Dr. Surya Prasada Rao Borra

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Research Interests

Image Processing, Hardware-Efficient algorithms for Image processing Applications

Date of Birth
        01-06-1979

Education

- Ph.D in Electronics and Communication Engineering, JNTUK, Kakinada, April 2022
  Topic: "Development of Different Methodologies and a VLSI Architecture for Medical Image Fusion".
  Advisors: Dr. Rajesh K Panakala and Dr. P.Rajesh Kumar
- M.Tech in Digital Systems and Computer Electronics, JNTU Hyderabad, September 2008.
- B.E. in Electronics and Communication Engineering, Andhra University, August 2002.

Publications

Text Books & Journal Reviews:

1. Reviewed the Script (Text Book) Electronic Devices and Circuits, 2/e (JNTU Kakinada 2012) by Dr.S.Salivahanan and Dr.N.Suresh Kumar published by **Tata McGraw Hill** Education Private Limited.
2. Reviewed two chapters (PN junction diode and Bipolar Junction Transistors) from Electronic Devices and Circuits published by **Universities Press (an associate of Orient BlackSwan)**
3. Recognized reviewer for Elsevier journal "**Informatics in Medicine Unlocked**".
4. Active Review member for Journal of Emerging Technologies and Innovative Research (**Member ID: 114986)**

Journals (With ISSN and Indexing):

1. **Surya Prasada Rao Borra**, Sumathy, B., Ismail, B.M. et al. "Google's new AI technology detects cardiac issues using retinal scan", Applied Nanoscience (2022). https://doi.org/10.1007/s13204-021-02208-5. (**SCI Indexed**)

2. **Surya Prasada Rao Borra,** Geetha Devi Appari, **"A Smart Home Security Locker using Microcontroller", IOSR Journal of Engineering (IOSRJEN), ISSN: 2250-3021, Vol. 11, Issue 7, pp. 1-4, July 2021.**

3. **Surya Prasada Rao Borra**, Vishal Moyal, Shafqat Nabi Mughal, Praful Nandankard, "An Efficient Shape Adaptive Techniques for the Digital Image Denoising", Turkish Journal of Computer and Mathematics Education, ISSN: 1309-4653, Vol12, Issue 9, pp.2709-2719, April 2021.

4. **Surya Prasada Rao Borra,** Geetha Appari, "Wavelet transform based image fusion of MRI and CT images for better diagnosis", Journal of Information and Computational Science, ISSN: 1548-7741, Vol.14, Issue 1, pp. 90-95, Jan 2021.

5. **Surya Prasada Rao Borra**,Rajesh Kumar Panakala,P.Rajesh Kumar, "**VLSI Image Fusion Using DWT-PCA Algorithm With Maximum Selection Rule**" International Journal of Intelligent Engineering& Systems (IJIES),Volume-12, Issue-5, pp.1-11, Sep'2019.(**SCOPUS INDEXED**).

6. **Surya Prasada Rao Borra**,Rajesh Kumar Panakala,P.Rajesh Kumar, "**VLSI Image Fusion Using PCA Algorithm With Maximum Selection Rule**" International Journal of Recent Technology and Engineering (IJRTE),Volume-7, Issue-6S5, pp.1960-1965, April 2019.(**SCOPUS INDEXED**).

7. A.Geetha Devi, **B. Surya Prasada Rao**, T. Madhu, K. Lal Kishore, **"A method of super resolution reconstruction for surveillance images using fuzzy interpolation"**, IJRAR, (E-ISSN 2348-1269, P-ISSN 2349-5138), Volume.5, Issue 4, Page No pp.103-109, November 2018.(**UGC approved**)

8. **Surya Prasada Rao Borra**, Geetha Devi Appari, Balaji Tata, **"Principal component analysis based super resolution reconstruction",** International Journal of Emerging Technologies and Innovative Research (ISSN:2349-5162), Vol.5, Issue 11, page no. pp577-582, November-2018. (UGC approved)

9. A.Geetha Devi, **B.Surya Prasada Rao**, T. Madhu, "**A fuzzy rule based framework for super resolution reconstruction",** International Journal of Emerging Technologies and Innovative Research(ISSN: 2349-5162), Vol.5, Issue 11, page no. pp222-231, November-2018. (UGC approved).

