



# INTERNATIONAL WEBINAR

ON



## INTELLIGENT OPTIMIZATION TECHNIQUES AND THEIR REAL LIFE APPLICATIONS

Optimization, Algorithms, Advanced Applications, Swarm Intelligence

Last Date of Registration: February 24, 2022

Date: February 25-27, 2022

Organized by

Department of Mathematics

**Punjabi University (Patiala), INDIA**

In Collaboration With



Mizan-Tepi University  
ETHIOPIA



UNIVERSITY OF  
WOLVERHAMPTON

University of Wolverhampton  
UNITED KINGDOM



MathTech Thinking Foundation  
INDIA



**Free Registration  
Certificate to Each  
Held Through**



**webex**  
by CISCO



**YouTube**

**Important contacts and quick links**

Registration: <https://bit.ly/PBIMAT22>

Website-1: <https://bit.ly/3LtSTMf>

Website-2: <https://www.mttf.in/events/>

Email: [hodmathspup@gmail.com](mailto:hodmathspup@gmail.com)

Email: [organizingsecretary@mttf.in](mailto:organizingsecretary@mttf.in)

Whatsapp: +251937341707, +919872211695

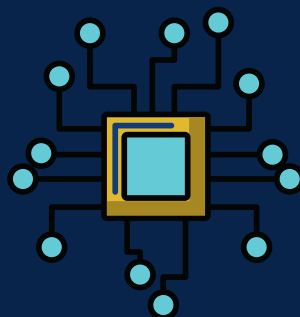
Whatsapp: +917888785729, +917986461434

# THEME

The objective of this webinar is to bring together academicians, researchers, professionals, executives and practicing engineers from various industries, research institutes and educational bodies to share, review, exchange their ideas and discuss current developments in Optimization techniques. These techniques may be based on swarm intelligence, biological systems, physical and chemical systems. Developing economies, aspiration for improved quality of life and rise in the rate of growth have led to the development of various infrastructure facilities in the society. This webinar offers a real opportunity to discuss new issues, tackle complex problems and find advanced enabling solutions, which are able to shape new trends in Computer Science, Engineering, Optimization, Commerce, Economics, Applied Sciences and Bio-Medical Sciences for development of human mankind being as a whole. Hopefully, these discussions will open a debate on new opportunities and new challenges in the area, unifying the efforts toward the development of new adequate tools, protocols and databases for evaluating and monitoring the progress in area of interest.

## Who can participate?

Academicians, young researchers, PG/MD/PhD students, faculties from Universities/ colleges/ Institutes, programme officers, staff working with government or NGOs, programme evaluators, M&E experts.



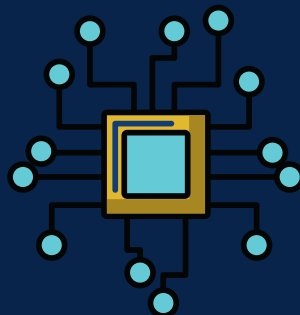
# ABOUT THE WEBINAR

This International Webinar on "Intelligent Optimization Techniques and Their Real Life Applications" is a part of 'Azadi ka Amrit Mahotsav' being celebrated to mark the 75th Year of Indian Independence. It is an initiative of the Government of India to celebrate and commemorate 75 years of progressive India and the glorious history of its people, culture and achievements. This Mahotsav is being celebrated all over the country through various programmes. In this regard, the Office of the PSA and Ministry of Culture, Govt. of India in association with Vigyan Prasar, Department of Science and Technology, Govt of India is going to celebrate February 22-28, 2022 as the glorious Science Week Festival-Vigyan Sarvatra Pujyate (Science and technology is revered all over). The festival will be conducted at 75 locations throughout India in 19 Languages through Expositions, Lectures, Films, Radio Talks, Book fair, Science Literary activities, Posters and other competitions like Play, Essay & Slogan Writing, Poster making, Debate, Quiz, Model/Prototype, Poetry etc.

In this regard, Department of Mathematics, Punjabi University, Patiala is proud to host a series of Online Lectures by the resource persons from all over the globe. Participants from Colleges, Universities and other technical/professional institutes are welcome to attend this Webinar.

