


## FACULTY PROFILE

### DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

| Name of the Faculty | Designation/<br>Affiliation | Address/Contact                 | Email (Institute)<br>@kitsw.ac.in                                      |  |
|---------------------|-----------------------------|---------------------------------|--|---|
| Dr. K.Sowjanya      | Assistant Professor         | Staff Room<br>No:102-A, Block 1 | <a href="mailto:kotte.soujanya@gmail.com">kotte.soujanya@gmail.com</a> |   |

### EDUCATION

| Degree  | Details (specialization) | Institute/University                    | Month, Year completed |
|---------|--------------------------|---|-----------------------|
| B.Tech. | ECE                      | JNTU, Hyderabad, Telangana              | April, 2005           |
| M.Tech. | DECS                     | JNTU, Kakinada, A.P.                    | July, 2009            |
| Ph.D.   | Digital Image Processing | Andhra University, Vishaka Patnam, A.P. | May, 2018             |

| Details             | From<br>(Month, Year) | To<br>(Month, Year) | Name of the Organization                             |
|---------------------|-----------------------|---------------------|--|
| Assistant Professor | 15/07/2019            | Till Date           | Kakatiya Institute of Technology & Science, Warangal |
| Associate Professor | 13/06/2018            | 12/07/2019          | Vaagdevi college of Engineering, Warangal            |
| Research Scholar    | 01/05/2015            | 09/08/2017          | College of Engineering, Andhra University            |
| Assistant Professor | 13/06/2008            | 31/04/2015          | Sir C R Reddy College of Engineering, Eluru, A.P     |

### RESEARCH INTERESTS

1. Digital Image Processing
2. Artificial Intelligence Applications

*Ph.D Title:* Implementation of Nature Inspired Optimization Algorithms to Multilevel Thresholding Image Segmentation

### DETAILS OF PUBLICATIONS

#### Publications in Refereed Journals

| S.No | Details   |
|------|---|
| 1    | Soujanya K., Nayak R. Samba Siva, Rajarajeswari M., "An efficient routing scheme for ICMN", International Journal of Management, IT and Engineering, 1(6), pp.104-116 2011. |
| 2    | G. Sunny Kumar, K.Soujanya, V.Revathi, Design and Development of Stripline Dual Directional Coupler for Monitoring Forward Power and Reflected Power, IJECT, 2 (4), 2011.   |

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|----|--|
| 3  | V. Vamsi Sudheera, K.Anitha, Dr.P.Rajesh Kumar, K.Soujanya, “ Development of Hardware and Software for Obstacle Detection and Distance Estimation in Mobile Robots”, International Journal of Computer Science information and Engg., Technologies, 2012       |
| 4  | Soujanya Kotte, “Pavement image analysis using radon transform”, Journal of Communication, Navigation and Signal Processing, March 2012.   |
| 5  | Soujanya Kotte, Sudeepthi Matta, “Implementation of Punctured Terminated Convolutional Codes and Its Performance”, IJECT, 5(3), 2014.  |
| 6  | Sowjanya Kotte, Hima Bindhu Yanamadala, “Advanced Vehicle Tracking System on Google Earth Using GPS and GSM”, IJCTT, 6(3), 2013.   |
| 7  | M.Srikanth, K.Soujanya, “Tire Pressure Monitoring System Interference Suppression Using Beam Former Techniques”, IJCSMC, 3(9), 2014, pp.270 – 276.   |
| 8  | N. Suma Priya , K. Sowjanya”Grey Level Image Enhancement Technique using Particle Swarm Optimization Algorithm” IJSETR, Vol.04,Issue.10, 2015, pp:1817-1821  |
| 9  | B. Naga Gayathri Divya , K. Sowjanya “Otsu’s Method of Image Segmentation using Particle Swarm Optimization Technique” IJSETR, Vol.04,Issue.10, 2015,pp:1805-1808  |
| 10 | K. Sowjanya, P. Rajesh Kumar, S.K. Injeti, “An efficient approach for optimal multilevel thresholding selection for gray scale images based on improved differential search algorithm”, Ain Shams Engineering Journal ( <b>SCI</b> ), Elsevier BV, 7 July 2016 |
| 11 | K. Sowjanya, P. Rajesh Kumar, “Gray level Image Enhancement using Nature Inspired Optimization Algorithm: An Objective Based Approach”, World Journal of Modeling and Simulation ( <b>Scopus</b> ), U.K, Vol. 13, Number 1, pp. 66-80, 2017                    |
| 12 | K. Sowjanya, P. Rajesh Kumar, “Optimal Multilevel Thresholding Selection for Gray Level Image Segmentation using SMS Algorithm”, International Journal of Computer Applications, USA, Vol. 163, Number 11, pp. 35-47, 2017                                     |
| 13 | K. Sowjanya, P. Rajesh Kumar, S.K. Injeti, “Optimal Multilevel Thresholding Selection for Brain MRI Image Segmentation based on Adaptive Wind Driven Optimization”, Measurement Journal ( <b>SCI</b> ), Elsevier BV, Vol. 130C, pp.340-361, 2018.              |

