




# K. S. INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Road, Bangalore-560109.

<b>Faculty Name</b>	Dr P N Sudha	
<b>Designation</b>	Prof. & Head ECE dept.	
<b>Educational Qualification</b>	M.Tech Ph.D	
<b>Experience in Years</b>	20.9	
<b>Areas of Interest</b>	Wired & Wireless Communication, Underwater Communication & Source & Channel coding techniques	
<b>E-mail</b>	pnsudha@ksit.edu.in	

## Educational Details

Examination/ Degree	College / University	Year of Passing
U G /B.E	Vijayanagar College of Engg. Bellary/Gulbarga	1997
PG/Digital Electronics	B V B College of Engg. Hubli/ VTU	2002
PhD	JNTUA	2013

## Publications

### International Journals Published:

1. P.N Sudha, Chanda V Reddy “**Proposed method for handover in mobile network using fuzzy logic**”  
International Journal on Information Science & Computing in Vol.2 pp-53-58 ,July 2008
2. P.N Sudha, Dr U.Eranna “**Proposed source and channel coding techniques for memory channels**” in  
International Journal of Communication Engineering Applications, volume 02 on July 2011, pp.194-  
198.Impact factor:1
3. P.N Sudha, Dr U.Eranna “**Improving transmission rate and S/N ratio in mobile communication**” in  
International Journal of Graphics and Image Processing volume 01, issue 2 on November 2011, pp.226-  
229.Impact factor:2
4. P.N Sudha, Dr U.Eranna “**Joint source and channel coding techniques for voice communication**” in  
International Journal of Communication Engineering Applications, volume 03 on Jan 2012, pp 417- 420.Impact  
factor:1
5. P.N Sudha, Dr U.Eranna “**Speech coding and adaptive channel coding technique for memory and  
memoryless channels**” in International Journal on Information Sciences & Computing. Vol.6 Jan 2012

pp.48-51,Impact factor:2

6. Devika B, P. N. Sudha “Literature Survey on Optimization of Power in Ad hoc Networks” International Journal of Advanced Research in Computer Science and Engineering(IJARCSSE) Journal; Volume: 5; Issue: 8: Edition with Effect from 27th August, 2015; ISSN: 2277 128 X. March 2015 pp.239-241.Impact factor:1.492
7. PRATHIMA B A, SUDHA P N, SURESH P M, “**Proposed methodology for auto error correction and detection for closed loop manufacturing using embedded system**” International journal of current research, Vol 7,Issue 9, Sep-2015,pp.20519-20523.Impact factor:7.086
8. Dr. P.N Sudha, “**Proposed Adaptive Channel coding technique for underwater Communication**” in International Journal of Innovative Research in Technology & Science, Volume 4, Issue 1, Jan 2016,pp.27-29. Impact factor:2.236 ISSN:2321-1156
9. Sangeetha, V. and Dr. Sudha, P. N.” **Proposed algorithm: a novel approach to minimize the effect of fading using adaptive channel coding & multi carrier modulation techniques- a survey** “ in International Journal of Current Research Vol. 8, Issue, 01, pp.25246-25249, January, 2016
10. Dr P N Sudha, “**Proposed algorithm to minimize multipath fading and ISI for underwater communication**” is published in the proceeding of International Conference on Electrical, Electronics and Optimization Technique-IEEE-ICEEOT-2016 with IEEE catalog 978-1-4673-9939-5/16/\$31.00 ©2016 IEEE, DOI: [10.1109/ICEEOT.2016.7755180](https://doi.org/10.1109/ICEEOT.2016.7755180), pp-2069-2071.
11. Devika B, P. N. Sudha “**Fisheye state Protocol in Correlation with Power in Ad hoc networks**” International Journal in International Journal of Applied Engineering Research”(IJAER), volume no13, number 17, pp. 13335-13339, ISSN 0973-4562 Online ISSN0973-9769,2018
12. Rama murthy. N, P.N.Sudha, “**Smart Navigation System for Visually Challenged**” International Journal of Industrial Electronics and Electrical engineering ISSN : 2347-6982 PgNo.45-47
13. Sahana Salagare, P. N Sudha, Karthik P “**A Survey on Applications and Challenges of Underwater Wireless Sensor Node in** International Journal of Engineering Trends and Technology (IJETT),Vol- 41,Issue4, pp.201-204, Nov2016 ISSN:2231-5381. <http://www.ijettjournal.org>
14. SRIVIDYA L AND DR. P.N. SUDHA,”. **LITERATURE SURVEY ON RECENT AUDIO ENCRYPTION TECHNIQUES**". International Journal of Electronics and Communication Engineering & Technology (IJECET).Volume:7, Issue:6, Pages:91-95 . **ISSN Print:** 0976- 6464 **ISSN Online:** 0976 –6472, Journal Impact factor 8.269.
15. Navya. R Dr P.N.Sudha “**An automatic Wireless Multimedia Communication System to Detect accident of Vehicle and Mobile Telemedicine System**” International Journal of Innovative Research in science Engineering and Technology [IJIRSET] vol. 6 issue 3 March 2017, pg No1111-1116.DOI 10.15680
16. Cristo Jain, Manju V C , P N Sudha “**Real Time Smart Wireless Power Transfer System for Small Scale Application Using aerial Projector**” published in International Journal of Computer Applications Pg No.28-31 and ISBN 0975-8887.

