

FACULTY DEVELOPMENT PROGRAMME  
ON  
DATA ANALYTICS  
FOR  
ADVANCED RESEARCH  
(17-21 January' 2022)



**IIM SIRMAUR**  
KNOWLEDGE . LEADERSHIP

Organized by  
Indian Institute of Management  
Sirmaur



## OBJECTIVES

Since last few decades, the importance of data analysis and interpretation has increased manifold in academic and practitioner domains. However, there exists a number of issues that inhibits the application of research methods and techniques ranging from problem identification to the type of research techniques required to analyse the data and the interpretation of the results so achieved. Therefore, the prime objective of this programme is to tackle these issues by equipping the programme participants with the requisite knowledge for identifying the right research problem, selection of adequate data analysis techniques, application of those research techniques, and interpretation of results.

## TOPICS TO BE COVERED

1. Confirmatory Factor Analysis
2. Structural Equation Modelling
3. Introduction to Time Series
4. Time Series Decomposition
5. Exponential Smoothing Methods
6. Stationarity, ACF, PACF
7. Box-Jenkins Methodology
8. Seasonality in Time Series

**Exposure to Software:** Participants would be given a hands on training on the tools like **R, R-Studio, SPSS & AMOS.**

## ABOUT THE INSTITUTE

IIM Sirmaur is situated in the verdant surroundings of Himalayas (located in Paonta Sahib and nearby to Dehradun). IIM Sirmaur provides an ideal setting to educate and train the best minds of the country, away from the hustle and bustle of metropolitan cities. IIM Sirmaur is one of the 3<sup>rd</sup> generation IIMs set up by MHRD, Govt. of India.

Paonta Sahib is among the major industrial towns of Himachal Pradesh. The town is an important religious place for the Sikhs, and it attracts pilgrims from around the world. The campus is equipped with modern facilities and latest technology to provide an excellent learning environment for the students. The institute has state-of-the-art classrooms equipped with overhead projectors and modern furniture, fully equipped conference rooms with video-conferencing facility, a 24x7 library and a computer lab with latest configuration

machines as well as access to various software and databases.

## PATRON

**Prof. (Dr.) Neelu Rohmetra**  
Director, IIM Sirmaur

## FDP COORDINATORS

**Dr. Pradipta Patra (Coordinator)**

Assistant Professor

Indian Institute of Management Sirmaur

Rampur Ghat Road, Kunja Matralion

Paonta Sahib – 173025

Mob: 9515733562

Email: [Pradipta.patra@iismirmaur.ac.in](mailto:Pradipta.patra@iismirmaur.ac.in)

**Dr. Vikas Kumar (Co-Coordinator)**

Assistant Professor

Indian Institute of Management Sirmaur

Rampur Ghat Road, Paonta Sahib – 173025

Mob : 7018139947

Email: [vikas.kumar@iimsirmaur.ac.in](mailto:vikas.kumar@iimsirmaur.ac.in)

## HOW TO REACH IIM SIRMAUR

**By Bus:** The nearest bus stand is located at Paonta Sahib. The campus is around 2.5 Kms from the bus stand.

**By Rail:** The nearest railway stations to IIM Sirmaur are Dehradun and Yamuna nagar railway stations. IIM Sirmaur

campus is around 45 and 60 Kms from Dehradun and Yamuna Nagar respectively.

**By Air:** The nearest airports to IIM Sirmaur are Jolly Grant Airport, Dehradun and Chandigarh Airport which are 78 and 110 Kms (approx..) away from IIM Sirmaur campus respectively.

## NERABY ATTRACTIONS

**Renuka Ji** lake is a holy place in Sirmaur district of Himachal pradesh. This lake was named after the goddess Renuka. It is well connected by the road from IIM Sirmaur campus and is about 52 Kms. Boating is available on the lake.

**Dehradun** is the capital of Uttrakhand and is located at 45 Kms from IIm Sirmaur campus. This place has many tourists attcations such as FRI, Shashtradhara, Robbers' Cave etc.

**Mussoorie** is a hill station in Uttrakhand which is known for a number of tourists attactions. It is about 80 kilometres from IIM Sirmaur campus.

**Rishikesh** is a one of the major destination og yaga entusiats, adventure seekers and spirituality postulant. It is around 95 Kms from IIM Sirmaur campus.

**Haridwar** is considered as one of the seven holiest place to Hindus. It is around 110 Kms from IIM Sirmaur campus.

## SESSION SCHEDULE

Day	Session	Topic	Resource Person
17/01/2022	10:30 am - 1:00 pm	Introduction to Time Series (including inaugural session)	Prof. Pradipta Patra
	1:45 pm - 3:45 pm	Exponential Smoothing Models	Prof. Pradipta Patra
	4:00 pm - 6:00 pm	Time Series Decomposition	Prof. Pradipta Patra
18/01/2022	10:30 am - 12:30 pm	Stationarity in Time Series, ACF & PACF plots	Prof. Pradipta Patra
	1:15 pm - 3:15 pm	ARIMA Models; Box-Jenkins Methodology	Prof. Pradipta Patra

	3:45 pm - 5:45 pm	Confirmatory Factor Analysis	Prof. Vikas Kumar
19/01/2022	10:30 am - 12:30 pm	ARIMA Models; Box-Jenkins Methodology (Continued)	Prof. Pradipta Patra
	1:15 pm - 3:15 pm	Confirmatory Factor Analysis (Continued)	Prof. Vikas Kumar
	3:45 pm - 5:45 pm	Confirmatory Factor Analysis (Continued)	Prof. Vikas Kumar
	10:30 am - 12:30 pm	Seasonal Arima (SARIMA) Models	Prof. Pradipta Patra
20/01/2022	1:15 pm - 3:15 pm	Structural Equation Modelling	Prof. Vikas Kumar

	3:45 pm - 5:45 pm	Structural Equation Modelling (Continued)	Prof. Vikas Kumar
21/01/2022	10:30 am - 12:30 pm	Session on stress management, human values ethics, health and happiness	The Art of Living (Bangalore)
	1:15 pm - 3:15 pm	Structural Equation Modelling (Continued)	Prof. Vikas Kumar
	3:45 pm - 5:45 pm	Evaluation Feedback Valedictory	