About Electronics & ICT Academy at PDPM IIITDM Jabalpur

Ministry of Electronics and Information Technology, Government of India has instituted four Electronics and ICT Academies with one academy at IIITDM Jabalpur with the primary objective of preparing manpower for two important missions - 'Digital India' and 'Make in India'. The Academy aims at scalable training programmes in niche areas of electronics and ICT for the development of required knowledge base, skills and tools to unleash the talent of Indian population. IIITM Gwalior, MANIT Bhopal, and IIT Indore are partners in organizing specialized courses for faculty, students and unemployed graduates under the Academy. In addition, the Academy will conduct customized training programmes for corporate sector and research promotion workshops for faculty teaching in colleges. The Academy is envisioned to become a central hub of activities on training, research, consultancy work and entrepreneurship programmes. http://ict.iiitdmj.ac.in

About PDPM IIITDM Jabalpur

IIITDM Jabalpur was established 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 programmes in Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, Design and PhD programmes in Mathematics and Physics. Under IIIT act, the Institute has been declared an Institute of National Importance in January 2015. The Institute campus is being developed on 250 acres of land close to Dumna Airport, Jabalpur. The Institute is 10 kms from the main railway station and 5.5 kms from Dumna airport, Jabalpur. http://www.iiitdmj.ac.in/

Programme details

Medical Image Processing for Biomedical Applications and Additive Manufacturing using MAGICS and MIMICS

Who should attend ?

Program will be a unique opportunity for them who are keenly looking for Additive Manufacturing as tool for Biomedical Applications. The program is open to faculty, research scholar, scientist as well as medical practitioners involved with biomedical applications at colleges, universities and health services.

How to apply ?

By Email – Scanned copy of the filled in application form duly endorsed by the forwarding authority to be mailed at pkjain@iiitdmj.ac.in, pkjain2006@gmail.com

Please also send/post your duly-filled application form endorsed by the forwarding authority along with the DD of the registration fee (add accommodation charges, if needed) in favour of 'IIITDMJ-E&ICT ACADEMY' payable at Jabalpur. Registration fee can be paid to account (A/C Name: IIITDMJ-E&ICT ACADEMY; A/C No. 50302042708; Allahabad Bank, Mehgawan, IIITDM Branch, IFSC Code: ALLA0212433) by CASH/NET BANKING/NEFT. No Travelling Allowance will be paid by the Academy.

Important Dates :

Last Date of Registration through Email with online payment : August 06, 2018

Last Date of receipt Registration form with DD : August 13, 2018

Registration Fee :

Interested persons may register for the course with registration fee Rs. 5,000/- (Course material + lunch inclusive).

Accommodation (if needed) :

Accommodation is available on payment basis in Institute's Guest House and Hostel's Guest Rooms. Please see course website for further details.

Course Coordinators

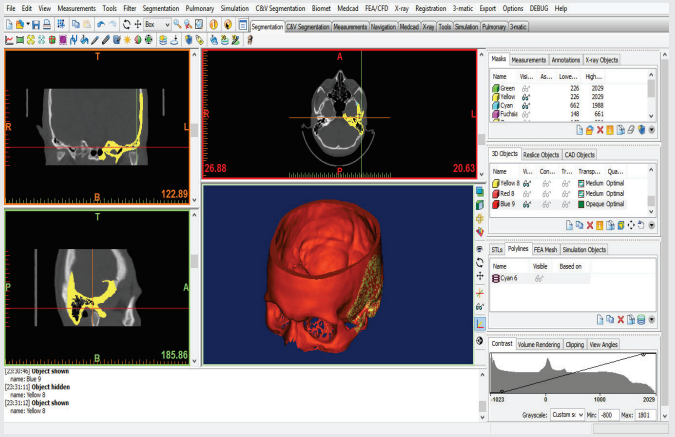
Dr. Prashant Kumar Jain
Contact: 0761-2794415, 9425800310;
Email: pkjain@iiitdmj.ac.in

Dr. Pavan Kumar Kankar
Contact: 0761-2794419, 9425807612;
Email: kankar@iiitdmj.ac.in

Medical Image Processing for Biomedical Applications and Additive Manufacturing using MAGICS and MIMICS (MIP-BAAM)

August 27-31, 2018

(Hands-on Experience Oriented Skill Development Program)



Faculty Development Programme Under Electronics and ICT Academy

An Initiative of
Ministry of Electronics and Information Technology, Government of India

Electronics and ICT Academy
PDPM Indian Institute of Information Technology, Design and Manufacturing, Jabalpur,
Dumna Airport Road,
Jabalpur 482005

Building Human Resources For Digital India

E&ICT Academy IIITDMJ

About the Programme

This programme is designed for anyone wish to develop a basic comprehension of image processing and use of it for biomedical applications. This is an exciting time in the medical science where engineering is the vital tool that fortifies and accelerate the treatment process. It is hands-on experience oriented skill development program with extensive applications of biomedical image processing using the advanced tools like MAGICS, MIMICS and MATLAB for CAD model preparation and its manipulation as well data preparation, slicing etc. for Additive Manufacturing.

