# Registration form

Name:	in 1980 in 1					
Gender:	<b>ラスリング</b>					
Institution/organization:						
Qualification:	■ 27.4.4.2.					
Designation:	Kindly use the QR code for Online Registration And to download the soft copy of the brochure					
Email ID:						
Phone Number:						
Contact Address:						
Choice of food (Veg/NonVeg):						
Date:						
Place:	Signature of Applicant					
Eligibility						

Work shop Dates: 11th-12th March 2019

Eligibility: Students 1st to Final Year of UG, PG or PhD from ECE, EEE, CSE, IT, Mechanical

and other Relevant department

Note: Interested Academic Staff and Industrial Persons can also Apply

## Registration & Contact

Last date for submitting the online of filled application form is 7th march 2019

NOTE: Selected participants will be intimated through e-mail within two days from the date of Receiving the application. The mode of payment and other details will be intimated through mail. Intrested participants can also submit application form in person along with filledin hardcopy registration form with prescribed registration fee to the convener for the further process.

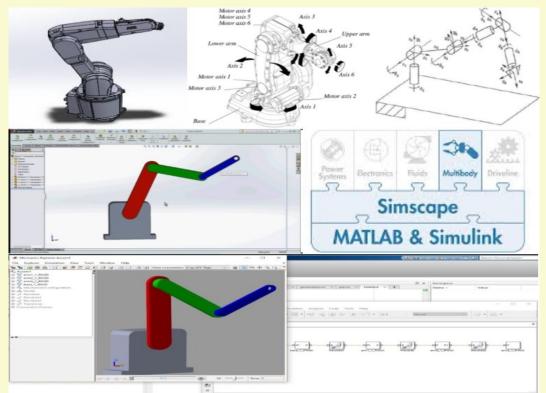
# Registration Fee: Rs. 500 (Including Lunch, Snacks&Certificate)

Dr.Sudharsan Jayabalan,PhD(Robotics) Associate Professor, Dept of ECE, GRIET Mobile:9551250587

E-Mail Id:sudharsan.jayabalan@gmail.com

# Two-Day Workshop on **Design of Robotic Arm using MATLAB-Solidworks**

11th to 12th March 2019



Organized by



**Department of Electronics and Communication Engineering** 

Gokaraju Rangaraju Institute of Engineering and Technology

(Autonomous)

Bachupally, Hyderabad, India. 500090

#### **About the Institution**

Gokaraju Rangaraju Institute of Engineering and Technology (GRIET) is a premier institute established in 1997 under the patronage of the Gokaraju Rangaraju Educational Society. The Departments under which various programmes are run at this institute are, department of Electronics and Communication Engineering (ECE), Electrical and Electronics Engineering (EEE), Computer Science and Engineering (CSE), Information Technology (IT), Mechanical Engineering (ME), Civil Engineering (CE).

Post graduate courses are offered by ECE(Embeded systems, VLSI), EEE(Power Electronics, Power systems) CSE, Software Enginering, DFM, Structural Engineering, Thermal engineering, GRIET is affiliated to JNTU, Hyderabad, and is approved by AICTE. All the departments are accredited by the NBA & NAAC.

## **About the Department** The department of Electronics & Communication Engineering started right from the inception of the

college in the year 1997. The primary objective of the department has been to impart quality education, training and research at the undergraduate and postgraduate in various areas of Electronics and Communication Engineering with broad emphasis on design aspects of electronic systems. The Department has been accredited by NBA. The Department has several well-equipped laboratories, The Department motivates students to take up

innovative projects through participation in an active in-house product development Lab. Industry interaction is being promoted through several projects. The Department has highly qualified faculty members with vast experience in their fields.

## **About and Importance of Workshop**

Robotics and automation plays a major role in the industrial revolution. The current industrial requirements are focused on lean manufacturing in industries. This requires an interdisciplinary problem-solving approach by the employees who has an ability to work and integrate multiple software environment. In order to enhance the employment opportunity of our students a hands-on exposure in working with multiple discipline software is being proposed.

During this workshop, students will have hands on exposure in Solidworks software which is used for 3D modelling and assembling of robotic arm and Matlab software for controlling the robotic arm.

#### **Resource Person**



Dr. Sudharsan Jayabalan, PhD.(Robotics)

Associate Professor, Department of ECE GRIET, Hyderabad, India—500090

Dr.J.Sudharsan got his bachelor of Electronics and Communication Engineering degree in 2008 from Anna University, India, He received Masters of Engineering in Embedded Systems Technologies in 2010 from Anna University. In 2012 he has been awarded with Anna Centenary research Fellow and carried out full

time PhD in the field of artificial intelligence and robotics. In November 2016 he had successfully defended his PhD thesis titled on "Design of Autonomous learning algorithm for an 8-DoF humanoid Robotic Arm using Hybrid Inverse Kinematic Technique" and was awarded Doctorate in Engineering. He worked as an associate Professor in Malla Reddy Institute of Engineering and Technology from December 2016 to December 2017 after which he joined Gokaraju Rangaraju Engineering College in February 2018. He is currently working on 2 research projects worth INR 3.25 Lakhs towards the development of industrial and educational robotic arm. He had been invited as a speaker for International Conference on Mechanical Engineering and Automation Science 2017 (ICMEAS 2017) was held in University of Birmingham, UK, from Oct.13 to 15, 2017. He also attended a one week summer school on "IEEE RAS Summer School on Soft Manipulation 2017", From 17 Jul, 2017 to 21 Jul, 2017 At Frauenchiemsee, Bavaria, Germany. He has also published around 7 research articles in the field of artificial intelligence and robotics in reputed International journals and conferences. His research article won the best paper award in the "International Conference on Mechanical Engineering, Material and Energy" which was held in Singapore during November 2014.

# **Course Content and Schedule**

1 11110	Topic
	<u>DAY1</u>
09:15	Inauguration
10:00	Introduction to interdisciplinary approach Product Development
10:20	Fundamentals of Robotic arm design
10:45	Tea Break
11:00	Introduction to Solidworks
11:20	3D part modelling using Solid works
12:30	Lunch Break
13:15	3D part modelling using Solid Works (Contd)
14:30	Tea Break
14:45	Modelling of Robotic Arm using Solidworks
	<u>DAY2</u>

Time

09:15

10:45	Tea Break
11:00	Quick Introduction to MATLAB and SIMULINK
12:30	Lunch Break
13:00	Co-Simulation Control of Robotic ARM by Invoking the Solidworks model in MATLAB
14:30	Tea Break
14:45	Co-Simulation Control of Robotic ARM by Invoking Solidworks model in MATLAB (Contd)
15:30	Valedictory

Assembling parts using Solid works

#### **Patrons**

Dr. Jandhyala N Murthy	Dr.Praveen jugge	Dr.K.V.S.Raju	Dr.N.Swetha
Director, GRIET	Principal, GRIET	SAO,GRIET	H.O.D,ECE,GRIE

#### Convener

### Dr.Sudharsan Jayabalan, PhD (Robotics)

Associate Professor, Department of ECE, GRIET

# **Program Co-ordinators**

Dr.E.Karthikeyan Dr.N.Arun Vignesh Dr. Asisa Kumar Panigrahy Associate Professor Associate Professor Associate Professor Dept of ECE, GRIET Dept of ECE, GRIET Dept of ECE, GRIET