Dr. Satya Bir Singh  
Convenor

Department of Mathematics  
Punjabi University, Patiala



# ORGANISING COMMITTEE

## CHIEF PATRON

**PROF. ARVIND**

VICE CHANCELLOR  
PUNJABI UNIVERSITY, PATIALA, INDIA

## PATRONS

**PROF. B.S. SANDHU**

DEAN ACADEMIC AFFAIRS  
PUNJABI UNIVERSITY, PATIALA

**PROF. A.K. TIWARY**

DEAN (RESEARCH)  
PUNJABI UNIVERSITY, PATIALA

**PROF. G.S. LEHAL**

DEAN (COLLEGE DEVELOPMENT COUNCIL)  
PUNJABI UNIVERSITY, PATIALA

**PROF. SANJIV PURI**

DEAN (PHYSICAL SCIENCES)  
PUNJABI UNIVERSITY, PATIALA

**PROF. M.A. QUADRI**

FORMER PROFESSOR,  
DEPARTMENT OF MATHEMATICS  
ALIGARH MUSLIM UNIVERSITY, ALIGARH

**PROF. A.K. MALIK**

DIRECTOR (PLANNING AND MONITORING)  
PUNJABI UNIVERSITY, PATIALA

**PROF. M.S. PATTERNH**

ASSOCIATE DEAN (RESEARCH)  
PUNJABI UNIVERSITY, PATIALA

**PROF. V.K. KAUSHIK**

REGISTRAR  
PUNJABI UNIVERSITY, PATIALA

**PROF. R.K. BAWA**

DEAN (COMPUTING)  
PUNJABI UNIVERSITY, PATIALA

**PROF. N.S. BHATNAGAR**

FORMER PROFESSOR, REGISTRAR  
IIT ROORKEE-247667, INDIA

**DR. RANJIT KAUR**

DEAN, DIRECTORATE OF INTERNATIONAL AFFAIR  
PUNJABI UNIVERSITY, PATIALA, INDIA

## ORGANISERS

### CONVENOR

**PROF. SATYA BIR SINGH**

DEPARTMENT OF MATHEMATICS  
PUNJABI UNIVERSITY, PATIALA, INDIA

### CO-CONVENOR

**DR. MEHAR CHAND**

DEPARTMENT OF MATHEMATICS  
BABA FARID COLLEGE, BATHINDA, INDIA

### COORDINATOR

**DR. NARINDER SINGH**

PH.D.(DEPARTMENT OF MATHEMATICS)  
PUNJABI UNIVERSITY, PATIALA, INDIA

### COORDINATOR

**PROF. HANAA HACHIMI**

BOSS TEAM, GS LABORATORY, ENSA OF  
KENITRA IBN TOFAIL UNIVERSITY  
UNIVERSITY CAMPUS PO BOX 242,  
KENIRA14000, MOROCCO.

### COORDINATOR

**PROF. VISHAL GUPTA**

DEPARTMENT OF MATHEMATICS MMU,  
MULLANA, AMBALA

### COORDINATOR

**DR. DEBBIE GILLILAND**

HEAD OF TNE, GLOBAL OPPORTUNITIES OFFICE  
UNIVERSITY OF WOLVERHAMPTON  
CITY CAMPUS SOUTH, WOLVERHAMPTON, UK

### COORDINATOR

**DR. ARJAN SINGH**

DEPARTMENT OF MATHEMATICS  
PUNJABI UNIVERSITY, PATIALA

# RESOURCE PERSONS



**PROF. VALENTINA E. BALAS**

"Aurel Vlaicu" University of Arad  
Faculty of Engineering  
Department of Automation and Applied Informatics  
Director of the Department of International Relations,  
Programs and Projects  
Head of the Intelligent Systems Research Centre  
IEEE Senior Member  
77 B-dul Revolutiei ,310130 Arad, Romania



**PROF. KUSUM DEEP**

Department of Mathematics Joint Faculty,  
Mehta Family School of Data Science and  
Artificial Intelligence  
Indian Institute of Technology Roorkee  
Roorkee – 247667, Uttarakhand, India



**DR. ESSAM H. HOUSSEIN**

Department of Computer Science,  
Vice Dean for Postgraduate Studies and Research Affairs,  
Faculty of Computers & Information,  
Minia University, Minia 61519, Egypt.  
Founder and Chair of the Computing &  
Artificial Intelligence Research Group (CAIRG)



**PROF. IDOWU A. OSINUGA**

Federal University of Agriculture, Abeokuta (FUNAAB),  
Dept. of Mathematics, FUNAAB, PMB 2240, Alabata Road,  
Ogun State NIGERIA



**DR. P. SHANMUGASUNDARAM**

Department of Mathematics  
Mizan Tepi university ,Ethiopia.



