

**Research Methodology Workshop**  
on  
**Econometric Methods for Economic and Business Research**  
for Ph.D. Students  
December 1-10, 2021

**Organized by:**  
Department of Humanities and Social  
Sciences,  
Indian Institute of Technology Roorkee,  
Roorkee-247667, Uttarakhand

**Sponsored by:**  
Indian Council of Social Science Research  
(ICSSR), New Delhi-110067

### About the Workshop

Most popularly, econometrics, as evolved from the discipline of Economics, provides the assortments of tools and techniques to analyze the actual economic and business phenomenon quantitatively. In the past few decades, the subject matter of econometrics has developed beyond testing and forecasting the economic, financial, and business theories and is most suited for decision-making and policy evaluation in economics and business research. It has evolved as an interdisciplinary subject, and knowledge of it enables both practitioners, managers, and social scientists to critically analyze the impact of research on society and vice versa. Such a workshop will offer the participants the practical guidelines for applied research in economic and business issues using advanced econometric tools.

### Objectives

The objective is to direct the participants through all the stages of economic analysis—from identifying a viable economic and business research problem, explore economic data sources, make a choice and model the issue with relevant tools, designing the frame for submission of a dissertation, report, or research article in high-quality journals. Emphasize the variety of cross-sectional and panel data econometric research methods alongside frontier optimization tools like stochastic frontier analysis (SFA) and data envelopment analysis (DEA) approaches, emphasizing the implementation of these methods using econometric and frontier analysis software. Examples will illustrate the methods from the diverse fields of business and economics. Hands-on training sessions will be conducted using Stata/EViews and R-software.

### Coverage

Topics to be covered include

- Introduction to Research Methodology and Methods in Economics and Business Research
- Methods & Tools for Defining and Collecting Economic Data
- Sample and Sampling designs, Data visualization, Summarization, and Inferences
- Classical Linear Regression Analysis: Estimation and Regression Diagnostics
- Beyond OLS- Quantile, Logit, Probit, Tobit, Censored Regression Analysis
- Time series models- Stationarity tests, Cointegration in Single & Multiple Equations
- Program Evaluation Techniques: Difference-in-Difference, Propensity Score Matching, Regression Discontinuity
- Parametric & Non-parametric Methods to Efficiency and Productivity Measurement: Stochastic Frontier Analysis & Data Envelopment Analysis
- Technology Heterogeneity and Meta-frontier Analysis in the Frontier Analysis
- Modeling Bad and Non-discretionary Variables in the Frontier Analysis
- Mechanics of Writing a Research Report and Research Paper
- Publishing Research Paper, Handling Plagiarism & Selecting Journals
- E-library and E-databases

## Eligibility criteria for participants

All the registered Ph.D. students of any Indian University/Institute in Economics, Business Studies, & Management will be eligible to apply for the course. MPhil students and faculty members are not eligible for this programme. However, college or university teachers or members of recognized research institutions who are registered as Ph.D. candidates can apply. The number of seats is limited to 30. Only 20 outstation and 10 local participants could be accommodated on a merit basis. The priority will be given to the participants from the neighbouring states.

## How to Apply:

Interested candidates can apply to **Course Director** along with duly filled up the registration form on or before **November 10, 2021**. The registration form is appended below. A duly filled soft copy of the registration form and required documents may please be sent through email at [humanities.iitr@gmail.com](mailto:humanities.iitr@gmail.com) to the **Course Director** of Workshop at

**Dr. Rachita Gulati,**  
**Associate Professor of Economics,**  
**ICSSR Sponsored Research Methodology Workshop 2020-21,**  
**Department of Humanities and Social Sciences,**  
**Indian Institute of Technology Roorkee, Roorkee-247667,**  
**Uttarakhand, India. Ph.: 01332- 285683 (O), +91 9675501888 (M)**

The duly filled in registration form must be accompanied by the following enclosures:

1. Brief CV of the applicant along with UG and PG Degrees.
2. Ph.D. registration certificate
3. Brief 1-2 pages synopsis covering Title of Study, Statement of Problem, Scope of Study, Objectives of Study, Hypotheses, Census/ Population / Sample design – Sample Size, Sample Unit, Sampling frame, Data collection and Data Analysis.
4. Attested copy of Caste/Community certificate of ST/SC/OBC/Minority, if applicable
5. Full Covid-19 vaccination certificate

**Only fully vaccinated candidates will be selected for participation in the programme.**  
**Candidates who have already attended a similar program need not apply.**  
**Participants are required to bring their Laptops for practical sessions.**

**\*Applications received after the due date shall not be considered.**

## Registration Fee:

There is no registration fee for the selected participants.

## Accommodation & Travel Allowance

The Workshop will be conducted at IIT Roorkee Campus. Accommodation will be provided to the outstation participants only at the institute premises. Travel allowance by shortest distance (2<sup>nd</sup> class return train fare or bus fare only) will be reimbursed to the outstation participants as per the ICSSR guidelines.