10. Balaji Tata, **Surya Prasada Rao Borra** , Geetha Devi Appari, "**Encryption and decryption of text file using LabView**", IJRECE, vol. 6 Issue 3, pp.1934-1939 (July-Sept 2018) (**UGC approved**).

11. **Surya Prasada Rao Borra**, Rajesh K Panakala, P.Rajesh Kumar, " **A Novel Approach of Medical Image Fusion using Wavelet Transforms**", Journal of Image Processing and Pattern Recognition Progress (JoIPPRP, ISSN:2394-1995), Vol-5, Issue-1, April-2018, pp.18-25. (**UGC approved**)

12. **Surya Prasada Rao Borra**, Md Nasreen, Vinay Salapala, " **Mean Approximation Image Fusion Algorithm using Wavelet Transforms**", International Journal for Reasearch in Engineering Application and Management (IJREAM, ISSN:2454-9150), Vol-5, Issue1, March 2018, pp. 170-175. (**UGC approved**)

13. Sikhinam Vinod Kumar, **B.Surya Prasada Rao**, "**Multi level Hybrid PAPR Reduction on OFDM Based System**", International Journal of Research in Electronics and computer Engineering (IJRECE, ISSN:), Vol–5, Issue-6. Nov -Dec, 2017. (**UGC approved**)

14. **Surya Prasada Rao Borra**, Rajesh K Panakala, P.Rajesh Kumar, "**Hybrid Image Fusion Algorithm using DWT Maximum Selection Rule and PCA**", International Journal of Scientific & Engineering Research, Volume 8, Issue 8, August-2017., pp.814-820. (**Thomson Reuter indexed**)

15. Lukka Sirisha, A.Geetha Devi, **B. Surya Prasada Rao**, "**An Effective Method of denoising of 2-D Data using Adaptive Kernel Bilateral Filter**" International Journal of Scientific & Engineering Research, Volume 7, Issue 11, November-2016, pp.565-571. (**Thomson Reuter indexed**)

16. **Surya Prasada Rao Borra**, Rajesh K Panakala and P.Rajesh Kumar, "**Contast Enhancement of Low Dose CT scan Images**", International Journal of Control Theory and Applications, Vol.8, no.5, pp.2415-2422. (**SCOPUS INDEXED**).

17. P.Sanjay Krishnamal, **Surya Prasada Rao Borra** and Rajesh K Panakala "**Image Fusion on Ratio Images for change detection in SAR images using DWT and PCA**", International Journal of Engineering Research and Applications (IJERA), Vol.3, no.6, pp.1242-1246.

18. Harika Bommadevara, **Surya Prasada Rao Borra** etl., "**Interference Reduction in ECG using Digital FIR filters**", International Journal of Electronics and Communication Technology" volume2, no.1, pp.76-80.

Conferences: International

1. Padma A, Gadde S, **Surya Prasada Rao Borra**, Ramachandran G., "Effective Cleaning System management using JSP and Servlet Technology", Proceedings of the 6th International Conference on Communication and Electronics Systems, ICCES 2021, 2021, pp. 1472–1478, 9488925 (**SCOPUS INDEXED**)

2. Surya Prasada Rao Borra, Md Nasreen, Vinay Salapala, " Mean Approximation Image Fusion Algorithm using Wavelet Transforms", International Multidisciplinary Conference on Knowledge Sharing, Technological Advancements and Sustainable Development (IMC-2018) held on 30th -31st March 2018 at PVPSIT, Vijayawada.

3. Surya Prasada Rao Borra, Rajesh K Panakala and P.Rajesh Kumar, "Qualitative Analysis of MRI and Enhanced Low Dose CT scan Image Fusion", **IEEE sponsored** 4th International Conference on Advanced Computing and Communication Systems (**ICACCS-2017**), pp.1752-1757, held on 6th – 7th Jan'2017 at Coimbatore.

