

CURRICULUM VITAE

SANTHOSH S

D308, Boys Hostel
IIT Hyderabad, Kandi, Sangareddy
Telangana – 502285, India.

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OBJECTIVE:

Seeking a challenging and growth oriented career where I can fully utilize my skills and available resources with opportunity for professional growth and to excel by contributing toward the achievement of organizational goal.

PERSONAL SKILLS:

I am a flexible person having research interest, problem solving abilities, good communication, creativity, leadership quality in coordinating the team to success. I am a **Smart Worker** rather than a hard worker.

CAREER PROFILE:

Project Assistant	Indian Institute of Technology – Hyderabad (IIT H)	Department of EE	Sept'14 – July'15
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EDUCATIONAL PROFILE:

PhD Scholar (Electrical Eng.,)	Indian Institute of Technology – Hyderabad (IIT Hyd)	July 2016 - present	9 (CGPA)
M.Tech., (Micro-Electronics and VLSI)	Indian Institute of Technology – Hyderabad (IIT Hyd)	2018	8.12 (CGPA)
B.E., (EEE)	Pannai College of Engineering and Technology Anna University – Chennai	2014	7.8 (CGPA)
H.S.C	V.H.N. Higher Secondary School	2010	73.16%
S.S.L.C	V.H.N. Higher Secondary School	2008	96.20%

AREAS OF INTEREST:

- ☞ Graphene – 2D Materials
- ☞ Nano Processor and Sensor Design
- ☞ MQCA & NanoMagneticLogic
- ☞ Rebooting Computing Paradigms
- ☞ First Principles Investigation
- ☞ Robotics in CPS & IOT

TECHNICAL PROFILE:

Computing Languages : C, C++, Java, Web Designing, Latex
Software : OOMMF, QE-Abinitio, LAMMPS, MATLAB/SIMULINK, Comsol
Hardware : Diploma in Hardware & Networking

RESEARCH SYNOPSIS:

Starting my career at IIT Hyd as project assistant, I worked on energy harvesting techniques and low power electronics. My focus got aligned towards Materials and its electronic properties. Contributing towards my M.Tech., thesis my work is on Next Generation Electronics focusing on Magnetic Quantum Dot Cellular Automata (MQCA) and Ultra Low Power devices. I am performing computational analyses of Graphene and examining the unique electronic and transport properties using DFT based ab-initio calculations. First principles investigation of futuristic materials for energy harvesting. I am working on Quantum Espresso based Ab-Initio simulations and Molecular Dynamics simulations with LAMMPS. My responsibility is to design novel device with future materials, which consume relatively low power utilizing MQCA.

Guided by: [Dr. Amit Acharyya](#).

KEY ACHIEVEMENTS:

- ☞ Nominee - INAE Innovative Student Projects Award 2018 for M.Tech Thesis.

- ☞ Completed **ARM Cortex-M0+ Hardware Design** training course at IIT Hyd by Mahmood Yakub and Duberly Mazuelos from ARM Ltd.
- ☞ Selected for sixteenth **National Children's Science Congress**, organized by Tamilnadu Science Forum, NCSTC network, DST Govt. of India.
- ☞ Participated in **Nuclear Awareness Festival**, organized by Department of Atomic Energy - Mumbai & IGCAR Kalpakkam.
- ☞ Successfully completed four levels of examination conducted by Dakshina Bharat **HINDI** Prachar Sabha.
- ☞ Successfully completed Certificate course in **French** from Madurai Kamaraj University - DDE
- ☞ Participated & won in various Drawing, Oration Competitions at Interschool and District level.
- ☞ Active member of **Red Ribbon Club**, organized workshops & blood donation camps
- ☞ Organized **E-CUBE'12** a national level technical symposium.
- ☞ Volunteer for Adhyayan and Green Prints – IIT Hyd

WORKSHOPS & SHORT COURSES:

- ☞ Attended GIAN course on “**Finite Element Method**” at IIT Hyderabad by Prof. J N Reddy from Texas A&M University and Dr.Amirtham Rajagopal from IIT Hyd .
- ☞ Attended a TEQUIP Workshop on “**Spintronics & Advanced Magnetic Materials**” by Prof. C. V. Krishna Murthy, IIT Madras and Prof. Anjan Barman at IIT Hyd
- ☞ Attended “**Challenge Lecture Series**” at IIT Hyderabad on diversified topics.
- ☞ Attended a course on “**High Speed Digital IC Design**” offered by IBM corporation - India Systems Development Lab at IIT Hyd
- ☞ Attended a talk on “**Antenna Design for Wireless Sensor Nodes Comprising Carbon Nano-Sensors**” at IIT Hyd by Prof. K. Naishadham from Georgia Institute of Technology.
- ☞ Attended a talk on “**Investigating the Nanostructures – A multi-technique Approach**” at IIT Hyd by Dr. Satyanarayan Kuchibhatla from Battelle Science and Technology India Pvt. Ltd,
- ☞ Attended a talk on “**Toward Internet of Everything: IoT, CPS, and SNSS**” by Dr. Ram D. Sriram from National Institute of Standards and Technology, Gaithersburg.
- ☞ Attended a workshop on “**Efficient Electric Drives**” organized by AVIT
- ☞ Attended a workshop on “**Renewable Energy**” organized by MKU – SEEN
- ☞ Attended a workshop on “**Computational Intelligent Techniques and its Applications**” organized by Kongu Engineering College
- ☞ Attended a workshop on “**Green Energy**” organized by Coimbatore Institute of Technology.
- ☞ Attended “**IEEE EDS Mini Colloquia On “Past, Present and Future of NANO CMOS Technologies**” organized by Thiagarajar College of Engineering.
- ☞ Attended a One Day Short Course On “**Quantum Physics in NANO ENGINEERING to Ultra Large Scale Integration (ULSI)**” Organized by Don Bosco Institute of Technology, *IEEE Electron Devices Society - Bangalore Chapter & Solid State Circuits Society*.
- ☞ Attended an IN-PLANT & Hands-On TRAINING at **MCNOLD Transformers - Sidco**.