## Duration & Venue of the Workshop:

The Workshop will be conducted from **December 1, 2021, to December 10, 2021, at the IIT Roorkee Campus.**

## COVID-19 Guidelines

Relevant COVID Standard Operating Procedures and guidelines set by the Government of Uttarakhand and IIT Roorkee will be followed.

The selection in the programme will be conditioned on the submission of a full vaccination certificate (both doses) along with an application form to protect health and safety. These rules will apply to all the participants, invited speakers and associated staff.

Social distancing is warranted and seating of 3:1 will be maintained in a room with a total capacity of 100 reserved for 30 participants.

Early submission of application and selection on first-cum basis is highly recommended.

## Contact:

For any information/clarification, please write to us at [humanities.iitr@gmail.com](mailto:humanities.iitr@gmail.com) or contact the Course Director:

### **Dr. Rachita Gulati (Course Director)**

Department of Humanities and Social Sciences,  
Indian Institute of Technology Roorkee,  
Roorkee-247667, Uttarakhand  
Email: [rachita.gulati@hs.iitr.ac.in](mailto:rachita.gulati@hs.iitr.ac.in)

## About IIT Roorkee

The Indian Institute of Technology Roorkee has its foundation in the Thomson College, which was founded in 1847 and was accorded the status of the first University of Technical Education (University of Roorkee) in Independent India in 1949. On September 21, 2001 the Government of India declared it as nation's seventh IIT. Over the years, it has built up and maintained an outstanding academic reputation. It has academic departments in the areas of Engineering, Sciences, Architecture, Management, Humanities and Social Sciences, besides several centers of excellence in the realm of higher education and research.

## About the Department of Humanities and Social Sciences

The Department of Humanities and Social Sciences was established in 1966. Over the years, it has grown into a vibrant department with teaching and research programmes in Economics, English, Psychology, and Sociology. The department is well equipped with excellent research facilities such as Digital Communication Research and Training Laboratory, Computer Lab, Econometric Laboratory, Economic Databases, and Psychology Laboratory.

Presently, **Prof. Anindya Jayanta Mishra** is serving as the Head, Department of Humanities and Social Sciences, IIT Roorkee.

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### How to reach IIT Roorkee

Roorkee is well connected to Delhi by rail and road. Some trains which are convenient for travelling between Delhi and Roorkee are New Delhi-Dehradun-New Delhi Shatabdi Express and Dehradun-New Delhi-Dehradun Janshatabdi Express. The nearest airport is located at Jollygrant, Dehradun. However, IGI New Delhi is the preferred airport. NH 58 from New Delhi to the higher reaches of the Himalayas passes via Roorkee. Roorkee is, therefore, well connected to all the major cities in the region by road. This place has frequent bus services from the Maharana Pratap Inter State Bus Terminal (Kashmere Gate) Delhi.

### Weather in Roorkee

The climate in Roorkee is extreme during winters as well as summers. There is a peak winter during the month of December. The temperature may rise to as high as 5-15 degrees Celsius.

**Department of Humanities and Social Sciences**  
 (Established since 1966)

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**for Ph.D. Students**  
**(December 1-10, 2021)**  
**[Sponsored by ICSSR]**

**Registration Form**

(space for latest  
passport size  
photograph)

Name							(space for latest passport size photograph)
Designation							
Date of Birth	DD	MM	YEAR				
Category (pl. put a tick mark <input type="checkbox"/> in the corresponding cell)	ST	SC	OBC	MINORITY	GEN		
Gender	Male	Female					
Post-Graduation							
Date of Registration for Ph.D.							
Area of Specialization							
Title of Ph.D. Thesis							
Name & address of the Institute/ University where registered							
Address for Communication:							
Ph. No. (Off.)					Mobile:		
Email:							
Accommodation required	YES			NO			
Have you attended similar course earlier: Yes / No _____ If yes, provide details:							

(Signature of the participant)

**Note: Participants are required to bring their Laptops for practical sessions.**

<b>Name, Designation and Email of the Ph.D Supervisor:</b>	
<b>Please send the duly filled registration form with enclosures to:</b> Dr. Rachita Gulati, Associate Professor, Department of Humanities and Social Sciences, Indian Institute of Technology Roorkee, Roorkee-247667, Uttarakhand, India. Email: <a href="mailto:humanities.iitr@gmail.com">humanities.iitr@gmail.com</a> Ph.: 01332- 285683 (O)	
For any further queries, please contact us at <a href="mailto:humanities.iitr@gmail.com">humanities.iitr@gmail.com</a>	
<b>Check List for Enclosures:</b> <ul style="list-style-type: none"><li>• Brief CV of the candidate along with UG and PG degree</li><li>• Ph.D. registration certificate</li><li>• Brief Ph.D. synopsis not more than two-pages covering Title of Study, Statement of Problem, Scope of Study, Objectives of Study, Hypotheses, Census/ Population / Sample design – Sample Size, Tools for data collection and methods for analyzing data.</li><li>• Attested copy of Caste/Community certificate of ST/SC/OBC/Minority</li><li>• Full vaccination certificate</li></ul>	

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