4. **Surya Prasada Rao Borra**, Rajesh K Panakala and P.Rajesh Kumar, "An exposure towards Performance measures of Image Fusion Strategies", **IEEE sponsored** 3rd Interantional Conference on Innovations in Information, Embedded and Communication Systems (**ICIIECS - 16**), pp.451-454, held on 17th - 18th March 2016 at Coimbatore.

5. **Surya Prasada Rao Borra**, Rajesh K Panakala and P.Rajesh Kumar "Contrast Enhancement of Low Dose CT scan Images", **Springer** International Conference on Soft Computing Systems (**ICSCS-16**) held on 19th February 2016 at Kumaracoil.

6. **Surya Prasada Rao Borra**, M.Madhavilatha, A.Geetha Devi and T.Madhu, "Reconstruction of Image using Super Resolution", International Conference on Systematics, cybernetics and Informatics (**ICSCI-2008**), Hyderabad, India, pp:511-514, held on 2nd to 5th January 2008.

Conferences: National

1. **Surya Prasad Rao Borra** and K.Ramanajaneyulu, "Knowledge Mangement pactice in Higher Education", National Seminar on Innovations in Higher Education held on7^{th} and 8th November 2014.

2. P.Prasanthi, **Surya Prasada Rao Borra**, A.K.Singh and VSSRN Raju, "Implementation of Time Frequency Algorithm for Intrapulse Modulation Recognition of RADAR Signals", proceedings of National Conference AIRES-2012 held in Andhra University on 10th July'2012.

3. **Surya Prasada Rao Borra**, Ch.Harini and Y.T.Ramya Ravali, "Gaitory Training System for Mentally Challenged People", proceedings of National Conference on **Assistive Technology,** Padmasri Dr. B.V.Raju Institute of technology, Hyderabad, India, 29-31 July'2011.

4. **Surya Prasada Rao Borra**, M.Madhavilatha, A.Geetha Devi and T.Madhu, "Image resolution Enhancement using Non- Uniform Interpolation Method", proc.,of National Conference on Recent Trends in Modeling, Simulation and Intelligent control of Electrical Systems",Sri Vishnu Engineering College for women, Bhimavaram, India, 29-30 December 2007.

5. A.Geetha Devi, T.Madhu, **Surya Prasada Rao Borra**,"Improving Image resolution Using Iterative Back Projection method", proc., of National Conference on Recent Trends in Modeling, Simulation and Intelligent control of Electrical Systems", Sri Vishnu Engineering College for women, Bhimavaram, India, 29-30 December 2007.

Professional Experience:

- Working as Associate Professor in the dept. of ECE, Prasad V Potluri Siddhartha Institute of Technology, Kanuru since 14th June 2012.

- Worked as Associate Professor in the dept. of ECE, Shri Vishnu Engineering College for Women, Bhimavaram from 1st October 2008 to 13th June 2012.

- Worked as Assistant Professor (Sr.Scale) in the dept. of ECE, Shri Vishnu Engineering College for Women, Bhimavaram from 7th June 2007 to 30th September 2008.

- Worked as Assistant Professor in the dept. of ECE, Bandari Srinivas Institute of Technology, Hyderabad from 7th Aug'2005 to 6th June'2007.

- Worked as Assistant Professor in the dept. of ECE, Sree Visveswaraya Institute of Technology and Science (SVITS), Mahabubnagar, from 22nd Aug'2002 to 6th Aug'2005.

Additional Responsibilities (**Institute Level**):
1. Entrepreneurship Development Cell – Coordinator
2. Digital Signage Boards - Coordinator
3. Universal Human Values, JNTUK - Coordinator
4. Q Leader – APSCHE
5. Anti Drug Committee – Coordinator
6. Equal Opportunities for disadvantaged people – Advisor

Additional Responsibilities (**Department Level**):
1. Facilities Committee - Coordinator
2. Industrial Visits - Coordinator
3. VLSI&SP Lab Incharge,
4. Member – BOS
5. NBA Criteria-4 Coordinator
6. NAAC Criteria – 2 Member

Professional Memberships:
1. ISTE
2. ISSE
3. IETE – Honorable Treasurer, IETE Vijayawada Local Centre.