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EDUCATION

Qualification	Specialization	Institute/ University	Year	CGPA/%
Ph. D.	Scalable Image Compression	VNIT Nagpur	2020	-
M. Tech.	Communication System Engg	VNIT Nagpur	2014	9.06
B. Tech.	Electronics & Comm. Engg	JNTU, Hyderabad	2012	82.7%
Class XII	Intermediate (MPC)	RD Junior College, Warangal	2008	97.0%
Class X	-	Princeton High School, Warangal	2006	88.3%

ACADEMIC PROJECTS:

- **Ph. D. thesis title:** Blind quality-scalable image and video compression without using PCRD optimization.
- **M. Tech. thesis title:** Applications of Discrete Wavelet Transform (DWT) for video encoding and Image security using chaos with EZW.
- **B. Tech. thesis title:** Channel Estimation and Prediction for Adaptive OFDM Downlinks.

TEACHING EXPERIENCE

- Total Experience: 3 year 11 months
- Total Experience after PhD: 2 year 3 months

Institute	Designation	From	To
IIIT Una (IIITU)	Assistant Professor	June 2022	till-date
VIT-AP University	Assistant Professor Senior Grade 1	June 2020	May 2022
VNIT Nagpur	Adjunct Assistant Professor of Practice	July 2019	May 2020
VNIT Nagpur	Adhoc Faculty	July 2014	July 2015

PUBLICATIONS

• SCI Journals

1. Cheggoju, Naveen, and Vishal R. Satpute. "Blind quality scalable video compression algorithm for low bit-rate coding." *Multimedia Tools and Applications* (2022): 1-16.
2. CHEGGOJU, NAVEEN, and VISHAL SATPUTE. "Robust compressed domain watermarking algorithm for video protection and authentication in noisy channels." *TURKISH JOURNAL OF ELECTRICAL ENGINEERING & COMPUTER SCIENCES* 27, no. 2 (2019): 1340-1354.
3. Kadu, Sneha, Naveen Cheggoju, and Vishal R. Satpute. "Noise-resilient compressed domain video watermarking system for in-car camera security." *Multimedia Systems* 24, no. 5 (2018): 583-595.
4. Cheggoju, Naveen, and Vishal R. Satpute. "INPAC: INdependent PAss Coding algorithm for robust image data transmission through low SNR channels." *The Visual Computer* 34, no. 4 (2018): 563-573.

• Under Revision

1. Cheggoju Naveen, Vishal R. Satpute, "BlinQS: Blind Quality Scalable Image Compression without using PCRD Optimization", *Multimedia Tools and Applications* (Springer). (Status: Under Revision)

• SCOPUS Journals

1. Cheggoju, Naveen, Nawandar, Neha and Vishal R. Satpute. "Repetitive Iteration CORDIC based Energy Efficient Image Compression for Portable Devices" *HKIE Transactions*, Taylor & Fransis, Volume 29, Issue 1.
2. Ghutke, Ragina C., Ch Naveen, and Vishal R. Satpute. "A novel approach for video frame interpolation using cubic motion compensation technique" *International Journal of Applied Engineering Research* 11, no. 10 (2016): 7139-7146.

• Conference Publications

1. Chakole, Pallavi D., Vishal R. Satpute, and Naveen Cheggoju. "Crowd behavior anomaly detection using correlation of optical flow magnitude." *Journal of Physics: Conference Series*. Vol. 2273. No. 1. IOP Publishing, 2022.
2. Cheggoju, Naveen, K. Madhavi, and Mallela Jayadeep. "InDiP: Intelligent Digital Painter for Low Resolution Face Inpainting." *2022 2nd International Conference on Artificial Intelligence and Signal Processing (AISP)*. pp: 1-7, IEEE, 2022.
3. R. Nale, M. Sawarbandhe, N. Cheggoju and V. Satpute, "Suspicious Human Activity Detection Using Pose Estimation and LSTM," *2021 International Symposium of Asian Control Association on Intelligent Robotics and Industrial Automation (IRIA)*, 2021, pp. 197-202, doi: 10.1109/IRIA53009.2021.9588719.
4. Neha Nawandar, Naveen Cheggoju and Vishal Satpute, "ANN based model to predict reference evapotranspiration for irrigation estimation", *International Conference on Recent Trends in Machine Learning, IOT, Smart Cities & Applications (ICMISC 2020)*.