Course will be beneficial to researchers, scientist as well as medical practitioners involved with biomedical applications and keenly looking for Additive Manufacturing as tool for Biomedical Applications.

Teaching methodology will be adopted in such a manner so that all can cope up even those who do not possess any prior knowledge of image processing, computational methods and programming, exposure to the software like MAGICS, MIMICS and MATLAB. Case studies of advance application of MIMICS and MAGICS will be presented by highly motivated researchers/faculty and they will also demonstrate applications of computational methods and application for research using MATLAB and share their recent research work. Every participant will be allotted an individual PC for hands on practice (with MAGICS, MIMICS and MATLAB) during the sessions.

PDPM-IIITDM Jabalpur has licensed access of these software and will be used for training during this course. For more details about MAGICS and MIMICS you can visit

https://www.materialise.com/en/software/magics

https://www.materialise.com/en/medical/software/mimics

and regarding MATLAB you can visit

https://in.mathworks.com/

This program also aims to share excellent facilities available at PDPM-IIITDM Jabalpur with nearby academic institutions and made available to their students. The training program information brochure can be downloaded from

http://mip.iiitdmj.ac.in

Course Contents

Biomedical image acquisition: X-ray Imaging, CT-scanning (CBCT and μCT), Magnetic Resonance Imaging (MRI), Basics of image processing, Segmentation and region growing of biomedical image: Optimal thresholding, Region-oriented, segmentation of images, Edge detection

Biomedical image processing and 3D modelling using MIMICS: Basic operations in MIMICS, Mimics Navigation, Segmentation, Splitting and merging of region, Region growing, Surgical Simulation, CAD link and STL generation, Thresholding

STL editing and pre-processing of solid model for Additive Manufacturing using MAGICS: Basic operations in MAGICS, STL standard data formats, Errors in STL file, STL repairing methods, Part orientation, Support creation.

Additive Manufacturing with MATLAB: Data preparation for additive manufacturing, Slicing, STL files manipulation using MATLAB, Tool path preparation using MATLAB

Case studies: Image Processing, Applications of MAGICS, MIMICS and MATLAB

Resource Persons

Prof. Pulak Mohan Pandey, IIT Delhi
Prof. A. M. Kuthe, VNIT Nagpur
Prof. Vijay K. Gupta, PDPM IIITDM Jabalpur
Dr. Prashant K. Jain, PDPM IIITDM Jabalpur
Dr. Pavan K. Kankar, PDPM IIITDM Jabalpur
Dr. Amit Kumar Singh, MNIT Jaipur
Dr. Rajesh B. Dhirawani, Jabalpur Hospital & Research Centre
Dr. Niharika Jain Gupta, Healthy Smile Dental Clinic And Orthodontic Center

Contact us

Dr. Prashant K. Jain
Dean (Student) and Associate Professor, ME Discipline
Contact: 0761-2794415, 9425800310; Email: pkjain@iiitdmj.ac.in
PDPM Indian Institute of Information Technology, Design and Manufacturing, Jabalpur,
Dumna Airport Road, Jabalpur 482005
Website: http://amec.iiitdmj.ac.in/index.html

Application Form

Name of the Applicant (first, last): .....

.....

Age : ..... Gender : Male/Female .....

Category : GEN/OBC/SC/ST .....

Designation : .....

Qualification : .....

Name and Address of the Organization/Institute/college:

.....

.....

City/town: ..... Email: .....

Alternate email (if any): .....

Phone Number: .....

Mobile Number: .....

Do you need accommodation? (Yes/No): .....

Are you working in the area of Biomedical? (Yes/No):

Do you have prior knowledge of Image Processing? (Yes/No):

DD/Web Ref. Number:..... Date: .....

Issuing Bank: ..... payable at: .....

Signature of the Applicant

I hereby agree to relieve Mr./ Ms./ Dr.....

.....in case she/he is selected to attend the programme.

Signature and Seal of the Forwarding Authority

Name .....

Designation .....