PUBLICATIONS:

1. **TUNABLE INTRINSIC MAGNETIC PHASE TRANSITION IN PRISTINE SINGLE-LAYER GRAPHENE NANORIBBONS**
[Santhosh Sivasubramani et al 2018 Nanotechnology 29 455701](#)
2. **DESIGN AND DEVELOPMENT OF A SECURITY MODULE WITH INBUILT NEURAL NETWORK METHODOLOGIES AND AN ADVANCED TECHNIQUE ON FINGER PRINT RECOGNITION. [BP]**
[Proceeding of ICCPCT'14; 978-1-4799-2395-3; ©2014 IEEE, pp- 1490-1495 NICHE – NIU](#)
3. **INNOVATIVE METHODOLOGY AND DESIGNING OF INTELLIGENT MOBILE ROBOTS COMPUTER VISION WITH GENETIC ALGORITHM SLE MECHANISM AND ADVANCED SENSORS IN MANAGING DISASTER.**
[Proceeding of ICCPCT'14; 978-1-4799-2395-3; ©2014 IEEE, pp-1692-1697 NICHE – NIU](#)
4. **SOLAR POWER CONVERSION USING SATELLITE AND DTH BASED UPON AUTOMATIC SUPPLY NETWORK WITH APPLIED NANOTECHNOLOGY. [BP]**
[Proceeding of ACEEE ICrtSIV'14;AETS Book Series vol 5 \(ISSN: 2214-0344\) PP-189-196; DOI - 03.AETS.2014.5.114](#)
5. **SATELLITE BASED SOLAR POWER CONVERSION**
[Proceeding of \(MNRES, DRDO, MKU – SEEN\) IWCRECC'12](#)
6. **DESIGN OF SLOTLESS PERMANENT MAGNET INDUCTION SYNCHRONOUS MOTOR**

***[BP]-Best Research Paper Award**

KEY-SKILLS GAINED:

Increase in ability to **work under pressure**, assertive at work and maintain effective work/life balance. Very steep learning curve, **adapt to new technology** in a very short time.

M.Tech. PROJECT DETAILS:

TITLE : [Investigation on electronic transport and magnetic properties of graphene for its applications in nanomagnetic computing](#)

B.E., PROJECT DETAILS:

TITLE : [Design Scheme of Maintaining Power System and Protecting Nuclear Reactor by Robot Employed With Fuzzy Logic](#)

DESCRIPTION: This project aims at solving the unsolved crisis in power system and power generation by developing an intelligent robot. My robot is designed in maintaining power system – long transmission lines and as well as to protect the nuclear reactors. My robot supervises the long transmission line from a remote distance for power theft/power security. If the line is interrupted by a tree or disconnected to ground due to natural resources, it quickly senses the situation and sends a quick message to the remote server. The, second motto of our designed robot is to take corrective/protective actions at nuclear reactor. As this is one of the plentiful un-explored energy sources with high security issues. Being an electrical engineer my motto is to find a solution to explore the unexplored thing, hence we came out with a robotic design fitted with various sensors, which can move throughout the project space and solve issues.

Guided by: Mr. **Karthikeyan K** (HOD - Department of EEE).

PERSONAL PROFILE:

Full Name	:	SANTHOSH S
Mother Name	:	LAKSHMI R
Date of Birth	:	09/07/1993
Age	:	25
Gender	:	Male
Marital Status	:	Single
Nationality	:	Indian
Known Languages	:	Tamil, English, Hindi
Permanent Address	:	2/497, Thirukkural Street, Thazhai veethi Gomathipuram, Madurai, Tamilnadu-625020.
Contact No.	:	+91 9994612187
Website	:	https://sites.google.com/a/iith.ac.in/ragansanthosh/
Hobbies	:	Listening Music, Playing - Cricket, Football, Gardening, Reading Books, Pet Keeping
ORCID	:	0000-0003-1607-0989

DECLARATION:

I hereby declare that the information furnished above is true to the best of my knowledge and belief.

Date : 14/09/2018
Place : Hyderabad


(S. SANTHOSH)