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EXTC EXPRESS



Department of Electronics and Telecommunication

April 2021

Sensor Technology

Sensors science and engineering is relevant to virtually all aspects of life including safety, security, surveillance, monitoring, and awareness in general. Sensors are central to industrial applications being used for process control, monitoring, and safety. Sensors are also central to medicine being used for diagnostics, monitoring, critical care, and public health.

Sensors can improve the world through diagnostics in medical applications; improved performance of energy sources like fuel cells and batteries and solar power; improved health and safety and security for people; sensors for exploring space and the known universe; and improved environmental monitoring.

Sensor technology has advanced exponentially in the past few decades. In this trend, the discovery and development of electroactive polymers can be considered a breaking point in this field. Also, the combination of materials with the development of nanotechnology was able to produce miniaturized devices with superior sensing properties.

The seed technologies are now being developed for long-term vision that includes intelligent systems that are self-monitoring, self-correcting and repairing, and self-modifying or morphing not unlike sentient beings. The ability for a system to see (photonic technology), feel (physical measurements), smell (electronic noses), hear (ultrasonics), think/communicate (smart electronics and wireless), and move (sensors integrated with actuators), is progressing rapidly and suggests an exciting future for sensors.

Accolades to Faculty's Accomplishments

- Dr. Ashwini Kunte has been honoured as a Chief Guest for International Summit on “ Women Leadership in Science and Technological Development” on 8th Nov 2020.
- Dr Ashwini Kunte, Dr Maniroja and Prof K K Mathew jointly organized a webinar series on understanding the opportunities for EXTC Graduates on 24th and 25th July 2020
- Dr Ashwini Kunte, Prof K K Mathew and Prof Anushree Gupta jointly organized a webinar on Sharpening your skills to take a big leap on 29th July 2020
- Dr Ashwini Kunte, Prof Anushree Gupta and Prof Uttara Bhatt jointly organized a webinar on Emerging Trends Electronics on 8th Aug 2020
- Dr Maniroja Edinburgh chaired the session on International conference on Trends in Electronics and Communication (IC-TELCON 2021) on 26th Feb 2021. She delivered a lecture on Digital Content Creation for Social Media at one week Webinar series on Digital Content creation on 6th and 7th of July 2020. She has also attended NBA awareness workshop from 11th to 14th may 2021, Attended a one week AICTE sponsored course on Implementation of Outcome Based Education (OBE) for Holistic Development” from 4th Jan 2021 to 9th Jan 2021 and one week AICTE sponsored course on Outcome Based Education: Critical Issues and Solution (A Case Study Approach from 30th Nov 2020 to 5th Dec 2020. She has participated and successfully completed the online workshop on Universal Human Values on the theme “Inculcating Universal Human Values in Technical Education” during 2-6 July, 2020
- Prof Anushree Gupta Attended NBA awareness workshop from 11th to 14th may 2021 and attended national workshop on Enabling Self Reliant Economy from 25th to 27th June 2020
- Prof. Shrishti Bhatia completed the online workshop on Universal Human Value (UHV) during 5-9 August, 2020 as organized by AICTE, New Delhi. She had also participated in a webinar series on, “Understanding the opportunities for EXTC Graduates in a 5G enabled world on 24th and 25th July 2020
- Prof. Neeru Pathak has attended online faculty orientation program for the course of “Mini Project 1 B (ECM401)” on 18th Feb 2021, orientation program for the course of “Linear Integrated Circuits ” on 9th Feb 2021 and faculty orientation program for the course of “Principles of Communication Engineering ” on 15th Feb 2021
- Prof Uttara bhatt participated in a webinar series on, “Understanding the opportunities for EXTC Graduates in a 5G enabled world on 24th and 25th July 2020, Participated in the Artificial Intelligence Webinar on 18th July 2020 and has attended online faculty orientation program for the course of Signals and Systems ” on 16th Feb 2021
- Prof Jyoti Kashyap participated in the webinar series on Sharpening your skills to take a big leap on 29th July 2020, Participated in the webinar series on Emerging Trends Electronics on 8th Aug 2020, attended a webinar on Design of Microwave Amplifiers on July 18, 2020 **and** attended Short Term Training Program on Green Internet of Things conducted from 10th to 15th August, 2020. She has also participated in the webinar on “Design & Simulation of RF Modules using CST Studio Suite 2020.06” on July 25-26, 2020.
- Prof Manoj Kavedia conducted a workshop on “IoT With Arduino” KC college Churchgate on 7th – 14th Oct 2020, Two day workshop on “Arduino” at Tujaram Chaturchand College of Arts Science and Commerce-Baramati 5th -6th Dec 2020. He also attended a workshop on Research Methodology and Technique organized by Sandip Academy of Engineering and Management from 04th -06th June July 2020, Understanding the opportunity For EXTC Graduates in a 5G enabled world (TSEC) on 24th and 25th of July 2020 and ISTE STTP on Internet Programming Vidhya Vardhini’s College of Engineering and technology-Vasai from 14th -25th June 2021
- Prof. Anchu Krishnan Attended a webinar organized by Indian Woman Scientist Association on 6th March 2021. She has also attended has attended online faculty orientation program for the course of “Mini Project 1 B (ECM401)” on 18th Feb 2021

