



Self-sponsored Short-Term Course
on
**Applications of MATLAB in Engineering Sciences and
Research (AMESR-2021)**

Dec. 27-31, 2021
(Online mode)



Sant Longowal Institute of Engineering & Technology
(Deemed to be University, under MoE, Government of India)
Longowal, Sangrur (Punjab) - 148 106, India,

www.sliet.ac.in

Coordinators

Mr. Surinder Kumar, AP (ME), SLIET Longowal
Dr. Harish Kumar Arya, AP (ME), SLIET Longowal

Introduction:

MATLAB is a comprehensive tool that plays a vital role in the scientific research and engineering applications by addressing the various aspects like simulation, programming, analysis etc. The flexibility of the MATLAB lies in its support to the GUI as well as user defined coding. In this modern scientific era, it is a torchbearer to the worldwide scientific community. This course is design to enhance the programming, simulation capabilities of the participants in various domain of science and engineering.

Objectives:

The main objective of the course is to introduce the concepts of MATLAB programming to the budding researchers in the field of Engineering and Sciences. This will enable them to handle wide variety of problems in industries as well as in the field of research. Interdisciplinary in nature, the course will also enrich participants with necessary in puts in all the areas with theoretical as well as practical knowledge.

Contents:

The STTP is focused on discussing various aspects of MATLAB and its applications. Tentative list of topics that will be covered in this program includes:

- MATLAB and its features
- Working with arrays of numbers
- Plots in MATLAB
- Programming
- Applications of MATLAB Toolboxes
- Developments of apps using MATLAB

Resource Persons:

Expert faculty members of SLIET Longowal and IITs/NITs will conduct the theory and practical sessions of the online program.

Who can participate?

Any undergraduate/diploma student/ working professional/ industry people with.

- Engineering/Sciences students
- Professionals working in Industry.
- Research students
- Teaching professionals & faculties.

How to Apply:

The interested persons from academia and Industry professional are required to register themselves on or before Dec. 24, 2021, through

https://docs.google.com/forms/d/e/1FAIpQLSewgr9YZ2aEHraosdTugWy6nMLLSjAejCqFblgPvQEq6unXiA/viewform?usp=pp_url

Course fee/Registration Fee:

Nominal registration fee of Rs. 250/- will be charged from all the participants. Fee will be accepted through UPI/Internet banking.

Important Dates:

- Last date for registration : **Dec. 24, 2021**
- Finalization of a list of selected participants : **Dec. 25, 2021**

Organizing Committee:

Patrons: Prof. Shailendra Jain, Director, SLIET Longowal

Chairman: Prof. A.S.Shahi, HOD (ME), SLIET Longowal

Conveners: Prof. Pardeep Gupta, SLIET Longowal

Prof. Rajesh Kumar, SLIET Longowal

Coordinators: Mr. Surinder Kumar, SLIET Longowal

Dr. Harish Kumar Arya, SLIET Longowal

<p>Details for payment of registration fee: Account Name: AMESR2021 Account No.: 5168101490 IFSC code: CBIN0283105 Bank Name: Central Bank of India</p>	<p>Contact us: Mr. Surinder Kumar Mobile: +91-98157-49166 Dr. Harish Kumar Arya Mobile: +91-9988525366 E-mail: aomes2021@gmail.com</p>
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Mr. Surinder Kumar and Dr. Harish Arya have organized Online One-week **Self Sponsored STC on Application of MATLAB in Engineering, Sciences and Research (AMESR-2021)**, during December 27-31, 2021, as Coordinators under the convenorship of Prof. Rajesh Kumar and Prof. Pardeep Gupta in the Department of Mechanical Engineering. Theme of this STC was on MATLAB and its applications with 40 % practically orientated demonstration. Faculty members, research scholars, PG students and UG students from various reputed Institutes including IIT, have participated and were enlightened with the field of MATLAB and its massive and widespread applications.