5. Naveen Cheggoju, Neha Nawandar and Vishal Satpute, "A New Parameter for Image Deciphering", International Conference on Recent Trends in Machine Learning, IOT, Smart Cities & Applications (ICMISC 2020).
6. Sawarbandhe, Mahesh D., V. R. Satpute, Naveen Cheggoju, and Saugata Sinha. "Combining Learning and Hand-crafted Based Features for Face Recognition in still Images." In TENCON 2019-2019 IEEE Region 10 Conference (TENCON), pp. 2502-2506. IEEE, 2019.
7. Dixit, Aditya, Shashwat Pathak, Rahul Raj, C. H. Naveen, and V. R. Satpute. "An Efficient Fuzzy Based Edge Estimation for Iris Localization and Pupil Detection in Human Eye for Automated Cataract Detection System." In 2018 9th International Conference on Computing, Communication and Networking Technologies (ICC-CNT), pp. 1-6. IEEE, 2018.
8. Singh, Chandraraj, Naveen Cheggoju, and V. R. Satpute. "Implementing Classification algorithms in Medical Report Analysis for helping Patient during unavailability of Medical expertise." In 2018 9th International Conference on Computing, Communication and Networking Technologies (ICCCNT), pp. 1-5. IEEE, 2018.
9. Rayi, Chandra Sekhar, and Cheggoju Naveen. "Objects Action Detection using GMM Algorithm for Smart Visual Surveillance System." *Procedia computer science* 133 (2018): 276-283.
10. Lokesh babu Gangula, G. Srikanth, Naveen Cheggoju and Vishal R. Satpute "Vision Improvement in Automated Cars by Image Deraining." In 2018 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS), pp. 1-4. IEEE, 2018.
11. Thangallapally, Sai Krishna, Raghupathi Maripeddi, Vamshi Krishna Banoth, Cheggoju Naveen, and Vishal R. Satpute. "E-Security System for Vehicle Number Tracking at Parking Lot (Application for VNIT Gate Security)." In 2018 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS), pp. 1-4. IEEE, 2018.
12. Naveen, Ch, Saiyma Fatima Raza, and V. R. Satpute. "Multi key algorithm for performance enhancement of video encryption." In 2016 11th International Conference on Industrial and Information Systems (ICIIS), pp. 666-671. IEEE, 2016.
13. Raza, Saiyma Fatima, Ch Naveen, V. R. Satpute, and A. G. Keskar. "A proficient chaos based security algorithm for emergency response in WBAN system." In 2016 IEEE Students Technology Symposium (TechSym), pp. 18-23. IEEE, 2016.
14. Satpute, V. R., Sneha Kadu, and Ch Naveen. "Compressed domain video watermarking using EZW and chaos." In 2016 IEEE Region 10 Conference (TENCON), pp. 3083-3086. IEEE, 2016.
15. Gajbhiye, Pranjali, Ch Naveen, and Vishal R. Satpute. "VIRTUe: Video surveillance for rail-road traffic safety at unmanned level crossings;(Incorporating Indian scenario)." In 2017 IEEE Region 10 Symposium (TENSYP), pp. 1-4. IEEE, 2017.
16. Kadu, Sneha, Ch Naveen, V. R. Satpute, and A. G. Keskar. "A blind video watermarking technique for indoor video content protection using Discrete Wavelet Transform." In 2016 IEEE Students' Conference on Electrical, Electronics and Computer Science (SCEECS), pp. 1-6. IEEE, 2016.

