

High End Workshop
on

Computational Genomics and Proteomics

(“KARYASHALA” Under the Accelerate Vigyan Scheme - A SERB Initiative)

24-30 July 2022



ACCELERATE
विद्यया



Funded by
Science & Engineering Research Board (SERB)
Department of Science and Technology (DST), New Delhi

Organized by
Department of Electronics and Communication Engineering
PDPM IITDM, Jabalpur, M.P.

ABOUT PDPM IITDM

PDPM IITDM Jabalpur is an Institute of National Importance, established by the Government of India in 2005 with a focus on education and research in IT enabled Design and Manufacturing. Since its inception, PDPM IITDM Jabalpur has been playing a vital role in producing quality human resources for contribution in India's mission of inclusive and sustainable growth. The Institute offers undergraduate, postgraduate and PhD programs in Computer Science and Engg., Electronics and Communication Engg., Mechanical Engg., Design and PhD programs in Natural Sciences (Mathematics and Physics). Under IIT act, the Institute has been declared as an Institute of National Importance in January 2015. The Institute is located at 10 kms from the Jabalpur railway station and 5.5 kms from Dumna Airport, Jabalpur. <http://www.iitdmj.ac.in>

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LEARNING OBJECTIVES: * Accessing DNA & Protein Data Bases * Study of DNA and Amino Acid Mapping Schemes * Genomic & Proteomic Signal Processing * Statistical Methods for Genomics & Proteomics * Genomic & Proteomic Data Analysis Using Machine Learning * MATLAB Bioinformatics Toolbox.

WHO CAN ATTEND?

Karyashala is open to postgraduate and PhD students from Institutes, Colleges, and Universities in India. Applicants pursuing PG/PhD programs in any discipline of Electrical Engineering, Computer Engineering, Bioinformatics, Biology, and Biochemistry are eligible. Students who have recently completed their PG programs are also eligible. Preference will be given to the students having interest in Machine Learning, Signal Processing, Mathematical Biology, Computer Science & Engineering, Computational Biology, and Bioinformatics. Candidates who have completed PhD will not be considered. Total numbers of seats are limited to 25. **There is no registration fee.**

HOW TO APPLY?

Register through google form link:

<https://forms.gle/KkccqFQpma9zU5eMz8>

or

by scanning the QR code



IMPORTANT DATES

- Registration opens: 23 June 2022
- Last date for registration: 10 July 2022
- Display of shortlisted candidates: 12 July 2022
- Workshop dates: 24-30 July 2022

BOARDING, LODGING & T.A.

Boarding and lodging to the selected candidates will be borne by the organizing institute. TA will be admissible as per GoI norms.

CHIEF PATRON

Prof. P. N. Kondekar
Director
PDPM IITDM Jabalpur, M.P.

ORGANIZING COMMITTEE

Prof. Prabin Kumar Padhy
Dr. Anil Kumar
Dr. Rakesh Kumar Jha
Dr. Varun Bajaj
Dr. Ravi Panwar

EVENT ORGANIZER

Prof. Sanjeev Narayan Sharma
Department of ECE,
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Email: snsarma@iitdmj.ac.in

पी.डी.पी.एम.
भारतीय सूचना प्रौद्योगिकी, अभिकल्पन
एवं विनिर्माण संस्थान, जबलपुर



PDPM
Indian Institute of Information Technology,
Design and Manufacturing, Jabalpur



High End Workshop
On
Recent Trends in Signal, Image, and Video Processing
("KARYASHALA" Under the Accelerate Vigyan Scheme - A SERB Initiative)

24-30 July 2022

(Under the KARYASHALA Scheme - A SERB initiative)

Funded By

Science and Engineering Research Board (SERB), Department of Science and Technology, Government of India under Accelerate Vigyan Scheme

Event Organized by

Dr. Amit Vishwakarma, Assistant Professor, Discipline of Electronics and Communication Engineering, PDPM Indian Institute of Information Technology, Design and Manufacturing Jabalpur, M.P., India

About IIITDM: PDPM IIITDM Jabalpur is an Institute of national importance, established by government of India in 2005 with a focus on education and research in IT enabled Design and Manufacturing. Since its inception, PDPM IIITDM Jabalpur has been playing a vital role in producing quality human resources for contribution in India's mission of inclusive and sustainable growth. The institute offers undergraduate, post graduate and PhD programs in Computer Science and Engg., Electronics and Communication Engg., Mechanical Engg., Design and PhD programs in Natural Sciences (Mathematics and Physics). Under IIIT act, the institute has been declared as an institute of national importance in January 2015. The Institute is located at a distance of 10 kms from the Jabalpur railway station and 5.5 kms from Dumna airport, Jabalpur. <http://www.iiitdmj.ac.in>.

About the workshop: 'KARYASHALA' is aimed to provide hands-on experience to the students primarily from universities, colleges, private academic institutions and newly established institutes in providing information regarding new fields and skill development on themes required for research work. The program is meant to support motivated PG and Ph.D. level students, who are having a strong willingness to get excellence in their scientific and engineering research pursuits. Signal, image, and video processing are the enabling technology for the generation, transformation, and interpretation of information. This event serves its participants through high-quality publications discussions, conferences discussions, technical and educational activities, and leadership opportunities. Its goal is to keep participants abreast of the latest information and to serve the public at large in signal, image, and video processing areas. Moreover, use of machine and deep learning for signal, image, and video processing will be also discussed.

