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A Voice Of Electronics And Communication Engineering

KKR&KSR INSTITUTE OF TECHNOLOGY & SCIENCES |ECE
DEPARTMENT |2017



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suneraTMtech



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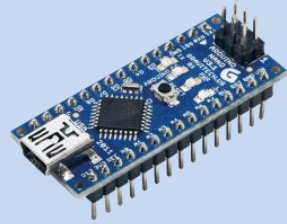
Ms.B.Sai Anjani

Mr. A.Sarath

Mr.G.Saketh

Real Time Implementation of EMBEDDED Applications using Arduino Nano

The ECE department association "SPACE" conducted a two day National level workshop on "Real Time Implementation of EMBEDDED Applications using Arduino Nano" from 11th July to 12th July 2017. The resource person for this workshop was **Mr. M.Praveen, Manager , Parl embedded Technology private Ltd.**



This programme is targeted to Electronics students with some knowledge on Embedded Systems Concepts and Microcontrollers. This course is based on the Arduino Nano board and its implementation using Arduino IDE. This programme provides better view on programming aspects of Arduino Microcontrollers. Thus it offers various Real Time projects to implement using Arduino Microcontroller by programming in C Language Programming.

On first day at 10.30 AM the workshop is started by is **Mr. M.Praveen, Manager , Parl embedded Technology private Ltd** with the explanation of Embedded system . More than 100 students actively participated in the workshop .

The following programs carried out on first day

- LED program
- 7 segment display program
- LCD program

On second day resource person explained Design of attendance using RF cards along with following programs

- Running of motor in clock wise
- Running of motor anti clock wise
- Sensing Temperature using LM35

After the feedback from the participants, certificates were distributed to all the participants by resource person. The Vote of Thanks was delivered by the Dr. Siva Ganga Prasad, HOD ECE dept. On behalf of the department of Electronics and Communication Engineering, He extended his gratitude to the College Management and Principal.



SPACE Celebrations:

Student organization SPACE (Students Pioneer Association of Communication Engineering) is initiated and run by students to provide co-curricular opportunities for social interaction, recreation, leadership training, and enhancement of academic interests. Students learn to organize and to work with others, pursue special interests, and make friends. The student organizations on our campus are as diverse as our student body and are a great way to meet new people and enhance your college experience.

The student association, **SPACE**, was established on 16/7/2016 by the dept of ECE. It has been organizing successfully. The first anniversary of association naming SPACE DAY was celebrated on 15th June 2017, in the College. The chief guest of the program was **Mr. A. Satish, Deputy Chief Engineer, IRSE**. The members of the SPACE organization for the academic year 2017-18 were introduced by Mr. K. Raju to the students, faculty and the management members associated in the event.



List of Student Association (SPACE) members for A. Y: 2017-18

Name of the Student	Designation
K.Pavan Kumar(IVECE-2)-14JR1A04B0	PRESIDENT
M.MOUNIKA (IV-II)-14JR1A0481	Vice PRESIDENT
K.AMARNATH (III-II)-15JR1A04A6	SECRETARY
Y.PAVAN KUMAR(II-III)-16JR1A04H5	JOINT SECRETARY
M.NAGASUMA(III-II)-15JR1A0482	JOINT SECRETARY
P.VASAUDHA(III-III)-15JR1A04C7	JOINT SECRETARY
P.DIVYASAI(II-III)-16JR1A04B9	TREASURER
M.MALLIKA(II-III)-15JR1A0476	CHIEF CO-ORDINATOR
K.NISHANTH CHOWDARY (III-II)-15JR1A04A5	TECH. CO-ORDINATOR

Later the SPACE magazine was released by the Chief Guest and the copies are distributed to the dignitaries on the stage. The association calendar for the current year was launched by Honorable Chairman, KITS College.

In this occasion, the SPACE had conducted Technical Quiz, Paper Presentations & Project Expo to ECE students. Prizes and certificates were distributed to all the winners and runners of Paper presentation, Technical Quiz and Project expo on SPACE DAY by the Honorable Secretary and Principal, KITS College.



Later it was followed by a guest lecture given by **Mr. A.Satish**. After that, the felicitation of the chief guest was done. The Vote of thanks was delivered by **Mr. K.Raju**, Associate Professor of ECE, on behalf of the

department by extending his gratitude to the College Management, Principal, Vice Principal, HOD, Delegates, Panelists and Organizing Committee. The program ended with the National Anthem.



Faculty Achievements :

Prof. K MadhuSudhana Rao

Prof. K.madhusudhana Rao published a paper on "Performance of Slotted Hexagonal Patch for Wireless Applications" in Springer.



Prof. C.Satyanarayana

- Satyanarayana Chanagala and Zafar Jawed Khan, "An approach to optimize sampling time for maximizing the lifetime of WSN," Joint International Conference on Artificial Intelligence and Evolutionary computations in Engineering Systems (ICAIECES-2017) & Power, Circuit and Information Technologies (ICPCIT-2017).
- Satyanarayana Chanagala and Zafar Jawed Khan, "Temperature critical boundary conditions for maximizing the lifetime of Wireless Sensor Network," IEEE- International Conference on Computing Methodologies and Communication (ICCMC- 2017).
- Satyanarayana Chanagala (and Zafar Jawed Khan, "A Battery and Environmental Aware Approach to Maximize the Lifetime of Wireless Sensor Network," IEEE-International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS 2017).



Dr. Sk. Khmuruddeen

- One Paper is accepted for International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS) .
- Presented a paper on "Hold cube minimization for Low Power based on linear feedback shift register" in International Conference ON Computing Methodologies and Communication (ICCMC 2017).