17. Devika B, P. N. Sudha “**Power Optimization in MANET using Topology Management**” published in Engineering Science and Technology, an International Journal, Volume 23, Issue 3, Pages 565-575, ISSN 22150986, ELSEVIER BV, 2019.
18. Srividya, Dr. P N Sudha, “**Physical Layer Secret Symmetric Key Generation and Management Techniques for Wireless Systems-A Study**” published in JASC: Journal of Applied Science and Computations Volume VI, Issue II, February/2019 ISSN NO: 1076-5131 PP No. 136-141
19. Skanda H N, Smitha S Karanth, Suvijith S, Swathi K S, Dr. P N Sudha “**IOT BASED CAMOUFLAGE ROBOT**” published in Journal of Emerging Technologies and Innovative Research [JETIR] March 2019, Volume 6, Issue 3, ISSN-2349-5162, PP No. 237-239
20. Anurag Reddy R, Ankita A Raikar, Harsha N, Kishore Bhat U, Dr. P N Sudha “**WATCHDOG FOR ATM**” published in Journal of Applied Science and Computations Volume VI, Issue IV, April/2019 ISSN NO: 1076-5131 PP No. 2965-2969
21. Skanda H N, Smitha S Karanth, Suvijith S, Swathi K S, Dr. P N Sudha “**IOT BASED CAMOUFLAGE ARMY ROBOT**” published in Journal of Applied Science and Computations Volume VI, Issue V, May/2019 ISSN NO: 1076-5131 pp No. 2614-2619.
22. Devika B, P. N. Sudha “**Power-Cognizant Proactive Routing Protocol for Amending Energy in Ad hoc Networks**” pp 152-159, ICDSMLA 2019, online ISBN 978-981-15-1420-3. 19 May 2020. will be published in “Springer Briefs in Applied Sciences and Technology” ISSN: 2191-530X, (Indexed in SCOPUS, UGC, Springer link & Major AI) SPRINGER.
23. Prathima B A, Sudha P N & Suresh P M (2020) “**Shop floor to cloud connect for live monitoring the production data of CNC machines,**” International Journal of Computer Integrated Manufacturing, 33:2, 142-158, DOI: 10.1080/0951192X.2020.1718762 To link to this article: <https://doi.org/10.1080/0951192X.2020.1718762>, Published by Taylor & Francis Publication.
24. Anurag Reddy R, Ankita A Raikar, Harsha N, Kishore Bhat U, Dr. P N Sudha “**WATCHDOG FOR ATM**” published in Journal of Applied Science and Computations Volume VI, Issue VI, JUNE/2019 ISSN NO: 1076-5131 PP No. 629 to 635
25. Kadri Srinidhi Rao, Jeevitha Kalaashilpa N C, Bhagya Shree S J, Ashwini S, Dr P N Sudha “**Literature Survey on A Bore Well Rescue Bot**” published in “International Journal of Latest Engineering and Management Research (IJLEMR)” ISSN: 2455-4847 www.ijlemr.com, Volume 05 - Issue 05, May 2020, PP. 05-08
26. Abhishek A Nandyal, Adithya D M, Karthik K, Manikantan G, ” **A LITERATURE SURVEY ON “UNMANNED UNDERWATER VEHICLE FOR MONITORING AQUATIC ECOSYSTEM”** ” published in *International Journal of Engineering Applied Sciences and Technology*, 2020 Vol. 5, Issue 2, ISSN No. 2455-2143, Pages 599-601.
27. Abhishek A Nandyal, Adithya D M, Karthik K, Manikantan G, ” **UNMANNED UNDERWATER VEHICLE FOR MONITORING AQUATIC ECOSYSTEM**” published in International Journal of Engineering Applied

