto:gmuralirao@gmail.com)

Selection will be based on suitability/eligibility and first come first served basis. Selected candidates will be intimated by mail. (Please note that there is **NO Registration fee**)

**Last date for receiving the completed Registration Forms - 28<sup>th</sup> Feb 2015**

**Last date for Confirmation of Registration**

**- 2<sup>nd</sup> March 2015**

## **About Indian Statistical Institute**

The Indian Statistical Institute (I.S.I.), founded by Professor Prasanta Chandra Mahalanobis, grew out of the Statistical Laboratory set up by him in the Presidency College in Kolkata in the year 1931. In 1959, in recognition of the role of statistics as a key technology of the modern times and the importance of the Institute in the development and application of statistics, the Parliament of India enacted the Indian Statistical Institute Act, declaring it an Institution of National Importance. The Institute is now considered as one of the foremost centres in the world for training and research in statistics and related sciences. In keeping with this long tradition, the Institute has been engaged in developing statistical theory and methods and their practical applications in various branches of science and technology. The major objectives of the Institute, as given in its Memorandum, are

- To promote the study and dissemination of knowledge of statistics, to develop statistical theory and methods, and their use in research and practical applications generally, with special reference to problems of planning of national development and social welfare;
- To undertake research in various fields of natural and social sciences with a view to the mutual development of statistics and these sciences;
- To provide for, and undertake, the collection of information, investigation, projects and operational research for purposes of planning and the improvement of efficiency of management and production.

The Institute initiated the Quality Movement in India as early as 1947. Through its SQC & OR Division the Institute is providing assistance to Indian industry relentlessly since then to achieve high quality and productivity at an affordable cost.

## **About the SQC & OR Unit, Indian Statistical Institute, Hyderabad**

The Statistical Quality Control and Operations Research (SQC & OR) Unit at Hyderabad of the Indian Statistical Institute was established in the year 1974 with the objective of helping industries in Andhra Pradesh and also industries of other states close to Hyderabad for promoting and propagating statistical and quality management methodologies. The SQC & OR Unit, Hyderabad is one of the major Units of the SQC & OR Division of the Indian Statistical Institute. SQC & OR Division was created by Professor Mahalanobis exclusively for helping the Indian industries in managing quality and productivity problems with the application of Statistical as well as Quality Management methodologies. Manufacturing, Automobile, Process, Service, Banking, IT, BPO & KPO industries, Research Institutions and Central & State Govt. Depts. have availed/availing the services of SQC & OR Unit Hyderabad.

SQC & OR Unit, Hyderabad has immensely contributed to the SQC & OR Division's activities such as

- Playing a pioneering role in the Quality Movement in India and setting path for quality control and improvement activities for the Indian industries through promotion and applications of statistical and operations research methodologies.
- Serving the industries in India and abroad over the last five decades by providing training and consultancy on quality concepts and methodologies such as TQM, Taguchi Methods, Quality Function Deployment, Six Sigma, and Quality Systems.
- Collaborating and exchanging ideas with quality gurus. Some experts like Shewhart, Deming, Juran, Taguchi, Ishikawa, Ott, Tippet and Suda visited ISI at various points of time and interacted with ISI faculty.

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