S. No.	Name	Mobile No.	Affiliation	Designation
1	Anumay Kumar	8427252162	Sliet Longowal	Research Scholar
2	Sunil Kumar	9855288502	Sliet, Longowal	Assistant Professor
3	Sumit Kumar	9463077009	Sliet	Assistant Professor
4	Rishikesh Kumar	7774940485	Guru Nanak Institute Of Engineering And Management , Naushehra	Assistant Professor (Department Of Mechanical Engineering)
5	Rajneesh Patel	9795091666	Mcaet, Ambedkar Nagar (U.P.)	Guest Faculty
6	Prabhat Kumar	9006620532	Guru Nanak Institute Of Engineering And Management, Naushera, Punjab	Assistant Professor
7	Anupriya	8789517256	Govt. Poytechnic College, Saharsha	Computer Science Engineering
8	Muskan Kumari	6207104430	Govt. Polytechnic College , Jamui	Electrical Engineering
9	Vivek Kumar	9988552993	Sliet	Ap
10	Govind Vashishtha	+918755929023	Sant Longowal Institute Of Engineering & Technology	Research Scholar
11	Lucky	9417424879	Indian Institute Of Technology, Delhi	Research Candidate
12	Aditya Kumar	8699665378	Iit Jodhpur	Research Scholar
13	Adamyra Rath	9501315051	Guru Nanak Dev Engineering Collage, Ludhiana	Pg Scholar
14	Robin Singh	8278842530	Sliet Longowal	Pg Student

15	Rachit Kumar	9412502006	Sliet	M.Tech
16	Aditya Kumar Singh	9455963689	Mtech Nanotechnology Aktu Lko	Student
17	Shahzad Ansari	+91 9065693862	Gniem Naushera	Me Student
18	Pawan Kumar	8002677803	Gniem Naushera	Me Student
19	Karan Chopra	9888909230	Gniem, Naushehra	Assistant Professor
20	Ramesh Chand	9855300154	Dr. Br Ambedkar National Institute Of Technology Jalandhar	Research Scholar Phd
21	Sumit Saini	8528434049	Sant Longowal Institute Of Engineering And Technology	Research Scholar
22	Nitin Yadav	09050562296	Sliet, Longowal	Researcher Scholar
23	Pradeep Kumar	7814360589	Guru Nanak Dev Engineering College	Student
24	Dr. Bhupinder Singh Dhillon	6280274084	Guru Nanak Dev Engg College Ludhiana	Asisstant Professor
25	Prem Raj	8699281750	S.L.I.E.T. ,Longowal	Research Scholar
26	Paramjeet Shakya	7905041351	Sant Longowal Institute Of Engineering And Technology, Sangrur	Research Scholar
27	Ishank	9896827186	Sant Longowal Institute Of Engineering And Technology	Research Assistant
28	Dr. Abhishek Kumar Pandey	9711865954	G D Goenka University, Gurugram	Assistant Professor
29	Sharanjit Singh	9463907010	Dav University Jalandhar	Assistant Professor
30	Ashish Pratap Ranjan	8840262690	Iit Madras	Student
31	Dr. Rajni Bala	9988297148	Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib, Punjab	Assistant Professor (Senior Scale)
32	Vikrant Guleria	9418339451	Sant Longowal Institute Of Engineering And Technology	Research Scholar
33	Manglesh Kumar Gupta	8948999695	Centre For Advanced Studies	M.Tech Student

34	Dr. Tushar Kanti Bose	8420785157	Srikrishna College, Bagula, W.B.-741502	Assistant Professor
35	Sonu Ram	8054780537	Sant Longowal Institute Of Engineering And Technology	Research Scholar
36	Aman Kumar Pal	8317083522	Centre For Advanced Studies	M.Tech Student
37	Nisha Pahal	7011953787	Amity University Noida	Assistant Professor
38	Karan Chanana	09992522024	Sant Longowal Institute Of Engineering And Technology Sangrur	Student GCT/2130007
39	Surya Pratap	8968345622	Sliet, Longowal	M. Tech Scholar

Schedule of STC-Application of MATLAB in Engineering Sciences and Research (AMESR-2021)					
Day Time	Monday 27.12.2021	Tuesday 28.12.2021	Wednesday 29.12.2021	Thursday 30.12.2021	Friday 31.12.2021
Morning 10.30 am to 12.00 Noon	Inauguration of STC	MATLAB programming with functions Dr. R. K. Saxena Prof. (ME) SLIET	Fuzzy control for decision making Prof. Shailendra Jain Director, SLIET	Image processing using MATLAB Dr. Ashwani Aggarwal A.P (EIE) SLIET	Hydraulic and Pneumatic Systems Simulation using MATLAB Dr. Nathi Ram Prof. Head, IGTUW Delhi
Break					
3.00 pm to 4.30 pm	Introduction to MATLAB and basic 2-D and 3-D plots Mr. Surinder Kumar A.P (ME) SLIET	Evolutionary programming in optimization Dr. Manmohan Singh Assoc. Prof. (EIE), SLIET	Practical session on overview of Simulink and physical modelling in interdisciplinary engineering applications Dr. Souvik Chatterjee, Senior Education Customer Success Engineer MathWorks India Private Limited	From Offline Simulations to Real Time Simulations Dr. Anshul Varshney, Scientist, PMM Division CSIR-New Delhi	Valedictory Session

