

## Resume

**NAME: R Nithya Kumari**

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### ADDRESS

# 372, 1<sup>st</sup> Main Road, New Binny Layout, Bangalore-560023.

### PROFESSIONAL WORK EXPERIENCE

K.S.Institute of Technology, Bangalore, India

**Lecturer**, 2007-2011

K.S.Institute of Technology, Bangalore, India

**Asst.Professor**, July 2013 - Present

### Teaching Experience:

- \* 5.3 years

### Subjects Taught:

- \* Digital Communication.
- \* Analog Communication.
- \* Multimedia Communication.
- \* Signals and System.
- \* Network Analysis.
- \* Information Theory and Coding.
- \* Image Processing.
- \* Management and Entrepreneurship

### Labs Handled:

- \* Analog Communication Lab
- \* DSP Lab
- \* Analog Electronics Lab
- \* Advanced Digital Communication Lab
- \* Microprocessor Lab

### Activities Involved:

- \* Was responsible for preparing learning material for courses and devising relevant practical activities.
- \* Actively involved in class discussions and encouraging debate.
- \* Guided students in upgrade of tools and applications.
- \* Actively involved as Coordinator for Terminal Test preparation.

### Field of Interest:

- \* Digital Communication.
- \* Digital Signal Processing.
- \* Image Processing.

**EDUCATIONAL QUALIFICATION**

- \* M.Tech in Digital communication from BMS College of Engineering, Bangalore with 74%.
- \* B.E in Telecommunication from VKIT, Bangalore with 64%.
- \* 12<sup>th</sup> (Science) from S.J.R. College of women, Bangalore with 64 %.
- \* 10<sup>th</sup> (SSLC) from Tilak Memorial High School, Bangalore with 85 %.

**PUBLICATIONS****Journals:**

1. **“Analysis of Mobile WiMAX 802.16e Physical Layer Performance for Multimedia Communication”**, *International Journal of Computer Applications (IJCA)*, USA, December-2012.
2. **“Performance Study of Spectrum Estimation and Sensing Methods in Cognitive Radio”**, *International Journal of Computer Engineering & Technology (IJCET)*, India, June-2013.

**International Conference:**

1. **“Analysis of Mobile WiMAX 802.16e Physical Layer Performance for Multimedia Communication”**, *International conference on Electronic Design and Signal Processing (ICEDSP)*, MIT, Manipal, December-2012
2. **“Wavelet Denoising Approach for Spectrum Estimation in Cognitive Radio”** *International Conference on Convergence of Science, Engineering and Management in Education and Research (ICCSEM – 2013)*, DSCE, Bangalore, India, September – 2013.

**National Conference:**

1. **“Comparative Study of Spectrum Estimation Technique in Cognitive Radio”**, *National Conference on Wireless, Signal Processing & Embedded Systems (WiSE)*, BMSCE, India, June-2013.
2. **“Performance study of spectrum estimation and sensing methods in cognitive radio”** *National Conference on Women in Science and Engineering (NCWSE2013)*, SDMCET, Dharwad, India, June-2013.

**PROJECTS UNDERTAKEN**

**Title : Performance Analysis of Mobile Wimax 802.16e Physical Layer**

**Description :** IEEE 802.16 Wireless MAN standard specifies a Medium Access Control (MAC) layer and a set of PHY layers to provide fixed and mobile Broadband Wireless Access (BWA) in broad range of frequencies. IEEE 802.16 OFDM PHY layer adopted for its robust performance in multipath environment. The simulation performance of IEEE 802.16 OFDM PHY layer using various modulation schemes is verified with respect to the Bit error rate plots. The evaluation was done through simulation developed in MATLAB.

**Title : Daubechies D4 wavelet transformed based compression.**

**Description :** Compressing the short video stream using Daubechies wavelet transform. Video requires large memory space to store it. In order to save the memory required to occupy the original video we compress the video, process and store it at the transmission part. At the receiver part we decompress it back using the same transformation technique to obtain the original video back.

**Title : Spectrum Estimation and Sensing in Cognitive Radio.**

**Description :** Spectrum estimation and Spectral sensing is the challenge for cognitive radio (CR) design and implementation. Analyzing the performance of various energy detector based spectrum estimation algorithms as well spectrum sensing using discrete wavelet packet transform (DWPT) is done here. Apart from this we reduce the effect of noise before detection using a technique called Wavelet Denoising. The performances of all these algorithms are simulated using MATLAB and through simulation the best method of detection is identified.

**AWARDS & ACHIEVEMENTS**

- ❖ Cleared **GATE-2011** with **87.6** percentile and **GATE-2013** with **89.3** percentile.
- ❖ Participated in school level IQ competition and received certificates.

**ADDRESS**

**Father's Name** : N Ravi Kumar  
**Date of Birth** : 19.11.1984  
**Gender** : Female  
**Nationality** : Indian  
**Hobbies** : Gardening, Reading Books, Listening to music.  
**Languages Known** : English, Kannada, Telugu, and Tamil.

**REFERENCES**

**Mrs.Suma.M.N**  
Associate Professor

**Mr.Praveen.A,**  
Assistant Professor

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