Sciences and Technology, 2020 Vol. 4, Issue 11, ISSN No. 2455-2143, Pages 493-497.

28. V Sangeetha, P.N. Sudha, “**Analysis of Bit Error Rate on M-ary QAM over Gaussian and Rayleigh Fading Channel**” published in “International Journal of Innovative Technology and Exploring Engineering (IJITEE)” ISSN: 2278-3075, Volume-9 Issue-6, April 2020
29. Kadri Srinidhi Rao, Jeevitha Kalaashilpa N C, Bhagya Shree S J, Ashwini S, Dr P N Sudha “**Rakshak - A Bore Well Rescue Bot**” published in International Journal for Research in Engineering Application & Management (IJREAM) ISSN : 2454-9150 Vol-06, Issue-03, June 2020.
30. Devika B, P. N. Sudha “**Chronological-Squirrel EarthWorm optimization for power optimization using topology management**” International Journal of Advanced Research in Engineering and Technology (IJARET)-SCOPUS Indexed journal ID: 2120-0201, 2020. (Accepted).
31. Navin Kumar H.G, Navya S, Pratima Agnihotri, Pratima V Kashyap, Dr P N Sudha” **Literature Review On Hybrid Temperature Sensing And Monitoring System With Built In Sanitizer**” International Advanced Research Journal in Science, Engineering and Technology Vol. 7, Issue 12, December 2020, DOI 10.17148/IARJSET.2020.71213

#### National level

32. **P.N Sudha, Chanda V Reddy, K. Senth Babu, Dr U.Eranna “Proposed method to Overcome Ne Effect in CDMA Technology using Fuzzy logic**” at National Conference on Communication Networks and Sec May - 2010,pp. 189-194.
33. **Navya.R Dr P.N.Sudha “Smart Wireless automatic collision detection of Vehicle and mobile telemedicine System** at National conference on recent trends and applications in Electrical & Electronics Engineering [NCRTAEEEE] held on 10<sup>th</sup> -12<sup>th</sup> May 2017 at KSIT Bangalore. Pg no. 7-12.
34. **ARJUN S D, AKSHAY H.B SRIVATSA, AKSHAY KUMAR P, VIJAYKUMAR B.H MATH Dr P N Su** “**Automatic solar tracking for better yielding green house using GSM**” at National conference on re trends and applications in Electrical & Electronics Engineering [ NCRTAEEEE] held on 10<sup>th</sup> -12<sup>th</sup> May 201 KSIT Bangalore. Pg no. 28-32.