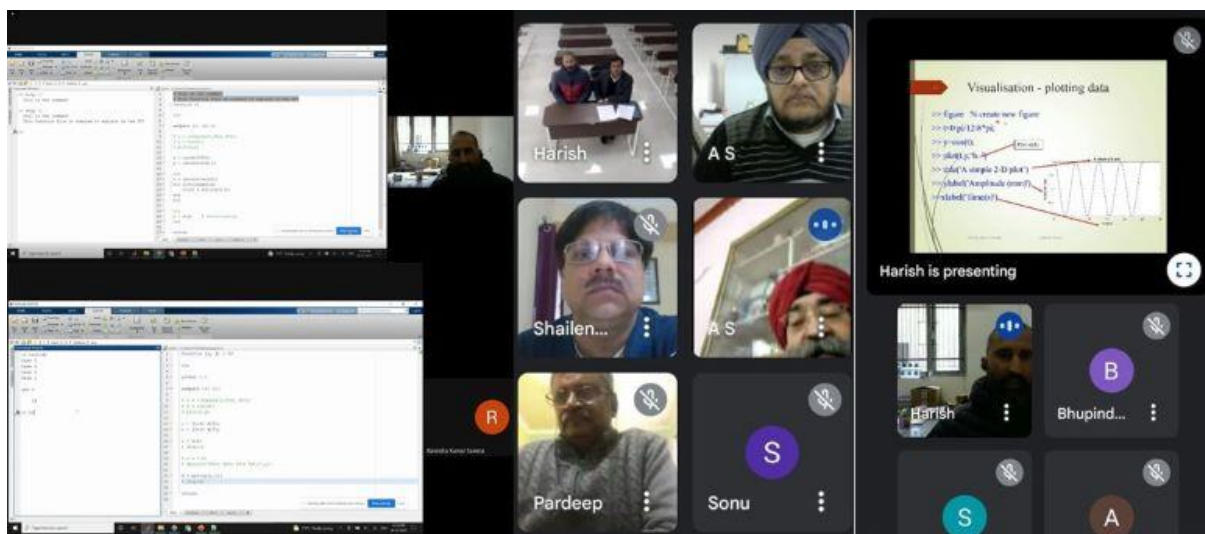


Fig. 1. Pics of inaugural ceremony on 27.12.2021

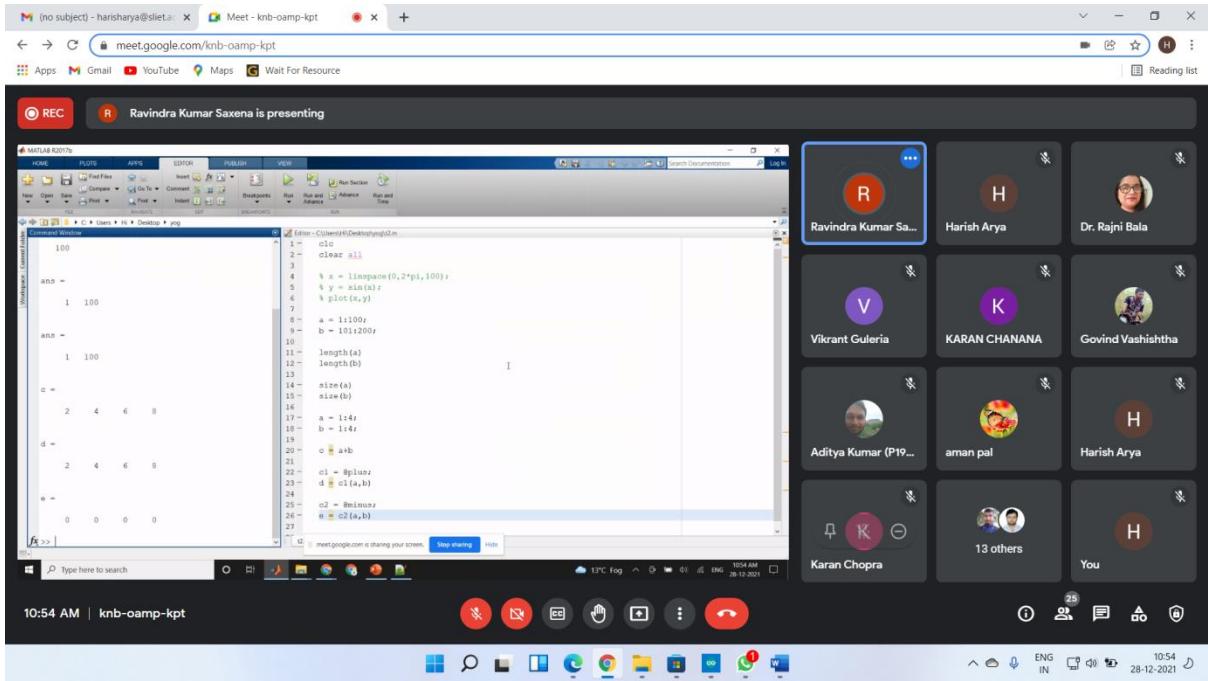


Fig. 2. Dr. R. K. Saxena delivering