Mr.P. Ashok Babu



Presented a paper on "Hold cube minimization for Low Power based on linear feedback shift register" in International Conference on Computing Methodologies and Communication (ICCMC 2017), organized by Surya Engineering College, technical Sponsor IEEE.



Mrs.T.Bhavani Asst. Prof attended for a One day National Convention on "**Research trends in Wireless Communication Technologies**" on 29th July 2017 at PVP Siddhartha Institute of Technology.

Mr.E.Bhanu Prasad

Presented a paper on "Analysis and design of X-Band Converter for Data acquisition System of satellite ground station" in International Conference ON Computing Methodologies and Communication (ICCMC 2017) organized by Surya Engineering College, technical Sponsor IEEE.



Mrs. P.Sarala Asst. Prof secured **A+** Grade in the One week Faculty Development program on "Signal Processing and communication" at MIT college, Organised by NIT Warangal.

Ms.T.Revathi ,Asst. Prof attended for a One day National Convention on "**Research trends in Wireless Communication Technologies**" on 29th July 2017 at PVP Siddhartha Institute of Technology.



Mr.B.Venu



Presented a paper on "Hold cube minimization for Low Power based on linear feedback shift register" in International Conference ON Computing Methodologies and Communication (ICCMC 2017), organized by Surya Engineering College, technical Sponsor IEEE.

Student Achievements/ Activities:

All the Best:

Final year and third year students were registered for the TCS to write the Code Vita exam and written the exam on 21st and 22nd of July 2017 campus.



Final Year students appeared for the Pool campus drive on 29th July 2017 in college campus. 19 of the ECE students Qualified for the Technical and HR round.



Congratulations:

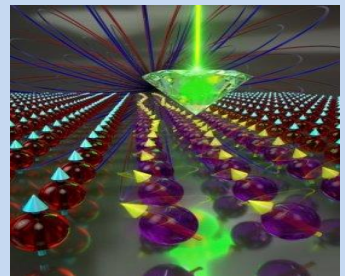
On the occasion of SPACE day, Department conducted Technical Quiz, Paper Presentations & Project Expo to ECE students. Prizes and certificates were distributed to all the winners and runners of Paper presentation, Technical Quiz and Project expo on SPACE DAY by the Honorable Secretary and Principal, KITS College.

Event	Student Name	Position
PPT	P.PREETHI(16JR1A04C5) M.DURGA KAVERI (14JR1A0482)	I
	G.SINDU(15JR1A0427) D.SAI YAMINI(15JR1A0425) A.L.PRAVALLIKA(15JR1A0403),	II
	A.L.PRAVALLIKA(15JR1A0403) D.YAMINI(15JR1A0425) G.SINDU(15JR1A0427)	I
PROJECT EXPO	P.DIVYA SAI(16JR1A04B9) HARSHAVARDINI(16JR1A04D3) P.KAVYA(16JR1A04C0)	II
	K.VIVEK (14 JR1A0497) SK.MAQBUL(15JR1A04G8) G.SAI MADHURI(16JR1A0425)	I
	J.MANIDEEP(14JR1A0458) K.LAXMI DURGA(15JR1A0463) TANMAI(16JR1A0485)	II
THEME DANCE	K.RAMYA KRISHNA(15JR1A0467) CH.TEJASWI (15JR1A0420)	--

Article:

New technique controls and measures electron spin voltage

Information technologies of the future will likely use electron spin rather than electron charge to carry information. But first, need to better understand how to control spin and learn to build the spin equivalent of electronic components, from spin transistors, to spin gates and circuits. The researchers have developed a technique to control and measure spin voltage, known as spin chemical potential. The technique, which uses atomic-sized defects in diamonds to



measure chemical potential, is essentially a nano scale spin multi meter that allows measurements in chip-scale devices.

In conducting materials, electrons can carry information by moving from point A to point B. This is an electric current. Spin, on the other hand, can propagate through insulating materials in waves each electron standing still and communicating spin to its coupled neighbor, like a quantum game of telephone. To drive these waves from point A to point B, needed to develop a technique to increase the spin chemical potential -- spin voltage -- at a local level.

"If you have a high chemical potential at location A and a low chemical potential at location B, spin waves start diffusing from A to B. "This is a very important concept in spintronics, because if you are able to control spin-wave transport, then you can use these spin waves instead of electrical current as carriers of information."

"What's remarkable is that this material is an insulator; it doesn't conduct any current and still you can send information in the form of spin waves through it". "Spin waves are so promising because they can travel for a long time without decaying, and there is barely any heat produced because you don't have moving electrons."

Once the team injected spin waves into the material, the next step was to figure out how to measure information about those waves. The researchers turned to nitrogen-vacancy (NV) defects in diamonds. These defects -- in which one carbon atom in a diamond is replaced with a nitrogen atom and a neighboring atom is removed -- can be used to detect minute magnetic fields. The researchers fabricated tiny rods of diamond containing NV centers and placed them nanometers above the sample. As the spin waves move through the material, they generate a magnetic field, which is picked up by the NV center. Based on NV-center measurements, researchers can now figure out the spin chemical potential, the number of spin waves, how they are moving through the material and other important insights. This system could also offer a glimpse into more exotic physics such as the spin-wave Hall effect, or show that spin-wave transport is hydrodynamic.

"The principle we use to control and measure the spin chemical potential is quite general. It opens ways to study more exotic spin phenomena in novel materials and aids the development of new spintronic devices".

By/-

Mr. M.Vasim Babu
Associate Professor



KKR & KSR Institute of Technology & Sciences

(Approved by AICTE New Delhi, Affiliated to JNTU Kakinada, Accredited by NAAC with "A" Grade)

Department of Electronics And Communication Engineering