#### **BOOK CHAPTERS**

1. Srividya L., Sudha P.N. (2020) “**Secrecy Capacity of Symmetric Keys Generated by Quantising Channel Metrics Over a Fading Channel.**” In: Smys S., Bestak R., Rocha Á. (eds) Inventive Computation Technologies. ICICIT 2019. Lecture Notes in Networks and Systems, vol 98. Springer, Cham. [https://doi.org/10.1007/978-3-030-33846-6\\_45](https://doi.org/10.1007/978-3-030-33846-6_45)
2. Devika B, P. N. Sudha “Power-Cognizant Proactive Routing Protocol for Amending Energy in Ad hoc Networks” pp 152-159, ICDSMLA 2019, online ISBN 978-981-15-1420-3. 19 May 2020. will be published

in" Springer Briefs in Applied Sciences and Technology" ISSN: 2191-530X, (Indexed in SCOPUS, UGC, Springer link & Major AI) SPRINGER. [https://link.springer.com/chapter/10.1007/978-981-15-1420-3\\_17](https://link.springer.com/chapter/10.1007/978-981-15-1420-3_17)

## **PAPER PRESENTATION**

### **Papers presented in International and National Conferences:**

1. **P.N Sudha, Dr U.Eranna "Speech Compression & Error Correction for mobile communication System"** at IETE, BANGALORE. pp20 ,26<sup>th</sup> APRIL 2008 .Impact factor: 0.375
2. **P.N Sudha, Dr U.Eranna "A method for improving the throughput in wireless Networks"** A National Conference on Next Generation Wireless Networks at R.V.COLLEGE OF ENGG on 16<sup>th</sup>&17<sup>th</sup> May- 2008.
3. **P.N Sudha, Dr U.Eranna "Proposed method to overcome nearfar effect in CDMA technology using Fuzzy logic "**National conference on COMMUNICATION NETWORK & SECURITY at R.V.College of.Engg. pp-189 on 17<sup>th</sup> May-2010.
4. **P.N Sudha, Dr U.Eranna "Proposed method for effective source & channel coding for communication system"** at IETE, BANGALORE centre on 7<sup>th</sup> to 9<sup>th</sup> Oct 2010. Impact factor: 0.375
5. **P.N Sudha, Chanda V Reddy, Dr U.Eranna "Proposed method for effective Source & Channel coding for Communication system in CDMA technology using Fuzzy logic"** International Conference on Mobile Internet devices ICMID-2010 17<sup>th</sup>,18<sup>th</sup> Dec-2010
6. **P.N Sudha,, Dr.U.Eranna "Effective coding techniques & to initiate handoff using fuzzy logic in wireless communication"** in International Conference on Frontiers of Computer Science, Bangalore on 7<sup>th</sup> to 9<sup>th</sup> Aug-2011.
7. **P.N Sudha, Dr U.Eranna "Source and adaptive channel coding techniques for mobile communication"** presented in workshop of ICT, SoftCOM 2012. Co-sponsored by the IEEE Communication Society held on 11<sup>th</sup> to 13<sup>th</sup> Sep. 2012
8. **Nishanth.Y.L, Manoj kumar.G.S, Dr P N Sudha "A wireless Home safety LPG Leakage Detector and Automatic alarm System"** National Conference at KSSEM on 29<sup>th</sup> April 2015.
9. **Dr P N Sudha, "Proposed algorithm to minimize multipath fading and ISI for underwater communication"** International Conference on Electrical, Electronics and Optimization Technique-IEEE-ICEEOT-2016 held during 3<sup>rd</sup> Mar to 5<sup>th</sup> Mar 2016 at Chennai.
10. **Devika, Dr P N Sudha, "Execution of PA Fish Eye State Protocol to Amend Power"** International Conference on Electrical, Electronics and Optimization Technique-IEEE-ICEEOT-2016 held during 3<sup>rd</sup> Mar to 5<sup>th</sup> Mar 2016 at Chennai.
11. **Rama Murthy, Dr P N Sudha,"Smart navigation System For Visually Challenged People"** International Conference on Mechanical, Civil, Electronics and Communication and Computer Science Engineering held on 3<sup>rd</sup> April 2016 organized by BTI in association with IRAJ.
12. **Rama Murthy, Dr P N Sudha, "Smart Navigation system using Ultrasonic sensor for Visually**

**Challenged People**” National conference on Advanced Communication, VLSI Design & Signal Processing Organized by department of ECE ,KSSEM Bangalore on 28<sup>th</sup> April 2016 .