the lecture on MATLAB on 28.12.2021

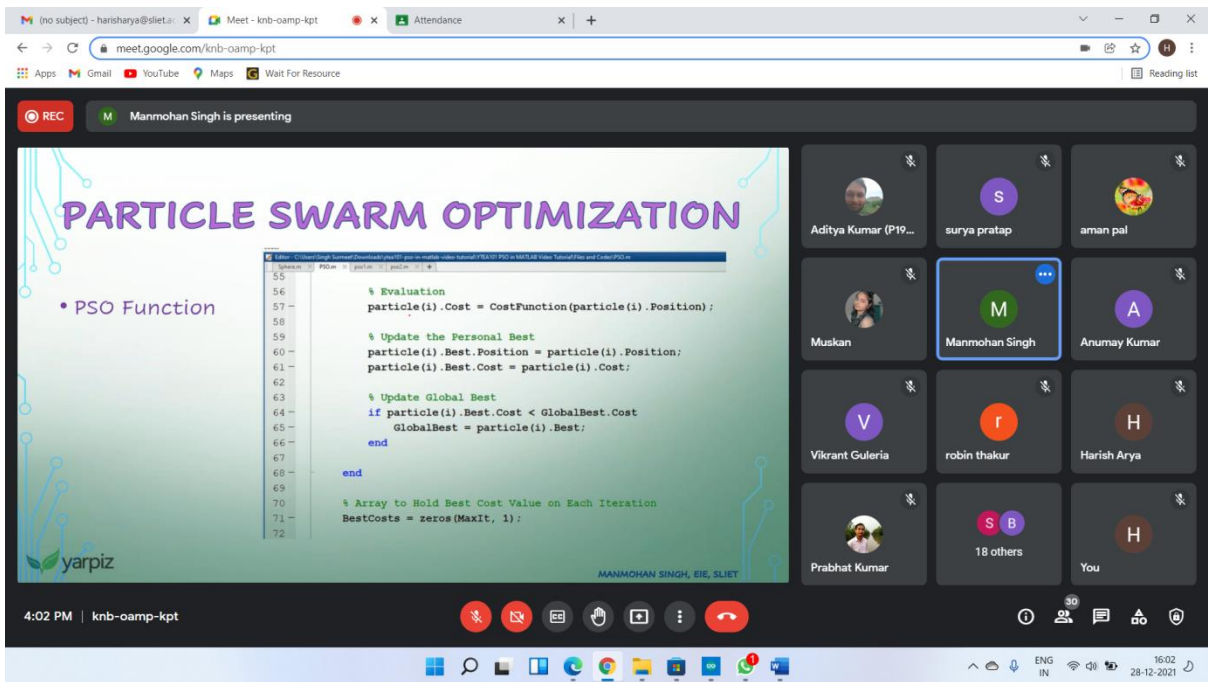


Fig. 3. Dr. Manmohan is delivering lecture on optimization through MATLAB on 28.12.2021