GIAN
GLOBAL INITIATIVE OF ACADEMIC NETWORKS

Government of India
Ministry of Human Resource Development

MHRD Scheme on Global Initiative on Academic Network (GIAN) Sponsored One Week Course on

"Perception and Modelling of Three-Dimensional Scenes"

December 4th – 10th, 2017

Organized By
Department of Computer Science and IT
Dr. Babasaheb Ambedkar Marathwada University, Aurangabad(MS)-431004

About GIAN

Govt. of India approved a new program Global Initiative of Academic Networks (GIAN) in Higher Education aimed at tapping the talent pool of scientists and entrepreneurs, internationally to encourage their engagement with the institutes of Higher Education in India so as to augment the country's existing academic resources, accelerate the pace of quality reform, and elevate India's scientific and technological capacity to global excellence. In order to garner the best international experience into our systems of education, enable interaction of students and faculty with the best academic and industry experts from all over the world and also share their experiences and expertise to motivate people to work on Indian problems, there is a need for a Scheme of International Summer and Winter Term.

Course Overview

In today's highly competitive business environment, management of physical assets (their selection, maintenance, inspection and renewal) plays a key role in determining operational performance and profitability of any business unit, manufacturing plant or industry that operate assets as a part of their core business. Asset Management, being the art and science of making right decisions and optimizing these processes, attempts to minimize the total life cost of assets and directly or indirectly influences manufacturing /production /operation /service cost, processes and quality, and throughput or delivery time. There is particular interest in the application of asset management principles to the management of engineering systems in any industrial unit where the cost and performance of the assets are of major significance. Asset Management for any engineering system needs to focus on maintenance, renewal and enhancement activities, with an integrating mechanism, on delivering sustainable outputs valued by customers and funding providers at the lowest whole-life cost emphasizing on creating knowledge of how assets degrade and fail to optimize maintenance and renewal interventions. It is essential that industries across India, many organizations of which being asset-intensive, promote a consistent asset management approach to their infrastructures and systems in overall manufacturing, production and supply chain domain to develop their own methods, standards and framework for achieving excellence in business performance.

Course Objective

i) Exposing participants to the fundamentals of asset management practices.
ii) Building in confidence and capability amongst the participants in the application of asset management tools and techniques and mapping the organizational activities and problems in terms of Asset Management framework,

iii) Providing exposure to practical problems and their solutions, through case studies and live projects in asset management,
iv) Enhancing the capability of the participants to identify, control and remove asset management related problems in engineering system.

Who Can Attend?

You Should Attend If...
- You are Executives, engineers and researchers from manufacturing, service and government organizations including R&D laboratories.
- You are students at all levels (BTech/MSc/MTech/PhD) or Faculty from reputed academic institutions and technical institutions.

Teaching Faculty

Professor Iftikhar B. Abbasov, is Head of Department of Engineering Graphics and Computer Design, of Southern Federal University, Taganrog, Russia. His scientific research areas are Mathematical Simulation of Nonlinear Wave Phenomena in Fluid Dynamics and Acoustics, Computer Modeling in Industrial Design. He is a scholarship holder of the Soros Foundation and University Academic Board. He is the member of the Russian Designers Union, Russian Acoustical Society, Indian Mathematical Society. He is an author of 12 textbooks on application of computer-aided technologies in the field of design. Among them, 8 textbooks were published by DMK Press publishing company (Moscow) and have the signature stamp of the Ministry of Education of the Russian Federation, Scientific and Methodological Council on Engineering Graphics of the Ministry of Education of the Russian Federation. 28 years of teaching and research experience.

Dr. Ratnadeep R Deshmukh, is Professor and Former Head, Department of Computer Science and IT, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (MS)-431001 India**.** His research interest is Human Computer Interaction, Digital Speech Signal processing, Data Mining, Image Processing, Pattern Recognition, Artificial Intelligence, Computational Auditory Scene Analysis (CASA),Neural Networks, GIS and Remote Sensing, Sentiment Analysis etc. He is Fellow member and Chairman, IETE Aurangabad Centre, He is the Coordinator for DST-FIST sponsored

project on "Hyper Spectral Image Analysis of RS and GIS" (2013-2018), Govt. of India, New Delhi. He received the Award 2015 for outstanding service in Education and Research to strengthen India's Unity and economic development. Coordinator, Maharashtra State Marathi World Dictionary Development Committee, Govt. of Maharashtra, for development of Marathi World Dictionary in the subject of Information Technology and Computer Science..He has visited University of Santiago de Compostela, Spain under the Research Excellence Program USC - India (PEIN Fellow). Edited Ten books and published more than 151 research papers.