**PROF. BO AKINKUNMI**

Department of Computer Science  
University of Ibadan, Oyo State Nigeria



**PROF. BUKOHWO M. ESIEFARIENRHE**

North-West University  
Department of Computer Science  
Faculty of Natural and Agricultural Science  
South Africa



**DR. LALIT GARG**

Department of Computer Information Systems  
Faculty of Information & Communication Technology  
Room 23, Level 1 Block A, ICT Building  
University of Malta, Msida



# SCIENTIFIC COMMITTEE

- 1.Dr.Navpreet Singh Noorie, Professor, Department of Mathematics, Punjabi University Patiala.
- 2.Dr. Shalini Gupta, Associate Professor, Department of Mathematics, Punjabi University Patiala.
- 3.Dr. Shelly Arora, Assistant Professor, Department of Mathematics, Punjabi University Patiala.
- 4.Ms. Rajni Bala, Assistant Professor, Department of Mathematics, Punjabi University Patiala.
- 5.Dr. Arjan Singh, Assistant Professor, Department of Mathematics, Punjabi University Patiala.
- 6.Dr. Mukhdeep Singh, Assistant Professor, Department of Mathematics, Punjabi University Patiala.
- 7.Dr. Jasleen Kaur, Assistant Professor, Department of Mathematics, Punjabi University Patiala.
- 8.Dr.Deepak Kumar,Assistant Professor, Department of Mathematics, Punjabi University Patiala.
- 9.Dr. Rupali Kaushal,Assistant Professor, Department of Mathematics, Punjabi University Patiala.
- 10.Dr. Dev Prakash Singh, Assistant Professor, School of Management studies, Punjabi University Patiala.
- 11.Prof. Ebenezer Bonyah, Department of Mathematics, Akenten Appiah Menka University of Skills Training and Entrepreneurial and Entrepreneurial, AAMUSTED Ghana
- 12.Dr. Zarife Zararsiz, Department of Mathematics, Nevşehir Hacı Bektaş Veli, Turkey
- 13.Prof.(Dr.) Hanaa Hachimi, BOSS team, GS laboratory, ENSA of Kenitra Ibn Tofail university University campus PO Box 242, Kenira14000, Morocco.
- 14.Dr. Amandeep Verma, Assistant Professor,Regional Centre, Punjabi University Campus,Mohali.
- 15.Dr. Rajinder Kumar,Assistant Professor,Regional Centre, Punjabi University Campus,Mohali.
- 16.Faculty members, Department of Mathematics, University of Wolverhampton, UK.
- 17.Faculty members, Department of Mathematics, Mizan-Tepi, Ethiopia.
- 18.Faculty members, Mathtech Thinking Foundation, India.
- 19.Dr. K C Deshmukh, Professor (Retd), Department of Mathematics, RTM Nagpur University.
- 20.Dr. G Suresh Singh, Professor and Head, Department of Mathematics, Trivendrum University, Thiruvananthapuram.
- 21.Dr. O Ravi, Principal, PMT College, Usilampatti, Madurai.
- 22.Dr. P L Sharma, Professor and Head, Department of Mathematics, HPU, Shimla.
- 23.Dr. A K Lal, Professor, Department of Mathematics, TIET, Patiala.
- 24.Dr. K P Ghadle, Professor and Head, Department of Mathematics, BAMU, Aurangabad.
- 25.Dr. Deepak Gupta, Professor and Head, Department of Mathematics, MMU, Mullana.
- 26.Dr. K.R. Takle, RNC Arts, JDB Commerce and NSC Science College, Nashik- Road, Nashik.
- 27.Dr. Natesan, Professor, Department of Mathematics, IIT Guwahati.
- 28.Dr. R K Saini, Professor and Head, Department of Mathematics, Bundelkhand University, Jhansi.
- 29.Dr. R K Mishra, Professor, Department of Mathematics, SLIET, Longowal.
- 30.Dr. R K Gangele, Department of Mathematics, Hari Singh Gaur,Central University, Sagar.
- 31.Dr. M K Sharma, Prof and Head, Department of Mathematics, TIET, Patiala.
- 32.Dr. V K Gupta, Professor and Head, Mechanical Engineering Department, Punjabi University, Patiala.
- 33.Dr. Surjeet Chauhan, Professor, Department of Mathematics, Chandigarh University, Ghanaur.
- 34.Dr. Ashok Pal, Professor, Department of Mathematics, Chandigarh University, Ghanaur.
- 35.Dr. Gauri Shankar, Professor, Department of Mathematics, Central University, Bathinda.
- 36.Dr. Sanjeev Manchanda, Consultant, Tata Consultancy services, Andheri East, Mumbai.
- 37.Shri Sukhveer Singh, Punjabi University NBD Campus, Dehla Seehan, Sangrur, Punjab
- 38.Dr. Vibha SaihjPal, University College, Chunni Kalan, Punjabi University, Patiala.
- 39.Dr. M L Ghai, Professor (Retd), PMN College, Rajpura.
- 40.Dr. B L Sethi, Professor (Retd), Department of Mechanical Engineering, TIET, Patiala.
41. Dr. Shiv Dev Shahi, Dept. of Mathematics, Chandigrh University, Gharuan
42. Dr.Minto Rattan, Department of Mathematics, University Institute of Engineering and Technology, Panjab University. Chandigarh, Chandigarh, - 160014, India
43. Dr. NeerajChamoli, Department of Mathematics, DAV College Chandigarh, India
44. Dr. Vandana Gupta, Department of Mathematics, DashmeshKhalsa College, Zirakpur
45. Dr. Nishi Gupta, Department of Mathematics, Chandigarh University, Mohali, Punjab, India
46. Dr. JatinderKaur, Department of Mathematics, Chandigarh University, Mohali, Punjab, India
47. Dr. Vinod Mittal, Department of Social Science, Punjabi University, Patiala, Punjab, India
48. Sh. Pushwinder Kumar, Department of Mathematics, Punjabi University, Patiala, Punjab, India
49. Mrs. SavitaBansal, Department of Mathematics, Punjabi University, Patiala, Punjab, India
50. Mrs. Meetu Jain, Department of Mathematics, Punjabi University, Patiala, Punjab, India
51. Temesgen Alemu Godana, Department of Mathematics, Punjabi University, Patiala, Punjab, India