Participants: Karyashala is open to postgraduate students/research scholars from all Institutes, Colleges and Universities. Preference will be given to the students having interest towards Signal, Image, and Video Processing. There are no registration fees for participants. Travel allowance will be provided to participants as per government rules. The financial allowance related to accommodation and food will be provided to participants at PDPM IIITDM Jabalpur hostels as per government rules.

Speakers: Experts from IITs, NITs, IIITs, and other international/national institutions of repute will be delivering talks along with a few hands-on sessions.

Registration: Participants interested to attend the program should send their CV/resume to email id mentioned as: "amitv@iiitdmj.ac.in".

Important dates:

The date of registration opens is: **04 July 2022**.

The last date of registration is: **14 July, 2022**.

Informing shortlisted candidates by email: **17 July 2022**.

Workshop date is: **24 July 2022 to 30 July 2022**.

Chief Patron

Prof. P.N. Kondekar, Director, PDPM IIITDM Jabalpur, M.P.

Event Organizer

Dr. Amit Vishwakarma, Assistant Professor, ECE Discipline, PDPM IIITDM Jabalpur, Email- amitv@iiitdmj.ac.in, Mobile - 8486491176.

Address

PDPM Indian Institute of Information Technology, Design and Manufacturing Jabalpur, Dumna airport road, Jabalpur, Madhya Pradesh – 482005. Website – www.iiitdmj.ac.in.

Two Weeks Online Training & Certificate Programme

Advanced Optimization Techniques and Hands-on with MATLAB/SCILAB

8th – 19th August 2022

Organized by

MNIT Jaipur, NIT Patna and PDPM IIITDM Jabalpur



About IIITDM Jabalpur

The PDPM Indian Institute of Information Technology Design and Manufacturing Jabalpur (IIITDMJ) is the unique Institute established by MHRD Govt. of India in collaboration with Govt. of Japan, to promote interdisciplinary research in the area of design and manufacturing. Institute has latest state of the art manufacturing facilities. To promote interdisciplinary research, Institute is following unique curriculum which provides students with an opportunity to gain interdisciplinary skills. Institute is also running Master of Design and M. Tech. program in Mechatronics, apart from the B. Tech. and M. Tech. programs in Mechanical (ME), Computer Science & Engineering (CSE) and Electronics & Communication Engineering (ECE). Institute also offers Ph.D. program in ME, CSE, ECE and Design. To know more about the Institute, please visit www.iiitdmj.ac.in

Detail Registrations

Registration link –

https://docs.google.com/forms/d/1akpzsSTmsswImho5Vunc_c4rfB7vnPil6PILcuDDAuGY/edit

Registration fee

Indian Participants –

Academic (student/faculty): INR 500

Industry Participants and Others : INR 1000

Foreign Participants – SAARC/African countries

Academic (student/faculty): - INR. 500

Others - INR 1000/ Rest of the countries

Fee - US\$ 60 or British £ 50

Last Date for Registration : August 05, 2022

Course Contents

- Module 1: Fundamental of Optimization: Classical Optimization techniques, Constrained Optimization, Linear and Nonlinear Optimization, Alternating direction multiplier method (ADMM).
- Module 2: Nature Inspired Optimization: Genetic Algorithms, Particle Swarm Optimization, Ant Colony Optimization, Cuckoo Search, Colliding Bodies Opt., Symbiotic Organism Search, Social Spider Opt., Artificial Bee Colony, Differential Evolution, Gray Wolf Optimization, CLONAL and other Bioinspired Algorithms, Comparing Nature Inspired Optimizers
- Module 3: Multi & Many Objective Optimization (MOO): Nondominated Sorted Genetic Algorithm NSGA-II & NSGA-III, MOO for Clustering, Cognitive Radio, Sensor Networks, Multi task Optimization, Dynamic Optimization
- Module 4: Real Life Applications: Wireless Sensor Network, Nonlinear System Identification, Data Clustering, Active Noise Control, Bio informatics, Signal Processing, Hyperspectral Image Processing, Many Other Application

Joint Principal Coordinator

Prof. Prabin Kumar Padhy,

PDPM IIITDM Jabalpur

Email: prabin16@iiitdmj.ac.in

Phone: +91-761-2794462 (O)+91-9425155297 (Cell)

Online Payment Details

Beneficiary Name : EICT Academy

Bank Name: INDIAN BANK

A/C No. : 50302042708

IFSC Code: IDIB000M694

Branch: Mehgawan, IIITDM Branch

Contact Us

Contact Us :

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PDPM
Indian Institute of Information Technology,
Design and Manufacturing, Jabalpur



Joint Online Faculty Development Programme

Smart Healthcare Technologies: Opportunities & Challenges 25 July – 5 Aug, 2022

Organized by
MNIT Jaipur, NIT Patna and PDPM IIITDM Jabalpur