Dr. C. Namrata Mahender , Working as Asst Prof .Ph.D. and Net in Computer Science. Her area of Specialization are Parallel Computing, Computational Linguistics and Psycho-linguistics. More than 30 papers have been published in reputed journals and conference. She has completed two UGC minor projects. She is life member of ISCA ,IETE , IAEng and member of IEEE. She won First prize in Inter University State Level Research Festival "AVISHKAR - 2009" under H. L. F. A. category at Teacher level & for the Team Management. She is a Secretary, IETE Aurangabad Center.

Course Content

Modern approaches to the study of sensation and perception. Influence of Context on Shape and Pattern Perception. The light, characteristics of light. Color vision. Color circle, color mixing, successive images, adaptation, color vision abnormalities. 2D and 3D feature-based alignment, the geometry of multiple views.

Three-dimensional modeling methods: Extrude, Bevel, Bevel Profile, Lathe. Color models. Additive, subtractive, perceptual color model. Color and coloring. Texture, surface relief, bump. Distance and Size Perception, Perceiving a Three-Dimensional World. Three-dimensional modeling methods: Loft, Lattice, Polygon Extrude, Free Deformation. Perception of figure and ground. Gestalt grouping factors, subjective contours.

The perception of space. Monocular and binocular spatial cues. Textures and materials of three-dimensional scenes. Methods of Shading: Blinn, Oren, Nayer, Phong, Strauss. Materials: Standard,

Multi/Sub-Object, Raytrace. Image processing. Binary, grayscale, color images. Adjusting the histogram. Sharpening, noise removal.

Installation and analysis light of scenes. The types of light source, natural and artificial lighting, shadow casting. Installation of the camera, foreshortening. Characteristics of Color Perception, Mechanisms of Color Perception, Color Specification, Using Color to Represent Information

Examination and Certificate

An examination will be conducted at the end of the course and grade sheets as well as participation certificate will be given to all the participants.

Registration

Registration to the portal is one time affair and will be valid for lifetime of GIAN. Once registered in the portal, an applicant will be able to apply for any number of GIAN courses as and when necessary. One time Non-refundable fee of Rs. 500/-is to be charged for this service. Please also note that mere registration to the portal will not ensure participation in the courses. The course Coordinator has the final say on the selection of participants. Please do not confuse with web Registration with course registration. The course registration fee is separate. The candidate has to pay course registration fee as per directive from the course coordinator/host Institute to the local Institute only. Registration Link for GIAN portal: http://www.gian.iitkgp.ac.in/GREGN/index

Registration fees:
The participation fees for taking the course is as follows:

Student:	Rs. 1000/-
Academician:	Rs. 3000/-
Industry/Research Organizations:	Rs. 5000/-
Participants from abroad :	US $200/-

NOTE: The above fees include all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, free internet facility.

Accommodation:
The participants will be provided accommodation on nominal payment basis at university campus(first-come-first-serve basis).

Travel Information

By Air: Aurangabad is having International & Domestic airport. Air services are available to and from Mumbai by Jet Airways and from New Delhi (Via Mumbai) by Air India.
By Road: Aurangabad is well connected with major cities of Maharashtra state and India by a good network of roadways. The distance for some of the major cities from Aurangabad are Pune (256 km), Nashik (218 km), Indore (402 km) and Mumbai (403 km).
By Train: Aurangabad is well connected with major cities of India by Train.

Important Dates

Last Date for Pre Registration : October 30, 2017

Last date for Final Registration: November 15, 2017

Course schedule : December 4-10, 2017

Contact Details

For any information regarding eligibility, fee payment, travel information, accommodation, etc., please contact the course coordinator via email or phone gian.bamu2017@gmail.com.

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Please email the application form along with the proof of the registration fee payment to the course coordinator gian.bamu2017@gmail.com