# Important Links

Registration: <https://bit.ly/PBIMAT22>

Website-1: <https://bit.ly/3LtSTMf>

Website-2: <https://www.mttf.in/events/>

YouTube Link: <https://bit.ly/3BUefy9>

## Helpdesk

Email: [hodmathspup@gmail.com](mailto:hodmathspup@gmail.com)

Email: [organizingsecretary@mttf.in](mailto:organizingsecretary@mttf.in)

Whatsapp: +251937341707, +919872211695

Whatsapp: +917888785729, +917986461434





# PROGRAMME

## Day-1: Feb 25, 2022 (Plenary Session)

Inaugural Ceremony	11:00AM to 11:30AM (IST)
Session-1: Prof. Kusum Deep	11:35AM to 12:35PM (IST)
Session-2: Prof. Valentina E. Balas	01:00PM to 02:00PM (IST)
Session-3: Dr. Essam H. Houssein	02:10PM to 03:10PM (IST)

## Day-2: Feb 26, 2022 (Plenary Session)

Session-4: Dr. P. Shanmugasundaram	11:30AM to 12:30PM (IST)
Session-5: Dr. Lalit Garg	01:00PM to 02:00PM (IST)
Session-6: Prof. Idowu A. Osinuga	02:10PM to 03:10PM (IST)

## Day-3: Feb 27, 2022 (Plenary Session)

Session-7: Prof. B. M. Esiefarienrhe	11:30AM to 12:30PM (IST)
Session-8: Prof. Bo Akinkunmi	01:00PM to 02:00PM (IST)
Valedictory Session	02:00PM to 02:20PM (IST)