13. **Manjesh.B , Potla Rajendra, Abhishek.J Ranjith.B.S ,Dr.P.N.Sudha, ”Smart and Energy efficient green house Management Using GSM modem”** National conference on Advanced Communication, VLSI Design & Signal Processing Organized by department of ECE ,KSSEM Bangalore on 28<sup>th</sup> April 2016 .
14. **Navya R, Dr P N Sudha, ”Smart Wireless Automatic Collision Detection of Vehicle & Mobile Telemedicine System “** National Conference on Recent trends and applications in Electrical & Electronics Engineering organized by ECE department, KSIT Bangalore from 10<sup>th</sup> May 2017 to 12<sup>th</sup> May 2017.
15. **Navya.R, Dr.P.N.Sudha,” An automatic wireless Multimedia Communication System to Detect accident of Vehicle & mobile telemedicine System”** International Conference on Computer Science & Technology Allies in Research organized by CSE department, City Engineering College Bengaluru on 11<sup>th</sup> May 2017 & 12<sup>th</sup> May 2017.
16. **Akshaya Kumar. P, Arjun S D, Akshay Srivatsa, Vijay Kumar Math & Dr P N Sudha,” Automatic Solar Tracking for Better yielding green house using GSM”** National Conference on Recent trends and applications in Electrical & Electronics Engineering organized by ECE department, KSIT Bangalore from 10<sup>th</sup> May 2017 to 12<sup>th</sup> May 2017.
17. **Prathima B A Dr P N Sudha Dr Suresh P M “Electronic Sensor for Micron resolution Dimension Measurement”** presented paper in International Conference on Electrical, Electronics, Communication Computer Technologies and Optimization techniques organized by GSSSIT Mysure on 15<sup>th</sup> and 16<sup>th</sup> Dec 2017
18. **Jayasudha B S K , P.N. Sudha “PCG acquisition and analysis for detection of cardiac failures at early stages”** International Conference On Bioengineering On Health And Environment (ICBHE’17) **08th-10th January 2018**
19. **Sahana Salagare, P. N. Sudha & P. Karthik “Survey on Energy Harvesting Systems for Underwater Devices** presented paper in International Conference on Advances in Engineering Science and Management On 12th and 13th October 2018 organized by KSSEM Bangalore
20. Ms. Devika ,P N Sudha **“Power-Cognizant Proactive Routing Protocol for Amending Energy in Ad hoc Networks”** presented paper in ICDSMLA 2019 held on 29<sup>th</sup>-30<sup>th</sup> March 2019 organized by CMRIT, Hyderabad
21. **Jayasudha B S K, P.N. Sudha “PCG analysis for cardiac failures using wavelet tool”, 4<sup>th</sup> International Conference on Science, Agriculture and Technology for society (ICSTS-2019) 13<sup>th</sup>-15<sup>th</sup> May 2019.**
22. Ms Srividya, P N Sudha, **“PHYSICAL LAYER SECURITY STUDY”**,paper presentation in National Conference on Electronics and Communication Engineering, 9-11 May 2019 organized by

Department of Electronics and Communication Engineering DSCE Bangalore, IEEE-DSCE Student's branch and IEEE women in engineering.