Publications from Faculty and Students

- Nagveni K Hebbar, Ashwini S Kunte, “ Transfer Learning Approach for Splicing and Copy-Move Image Tampering Detection,” ICTACT Journal on Image and Video Processing, May2021, Volume11, Issue:04, ISSN:0976102(online), DOI:10.21917/ijivp.2021.0348
- Mrs. Sheetal G. Jagtap Dr. Ashwini Kunte “Classification and Trends in Adaptive Beam forming Techniques of MIMO Radar” IEEE International Conference on Communication information and Computing Technology (ICCICT), June 25-27, 2021, Mumbai, India 978-1-6654-0430-3/21/\$31.00 ©2021 IEEE Explorer
- Chadha, A., Britto, J. & Roja, M.M, “iSeeBetter: Spatio-temporal video super- resolution using recurrent generative back-projection networks”, Springer Journal on Comp. Visual Media 6, 307–317 (2020). <https://doi.org/10.1007/s41095-020-0175-7>
- M. V. Rane, V. M. Apte, V. N. Nerkar, M. R. Edinburgh and K. Y. Rajput, “Automated Timetabling System for University Course,” 2021 International Conference on Emerging Smart Computing and Informatics (ESCI), 2021, pp. 328-334, doi: 10.1109/ESCI50559.2021.9396906.
- S. Shaikh, J. Gala, A. Jain, S. Advani, S. Jaidhara and M. Roja Edinburgh, “Analysis and Prediction of COVID-19 using Regression Models and Time Series Forecasting,” 2021 11th International Conference on Cloud Computing, Data Science & Engineering (Confluence), 2021, pp. 989-995, doi: 10.1109/Confluence51648.2021.9377137.
- Neeru Pathak, Mohammad Amir, Faraz Khan , Manthan Kudtarkar, “Patient Health Monitoring System Using IOT”, IRJET, vol:07, Issue:08, August 2020. E-ISSN:2395-0056p-ISSN:2395-0072.
- Mishika Sippy, Jeetika Khandelwal, Aishita Jain, K.K. Mathew, “Application Tracking and Career Prediction Model”, International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 08 Issue:4, April 2021
- Ananya Arora, Prayag Patel, Saud Shaikh, Prof. Amit Hatekar, “Support Vector Machine versus Naive Bayes Classifier: A Juxtaposition of Two Machine Learning Algorithms for Sentiment Analysis”, International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 07 Issue: 07 | July 2020 www.irjet.net p-ISSN: 2395-0072
- Priyanka Dewani , Mishika Sippy, Gopal Punjabi , Amit Hatekar, “A Comparison between Random Forest Classifier and K- Nearest Neighbours for Credit Defaulters Prediction”, International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume: 07 Issue: 10 | Oct 2020
- Dhananjay Thekedath , R.R. Sedamkar, “Affect State Classification from Face Segments Using Resnet-50 and SE-Resnet-50”, International Journal of Innovative Technology and Exploring Engineering, ISSN 2278-3075
- Thekedath, D., Sedamkar, R.R. Detecting Affect States Using VGG16, ResNet50 and SE-ResNet50 Networks. SN COMPUT. SCI. 1, 79 (2020). <https://doi.org/10.1007/s42979-020-0114-9>
- Thekedath, Dhananjay; Sedamkar, R.R.; Hemanth, Jude; Zurada, Jacek; Kasturiwale, Hemant (2020). Classification of affect states from facial segments using transfer learning. Intelligent Decision Technologies, 14(1), 35–45. doi:10.3233/idt-190077

Scholastic Accomplishments

Second Year (2019-2020)

<u>Semester III</u>	<u>GPA</u>	<u>Semester IV</u>	<u>GPA</u>
Shah Preet	9.88	Jhaveri Priyal	10
Khade Ashwarya	9.85	Darbari Jehan	10
Darbari Jehan	9.69	Mishra Keshav	10
Mishra Keshav	9.69	Shah Preet	10

Third Year (2019-2020)

<u>Semester V</u>	<u>GPA</u>	<u>Semester VI</u>	<u>GPA</u>
Warkhandkar Riya	10	Nalawade Prachi	10
Nalawade Prachi	9.93	Warkhandkar Riya	10
Kumar Isha	9.85	Dewani Priyanka	10

Final Year (2019-2020)

<u>Semester VII</u>	<u>GPA</u>	<u>Semester VIII</u>	<u>GPA</u>
Pitala Eeshita	9.31	Saxena Simran	10
Shetty Vignesh	8.73	Tudavekar Ameya	10
Saxena Simran	8.73	Pardeshi Nikita	10

B.E Topper (2019-2020)

<u>Name</u>	<u>CGPA</u>
Saxena Simran	9.44
Khan Faraz Ahmed	8.98
Nerkar Vishakha	8.77
	9.49



Editorial Team
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Dr. Mani Roja Edinburgh