17. Naveen, Ch, V. R. Satpute, and A. G. Keskar. "An efficient low dynamic range image compression using improved block based EZW." In 2015 IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions (WCI), pp. 1-6. IEEE, 2015.
18. Naveen, Ch, V. R. Satpute, and A. G. Keskar. "An improved block based EZW technique for low dynamic range image compression." In 2015 IEEE Asia Pacific Conference on Postgraduate Research in Microelectronics and Electronics (PrimeAsia), pp. 63-68. IEEE, 2015.
19. Kadu, Sneha, Ch Naveen, V. R. Satpute, and A. G. Keskar. "Discrete wavelet transform based video watermarking technique." In 2016 International Conference on Microelectronics, Computing and Communications (MicroCom), pp. 1-6. IEEE, 2016.
20. Naveen, Ch, and Vishal R. Satpute. "Image encryption technique using improved A5/1 cipher on image bitplanes for wireless data security." In 2016 International Conference on Microelectronics, Computing and Communications (MicroCom), pp. 1-5. IEEE, 2016.
21. Naveen, Ch, T. Venkata Sainath Gupta, Vishal R. Satpute, and A. S. Gandhi. "A simple and efficient approach for medical image security using chaos on EZW." In 2015 Eighth International Conference on Advances in Pattern Recognition (ICAPR), pp. 1-6. IEEE, 2015.
22. Naveen, Ch, Vishal R. Satpute, Avinash G. Keskar, and K. D. Kulat. "Comparative analysis of video compression mechanisms based on EZW coded 3D-DWT and AVI." In 2014 IEEE International Symposium on Signal Processing and Information Technology (ISSPIT), pp. 000096-000101. IEEE, 2014.
23. Satpute, V. R., Cheggoju, N, K. D. Kulat, and A. G. Keskar. "Comparison of 3d-dwt based video pre-post processing techniques." In Proceedings of the World Congress on Engineering and Computer Science. 2014.
24. Satpute, V., Ch Naveen, K. Kulat, and A. Keskar. "Fast and memory efficient 3D-DWT based video encoding techniques." In Proceedings of the International Multi Conference of Engineers and Computer Scientists, vol. 1, pp. 12-14. 2014.
25. Gupta, T. Venkata Sainath, Ch Naveen, V. R. Satpute, and A. S. Gandhi. "Image security using chaos and EZW compression." In 2014 Students Conference on Engineering and Systems, pp. 1-6. IEEE, 2014.
26. Naveen, Ch, V. R. Satpute, K. D. Kulat, and A. G. Keskar. "Video encoding techniques based on 3D-DWT." In 2014 IEEE Students' Conference on Electrical, Electronics and Computer Science, pp. 1-6. IEEE, 2014.

- **Book Chapters**

1. Gajbhiye, Pranjali, Naveen Cheggoju, and Vishal R. Satpute. "Moving Object Detection and Tracking in Traffic Surveillance Video Sequences." In Recent Findings in Intelligent Computing Techniques, pp. 117-128. Springer, Singapore, 2018.
2. Satpute, Vishal R., Ch Naveen, Kishore D. Kulat, and Avinash G. Keskar. "Fast and Memory Efficient 3D-DWT Based Video Encoding Techniques with EZW Based Video Compression Mechanism." In Transactions on Engineering Technologies, pp. 397-412. Springer, Dordrecht, 2015.

- **Contributions in Mathworks File Exchange**

1. Naveen, Cheggoju. "Sift (scale invariant feature transform) algorithm." File Exchange (www. mathworks. com/matlabcentral/fileexchange/43723-sift-scale-invariant-feature-transform-algorithm), Uploaded on October 01, 2013.
2. Naveen Cheggoju. "Play with the rubik's cube." MATLAB Central File Exchange (https://www.mathworks.com/matlabcentral/fileexchange/71089-play-with-the-rubik-s-cube), Uploaded on April 01, 2019.

- **Articles on arXiv**

1. Nawandar, Neha K., Naveen Cheggoju, and Vishal R. Satpute. "Stand-alone device for IoT applications." arXiv preprint arXiv:2110.15405 (2021).
2. Cheggoju, Naveen, and Vishal R. Satpute. "BlinQS: Blind Quality Scalable Image Compression Algorithm without using PCRD Optimization." arXiv preprint arXiv:2104.01361 (2021).

ACHIEVEMENTS

- Received Certificate of Merit for the paper "Fast and Memory Efficient 3D-DWT based Video Encoding Techniques" at the IMECS-2014 conference, organized by IAENG at Hong Kong on March 12-14, 2014.
- Secured 1st rank in college for UG program.
- Active member of IEEE (since 10 years) and IAENG (since 4 years). (*IEEE ID: 91230211, IAENG Membership No.: 140365*)
- Organized "Sapientia-2K12", A National level Techno Fest during B. Tech program.
- Won intra-institute (PG level) chess championship held at VNIT Nagpur.

FIELDS OF INTEREST

- Image and Video processing.
- Scalable image compression.
- Computer Vision.
- Machine Learning.

NAVEEN CHEGGOJU

*Last updated on 15-06-2022.