23. **Prathima, B.A., Sudha, P.N. and Suresh, P.M. Mruthunjaya M.** “**Live Production Data Monitoring System in the Context of Industry 4.0**”, In 4<sup>th</sup> International Conference on Science and Technology for Society ICSTS-2019 held from 13<sup>th</sup>-15<sup>th</sup> May 2019 in EWIT, Bangalore.
24. Ms Srividya, P N Sudha , “**Secrecy Capacity of Symmetric key Generated by Quantising channel metrics over a fading Channel**” in 4<sup>th</sup> international conference on Inventive Computation Technologies ICICT-2019 organised by RVS Technical Campus, Coimbatore, India during 29<sup>th</sup> & 30<sup>th</sup> Aug 2019: [https://doi.org/10.1007/978-3-030-33846-6\\_45](https://doi.org/10.1007/978-3-030-33846-6_45)
25. Prathima, B.A., Sudha, P.N. and Suresh, P.M. Mruthunjaya M., “**Electronic Gauge for Micron Measurement and its Relevance to Industry 4.0**”, In 2<sup>nd</sup> International Conference on Adaptive Computational Intelligence organized by GSSS Institute of Engineering & Technology for Women Mysuru on 15<sup>th</sup> & 16<sup>th</sup> Dec 2020

#### **PATENT DETAILS**

- Patent is filed for “**IoT based Efficient Water Resources Forecasting, Monitoring and Management System**” and patent application number is **202041049792**”

#### **Awards/ Achievements**

#### **AWARDS**

- Got **President’s Award** in Scouting & Guiding
- Got **Third Rank** in VTU for M Tech.
- Got **Outstanding Women in Engineering Award** by Venus International Foundation.
- Got nominated for **Senior women Educator & Scholar** by NFED.
- Chair for **Women In Engineering IEEE from 2015 to till date**
- Got best paper award for Paper presentation for the Paper **Proposed method to overcome nearfar effect in CDMA technology using Fuzzy logic** ”National conference on COMMUNICATION NETWORK & SECURITY at R.V.College of.Engg
- Received felicitation for 100% results for the subject Control system for fourth sem in 2015
- Received felicitation for 100% results for the subject Information Theory & Coding for fifth sem in 2016
- Received felicitation for 100% results for RF &MWR for second sem PG in 2016
- Received felicitation for 100% results for Error Control Coding for Fourth sem PG in 2017
- Received felicitation for 100% results for the subject Information Theory & Coding for fifth sem in 2017

## ACHIEVEMENTS, TRAININGS & CERTIFICATION

- Got **President Award** in Scouting & Guiding.
- Participated in District level sports & Games.
- Participated in National Jambori held at Bhopal.
- Got 1<sup>st</sup> class in lower Grade Drawing Exam.
- Got Microsoft Certified Professional certificate.
- Got **third rank** in M.Tech (Digital Electronics) in VTU.
- Got best paper award for the paper” **Proposed method to Overcome Nearfar Effect in CDMA Technology using Fuzzy logic**” at **National Conference on Communication Networks and Security** at RVCE.
- Worked as **BOE member** for VTU.
- Worked as **Visiting Faculty for JAIN University** for PG.
- Delivered a Technical talk on “**Coding techniques in wireless Communication**” in a five days FDP program at JSS institute of Technology on 30<sup>th</sup> June 2016.
- Got Nominated as “**Senior Women Educator and Scholar**” by National foundation for Entrepreneurship Development, Coimbatore, TN
- Got awarded as “**Outstanding Women in Engineering**” by VENUS International foundation Chennai.
- Invited to deliver technical talk for 5<sup>th</sup> Semester students at JSSIT Bangalore.
- Serving as **WIE CHAIR IEEE SB** for the academic year 2014- till date at KSIT Bangalore.
- Working as **President IIC Cell** at KSIT

## Professional Membership

- **ISTE LIFETIME MEMBERSHIP NUMBER:**
- **IEEE MEMBERSHIP NUMBER:**
- **MEI MEMBERSHIP NUMBER**

## Contact Details

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