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**Qualification:**

1992	B.E (Electrical Engineering)	Assam Engineering College, Guwahati, Assam
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Specialization: Digital Signal Processing, Image & Video Processing, Microprocessor Applications

**Journal Papers:**

1. Amrita Ganguly, Anil Mahanta: "Improved Mode Decision Algorithm Based on Residues and Early Zero Block Detection in H.264/AVC," *Signal, Image and Video Processing, Springer*, Volume 8, Issue 2, pp 299-305, February 2012.
2. Amrita Ganguly, Anil Mahanta: "Weight Based Fast Mode Decision for H.264/AVC Video Coding Standard," *Communications in Computer and Information Science* Volume 314, 2012, pp 420-431.
3. Amrita Ganguly, Anil Mahanta: New Fast Mode Decision Algorithm for Intra Only Spatial Scalable Video Coding," *Int. J. of Recent Trends in Engineering and Technology*, Vol. 4, No. 3, pp. 70-75, Nov 2010.
4. Angshumi Sarma, Amrita Ganguly: "A Combined DCT/DWT Based Image Watermarking Algorithm" , *IRNet Transactions on Electrical and Electronics Engineering (ITEEE)* ISSN 2319 – 2577, Vol-1, Iss-2, 2012.
5. Angshumi Sarma, Amrita Ganguly: "Image Watermarking in DCT/DWT Domain", *IRNet Transactions on Electrical and Electronics Engineering (ITEEE)* ISSN 2319 – 2577, Vol-1, Iss-2, 2012
6. Angshumi Sarma, Amrita Ganguly: " An Entropy based Video Watermarking Scheme", *International Journal of Computer Applications* (0975 – 8887) Volume 50 – No.7, July 2012
7. Chayashree Patgiri, Amrita Ganguly: "Adaptive Thresholding technique based classification of red blood cell and sickle cell using Naïve Bayes Classifier and K-nearest neighbor classifier", *Biomedical Signal Processing and Control*, Elsevier, Vol 68, May 2021
8. Chayashree Patgiri, Amrita Ganguly: "Machine Learning Techniques for Automatic Detection of Sickle Cell Anemia Using Adaptive Thresholding and Contour-based Segmentation Method", *Asian Pacific Journal of Health Science*, Vol 9(4), 165-170, March 2022

**Conference Papers:**

1. Amrita Ganguly, Anil Mahanta: "Fast Mode Decision Algorithm for H.264/AVC Intra Prediction" *IEEE, TENCON 2009*, Singapore, Nov. 2009.
2. Amrita Ganguly, Anil Mahanta: "A Subband/DCT based Fast Mode Decision Algorithm for H.264" *IEEE, TENCON 2009*, Singapore, Nov. 2009.
3. Amrita Ganguly, Anil Mahanta: "Fast Mode Decision Algorithm for Intra only Scalable Video Coding using combined Subband/DCT Coding" *Proceedings of 2009 International Conference on Software Technology and Engineering*, pp. 141-145, July 2009.
4. Amrita Ganguly, Anil Mahanta: "Fast Intra Prediction Algorithm in the Transform Domain for H.264/AVC", *IEEE International Conference on Advances on Communication, Network and Computing*, Oct. 2010.

5. Amrita Ganguly, Anil Mahanta: "Fast Mode Decision Algorithm for H.264/AVC using Edge Characteristics of Residue Images", *Seventh Indian Conference on Computer Vision, Graphics and Image Processing*, Chennai, Dec. 2010
6. Amrita Ganguly, Anil Mahanta: "Improved Inter Mode Decision for H.264/AVC Using Weighted Prediction", *International Conference on Signal Processing and Multimedia Applications, SIGMAP*, Spain, July 2011
7. Mousam Choudhury, Amrita Ganguly: "Transmission Line Fault Classification Using Discrete Wavelet Transform", selected for presentation, *IEEE International Conference on Energy, Power and Environment (Towards Sustainable Growth)*, NIT Meghalaya, June 2015.
8. Chayashree Patgiri and Amrita Ganguly, "Comparative Study on Different Local Adaptive Thresholding Techniques for Detection of Sickle Cell Anaemia from Microscopic Blood Images", *2019 IEEE 16th India Council International Conference (INDICON), 2019*, pp. 1-4.
9. Amrita Ganguly, Swarup Kundu, Gyanananda Bora and Gitartha Laskar, B.E students passed out in July, 2019, "Driver Fatigue Monitoring System", *Second International Conference in Advances in Electrical, Electronics and System Engineering*, 2019, IEEE conference
10. Chandana Dev, Amrita Ganguly, Hsuvas Borkakoty: "Assamese VADER: A Sentiment Analysis Approach using Modified VADER", *2021 IEEE International Conference on Intelligent Technologies (CONIT)*, June 2021
11. Hsuvas Borkakoty, Chandana Dev, Amrita Ganguly:., "A novel approach to calculate TF-IDF for Assamese Language", *ESIC 2020 : International Conference on Electronic Systems and Intelligent Computing*, March 2020
12. Soumya Samanta, Subir Dutta, Satyajit Das, Binoy Krishna Roy, Amrita Ganguly: "Design and FPGA Implementation of an Islanding Detection cum Re-synchronization Technique for a grid connected Inverter in a DC Microgrid", *IEEE International Conference on Energy, Power and Environment (ICEPE 2020)*.
13. Soumya Samanta, Subir Dutta, Satyajit Das, Binoy Krishna Roy, Amrita Ganguly: "Design and FPGA Implementation of a Deloading Control Technique for DC Link Voltage Regulation of a PV system", *IEEE International Conference on Energy, Power and Environment (ICEPE 2020)*.
14. Rinku Rabidas, Dheeraj Kr. Ravi, Shashikant Pradhan, Rhittwikraj Moudgollya, Amrita Ganguly: "Investigation and Improvement of VGG based Encoder-Decoder Architecture for Background Subtraction", *INTERNATIONAL CONFERENCE ON Advanced Communication Technologies and Signal Processing IEEE ACTS-2020*
15. Siddhant Kumar Das, Rishabh Lahkar, Antariksha K, Ayanmani Das, Aryamaan Bora, Amrita Ganguly: "Lightweight encoder-decoder model for semantic segmentation of hand postures", *4th International Conference on Inventive Computation and Information Technologies [ICICIT 2022]*