**Publications in Refereed Conference Proceedings**

| S. No | Details   |
|-------|---|
| 1.    | K Soujanya, T Mahender Raju, “Pavement image analysis using radon transform”, IEEE conference ACNCN-2012, at ECE department, Andhra University, Visakhapatnam, 17th and 18th 2012.                  |
| 2.    | K Soujanya, Y Himabindhu, “Implementation of real time vehicle tracking using GSM and GPRS”, National conference, at Sir C R Reddy College of Engineering, NCRRECE-2014, Feb 24th and 25th 2014     |
| 3.    | K Soujanya, M Sudeepthi, “Implementation of FEC’s techniques used in Thuraya Satellite System”, National conference, at Sir C R Reddy College of Engineering, NCRRECE-2014, Feb 24th and 25th 2014. |

| S.No | Details             | Value(Rs.)          | Status |
|------|---------------------|---------------------|--------|
| 1    | <i>AICTE funded</i> | <b>Grant-in-Aid</b> |        |

|  |   |                    |  |
|--|---|--------------------|--|
|  | <b>Research Promotion Scheme (RPS)<br/>Project<br/>Role: Co- Investigator</b> | <b>Sanctioned:</b> |  |
|--|---|--------------------|--|

**International Conferences Attended:**

**FDPs/STTPs/Workshops / Short-term Courses Attended:**

1. A Two Day National Level Workshop on “Recent trends in signal processing and image processing” at Narasaraopet Engineering College, Narasaraopet during 26<sup>th</sup> -27<sup>th</sup>, Dec 2008.
2. A Two Day National Level Workshop on “Advances in signal processing and image processing” at University College of Engineering, JNTU Kakinada, Kakinada during 25<sup>th</sup> -26<sup>th</sup> ,Feb 2011.
3. A Two Day National Level Workshop on “Advances in signal processing” at University College of Engineering, Andhra University, Visakhapatnam, during 30<sup>th</sup> -31<sup>st</sup> Aug 2013
4. A two day IEEE WIEAG workshop at Geethanjali College of Engineering and Technology (A), R.R.Dt., during 1<sup>st</sup>-2<sup>nd</sup>, Feb 2019.
5. One-week FDP on “Artificial Intelligence, Machine learning and Block chain Technology in Production and Supply Chain” from 25<sup>th</sup> -30<sup>th</sup> April 2019 at NIT, Warangal.

**BOOKS PUBLISHED:**

1. Optimal multilevel threshold selection for brain MR image segmentation: An optimization approach, **LAMBERT, Academic Publishing, Germany**, ISBN: 978-613-9-97046-9, March 2019.

| <b>ABROAD VISITS</b>  |                         |                      |                 |
|-----------------------|-------------------------|----------------------|-----------------|
| <b>Place of visit</b> | <b>Purpose of visit</b> | <b>Name of Event</b> | <b>Duration</b> |
|                       |                         |                      |                 |

| <b>COURSES TAUGHT</b>         |                               |                           |                               |
|-------------------------------|-------------------------------|---------------------------|-------------------------------|
| <b>Undergraduate Level</b>    |                               |                           |                               |
| <b>Courses Taught</b>         |                               | <b>Currently Teaching</b> |                               |
| <b>Course</b>                 | <b>Semester, Year, Branch</b> | <b>Course</b>             | <b>Semester, Year, Branch</b> |
| Analog Communications         | I Sem, III/IV, ECE            | Signals & Systems         | III Sem, II Year ECE          |
| Digital Communications        | II Sem, III/IV, ECE           |                           |                               |
| Data Communications           | I Sem, IV/IV, ECE             |                           |                               |
| Signals & Systems             | II Sem, II/IV, ECE            |                           |                               |
| Digital Signal Processing     | II Sem, IV/IV, ECE            |                           |                               |
| Linear Integrated Circuits    | I Sem, III/IV, ECE            |                           |                               |
| Information Theory and Coding | I Sem, IV/IV, ECE             |                           |                               |
| Computer Networks             | II Sem, III/IV, ECE           |                           |                               |
| <b>Postgraduate Level</b>     |                               |                           |                               |

|   |                    |  |  |
|---|--------------------|--|--|
| Communication Theory  | I Sem, M.Tech (CS) |  |  |
| Cellular & Mobile Communications                              | II Sem, M.Tech(CS) |  |  |
| Advanced Data Communications                                  | I Sem, M.Tech(WMC) |  |  |
| <i>Guiding PG Projects for M.Tech. (VLSI&amp;ES) students</i> |                    |  |  |

| <b>PROFESSIONAL AFFILIATION</b> |                |
|---------------------------------|----------------|
| <b>S.No</b>                     | <b>Details</b> |

**Other Activities:**

1. Co-chair for session-3 in a two-day national conference NCRRECE-2014 at Sir C R Reddy College of Engineering, Eluru, India, during 24th to 25th February 2014.
2. Coordinator for 15 Days STCC on “Embedded System Design Using ARM CM3” in association with C-DAC ,Hyderabad during 27<sup>th</sup> March to 13<sup>th</sup> April, 2019 at Vaagdevi College of Engineering, Warangal.