



ece SYNCOM

A VOICE OF ELECTRONICS AND COMMUNICATION ENGINEERING

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Glenwood Systems

The Pathway to Profitability

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SmartDV

Technologies

KITS

KKR & KSR Institute of Technology & Sciences

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



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Department Vision

Developing highly Qualitative, Technically Competent and Socially Responsible Engineers.

Department Mission

To provide quality education in the domain of Electronics and Communication Engineering through

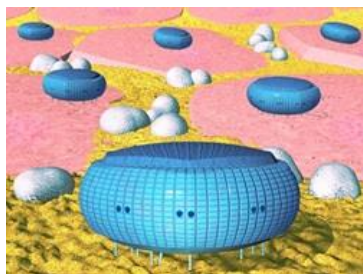
- Enriched curriculum for addressing the needs of Industry.
- Effective teaching learning processes through congenial environment.
- Gaining contemporary knowledge through research, development, curricular, co and extra-curricular.

ECE Program Educational Objectives

- To produce graduates who would have developed a strong background in basic science and mathematics and ability to use these tools in their chosen fields of specialization.
- To produce graduates who have the ability to demonstrate technical competence in the fields of electronics and communication engineering and develop solutions to the problems.
- To produce graduates who would attain professional competence through life-long learning such as advanced degrees, professional registration, and other professional activities.
- To produce graduates who function effectively in a multi-disciplinary environment and individually, within a global, societal, and environmental context.
- To produce graduates who would be able to take individual responsibility and to work as a part of a team towards the fulfillment of both individual and organizational goals.

Microbivores:

Nano medicine offers the prospect of powerful new tools for the treatment of human diseases and the improvement of human biological systems using molecular nanotechnology. This paper presents a theoretical nanorobot scaling study for artificial mechanical phagocytes of microscopic size, called "Microbivores" whose primary function is to destroy microbiological pathogens found in the human bloodstream using a digest and discharge protocol.



- 1) An array of reversible binding sites to initially bind and
- 2) Trap target microbes an array of telescoping grapples to manipulate the microbe, once trapped
- 3) A morcellation chamber in which the microbe is minced into small, easily digested pieces and
- 4) a digestion chamber where the small pieces are chemically digested.

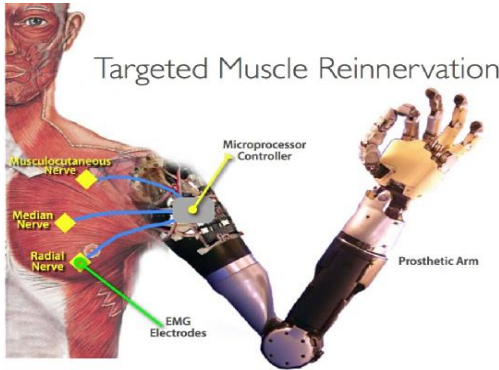
Working of Microbivores

Here's how the nanorobot works. During each cycle of operation, the target bacterium is bound to the surface of microbivore like a fly on flypaper, via species-specific reversible binding sites. Telescoping robotic grapples emerge from silos in the device surface; establish secure anchorage to the microbe's plasma membrane, then transport the pathogen to the ingestion port at the front of the device where the pathogen cell is internalized into 2 micron morcellation chamber. After sufficient mechanical mincing, the morcellated remains of the cell are pistoned into a 2 micron digestion chamber where a preprogrammed sequence of 40 engineered enzymes are successively injected and extracted six times, progressively reducing the morcellate ultimately to monoresidue amino acids, mononucleotides, glycerol, free fatty acids and simple sugars.

These simple molecules are then harmlessly discharged back into the bloodstream through an exhaust port at the rear of the device, completing the 30-second digestion cycle. This "digest and discharge" protocol is conceptually similar to the internalization and digestion process practiced by natural phagocytes, except that the artificial process should be much faster and cleaner. For example, it is well-known that macrophages release biologically active compounds during bacteriophagy, whereas well-designed Microbivores need only release biologically inactive effluent.

By /- Mr. B.Venu , Asst. Prof

Myo electric Prosthetic: Myo electric Prosthetics respond



to electrical signals generated by muscular movement. We know that neurons in the body use a combination of electrical and chemical signals to transfer message.

So how does it work?

Myoelectric prosthetics attach onto the residual

limb of the body part they are replacing. Multiple Sensors are fitted inside the prosthetic socket, which receive an electrical signal when a specific muscle is contracted. Once a specific muscle is stimulate, the sensors pick up the electrical signal between the neurons. This in tern send a message to the prosthetic limb, telling the joints to move into specific positions. Individuals can control the strength and speed of prosthetic movement by varying their muscle intensity.

If an individual has nerve damage to the area, or no arm at all, the prosthetic sensors can be linked to muscles in the chest and back.

Meaning the can control arm movement from the muscles in their chest or back. As you can see from the video to the left, myoelectric prosthetics can be very versatile.

If you are lucky enough to have your limb surgically removed and no neurons are damaged, your prosthetic limb may function much more naturally and intuitively. Although your limb has gone, your brain doesn't realize and the remaining neurons still receive neurons from the brain telling the phantom limb to move. Target muscle reinnervation (TMR) redirects those neurons, and attaches them to healthy muscles.

For example, imagine if you have to have your arm amputated. Neurons that would normally carry signals to your arm, are redirected and attached to muscles in on the chest. Sensors from the prosthetic are then attached to these neurons on the chest. Every time you think about moving your arm, your chest will contract, and the prosthetic will move in the way you would expect your arm too. This means you don't have to re-train your self by engaging specific muscles, to prompt movement of an unrelated prosthesis.

By
Mr. Kota Balaji (IV ECE)

Faculty Activities:

Prof. K. Madhu Sudhana Rao presented paper entitled “ **Design of UWB Elliptical Notch Antenna for Wireless Applications**” in the International Journal of Research Vol-05, Issue-01, January 2018 with organizing committee of Asian Journal Of Science National Conference .



Mr. G. Malyadri Successfully Completed an AICTE approved Faculty Development Program (FDP101X) on Foundation Program in ICT for education conducted by IIT, Bombay from August 3, 2017 to September 7, 2017. This FDP was held under the aegis of **Pandit Madan Malaviya National Mission for Teachers and Teaching (PMMMNMTT)**,MHRD, Govt. Of INDIA.

Mr. A.Sarat Kumar Successfully Completed an AICTE approved Faculty Development Program (FDP101X) on Foundation Program in ICT for education conducted by IIT, Bombay from August 3, 2017 to September 7, 2017. This FDP was held under the aegis of **Pandit Madan Malaviya National Mission for Teachers and Teaching (PMMMNMTT)**,MHRD, Govt. Of INDIA.



Mr. K.Mallikarjuna Rao Successfully Completed an AICTE approved Faculty Development Program (FDP101X) on Foundation Program in ICT for education conducted by IIT, Bombay from August 3, 2017 to September 7, 2017. This FDP was held under the aegis of **Pandit Madan Malaviya National Mission for Teachers and Teaching (PMMMNMTT)**,MHRD, Govt. Of INDIA.






Ms. T. Revathi Successfully Completed an AICTE approved Faculty Development Program (FDP101X) on Foundation Program in ICT for education conducted by IIT, Bombay from August 3, 2017 to September 7, 2017. This FDP was held under the aegis of **Pandit Madan Malaviya National Mission for Teachers and Teaching (PMMMNMTT)**,MHRD, Govt. Of INDIA.



Student Activities:

Results :

The Department of Electronics and communication Engineering Heartily congratulated all the students of II year students for fabulous performance in the third semester Exams. Let this be considered as a source of inspiration to the entire students of the department and an impetus to excellence.

NO	REGDNO	NAME	CGPA	PHOTO
1	16JR1A0417	G. MAHA LAKSHMI	8.64	
2	16JR1A0445	G. DILEEP KUMAR REDDY	8.64	
3	16JR1A0462	K.I SIREESHA	8.50	
4	16JR1A04D0	SD. HASEENA	8.50	
5	16JR1A0404	B.MOUNIKA	8.50	

Congratulations:

The following students got selected in the Glenwood Systems campus drive. We wish to appreciate for dedication and commitment to perform with excellence in campus drive. You have proven your abilities and talents. Heartfelt obligation to you and keep your spirits.



A. Chandana
14JR1A0403



K. Jaya Lakshmi
14JR1A0471



E. Vyshnavi
14JR1A0429



Sk. Parveen
14JR1A04C8



K. Sai Tejaswini
14JR1A0468



Y. Tejaswi
14JR1A04E7

Congratulations to **A. SRAVIKA (14JR1A0401)** who got selected in **SMART DV** campus drive.



HAPPY NEW YEAR

The ECE department HOD and faculty members wished the Principal sir , Secretary sir and Chairman sir on the eve of NEW YEAR.



Sankrathi sambaralu

With the initiation by the college management, staff and students actively participated in “**Sankrathi sambaralu**” celebrated on 11th January 2018 in college premises with great zeal, happiness and enthusiasm. Students have participated in various events like Rangoli, swindling of Kites ,playing with Marbles ,and traditional dress competitions



ABOUT

SYNCOM

SYNCOM is the News letter of ECE department packed with Information and News about our courses, successes, events and achievements. News letters are published periodically every month. College-planning newsletters with minimum 4 pages long. News Letters outline the information about upcoming events, procedures and strategies of the college. **With all Your Cooperation, Our Dept. News letter Volume 2 is Successfully completed with December month and happy to say that..Volume 3 will start from JANUARY on wards comprises much content with new grace & colour full.**

The body for the SYNCOM for the 3rd volume is



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