



DR. PUSHPALATHA G S

Assistant Professor, Author

PROFILE

Dynamic and dedicated academician with over 20 years of experience in teaching, research, mentoring, and leadership within the Department of Electronics and Communication Engineering at Dr. Ambedkar Institute of Technology. Holds a Ph.D. in Cryptography with a proven track record of high-quality research publications. Beyond academia, authored innovative children's activity books designed to spark curiosity and enhance problem-solving skills in young minds. Actively involved in developing Children's books. Passionate about nurturing the next generation of leaders and researchers while driving technological advancement through both research and practical applications. Committed to contributing to organizational growth through academic and professional expertise.

CONTACT

Mobile: +91 8618331380

EMAIL:

contact.pushpalathags@gmail.com

EDUCATION

- Ph.D. in Cryptography, Visvesvaraya Technological University, 2025.
- MTech in VLSI and Embedded Systems, Visvesvaraya Technological University, 2014.
- B.E in Telecommunication Engineering, Visvesvaraya Technological University, 2006.

PROFESSIONAL EXPERIENCE AND ROLES

Assistant Professor, Dr. Ambedkar Institute of Technology, Bengaluru;

Since 2006 to Present

- Teach undergraduate and post-graduate students in various courses such as Basic Electronics, Digital Signal Processing, Cryptography and Network Security, Information Theory and Coding, Technological Innovations Management and Entrepreneurship, Social Connect Responsibilities and many more, emphasizing real-world applications of theoretical concepts.
- Supervise technical labs and guide students through hands-on experimentation and problem-solving.
- Lead a research group focused in the areas of cryptography, wireless communication, and signal processing, resulting in research outcomes through reputed journal publications, innovative projects, and patents.
- Mentoring students, providing guidance on research, thesis development, and career planning.

Additional Roles

Mentor, Researcher, Author, Evaluator, MSME Coordinator, Student Coordinator etc.

SKILLS

Technical Skills

- MATLAB
- DSP Tools
- Xilinx FPGA Tools
- HDL (VHDL, Verilog)

Additional Skills

- Good leadership qualities
- Good communication skills
- Good organizational skills

KEY SKILLS & COMPETENCIES

- **Leadership & Mentoring:**
Leading student clubs and research teams. Providing mentorship to undergraduate and post-graduate students. Strong focus on nurturing creativity and innovation within academic and collaborative environments.
- **Research & Development:**
Extensive experience in conducting cutting-edge research and publishing in high-impact journals. Proficient in applying advanced theoretical concepts to real-world technology solutions.
- **Technical Expertise:**
 - **Matlab:** Advanced modeling, simulation, and analysis of engineering systems.
 - **DSP (Digital Signal Processing):** Proficient in signal analysis and processing techniques.
 - **Xilinx:** Proficient in FPGA design and implementation.
 - **HDL (Hardware Description Languages):** Good knowledge of design and testing of digital circuits.
- **Collaboration & Networking:**
Collaborative approach to interdepartmental and interdisciplinary research. MSME coordinator, contributing to skill development, entrepreneurship development, innovations, and real-world applications.
- **Teaching & Curriculum Design:**
Designing curriculum with a focus on cutting-edge technologies and NEP.

RESEARCH WORK AND PUBLICATIONS

- **Research title:** Digital encryption of speech signal using chaotic based stream cipher system for secure voice communication
- Published articles in reputed international journals from research outcomes in the fields of cryptography, signal processing, image processing etc.

ACHIEVEMENTS

- Author and self-publisher of innovative children's activity books.
- Published Indian patent on research work.
- Granted Indian design patent for social work.
- Member of professional bodies such as Cryptography Research Society of India (CRSI), International Association of Engineers (IAENG) and Institute of Doctors, Engineers, and Scientists (IDES).
- Teaching expertise in various subjects such as cryptography, signal processing, image processing, basic electronics, network theory, information theory and coding, hardware description language, MATLAB etc.
- Organized many activity-based workshops and technical events for students.
- Engaged in entrepreneurship development activities.
- Participated and organized seminars, workshops, and faculty development programs.
- Certified Yoga Instructor from S-VYASA University.
- Participated in extracurricular activities like yoga, dance, sports etc.

BOOKS WRITTEN:

- *Binary Coding Activities* – A collection of puzzles and games that teach binary coding concepts. Illustrations and activities helps to understand the technology and improve problem solving skills.
- *Inspiring Personalities*– Discusses lifestyle, education, field of work and legacy of most famous personalities, that motivates to develop ambition and goal setting.
- *Graphs*- Illustration of basic graphs with activities and Quiz. The concepts involve charting the self-data and helps in developing data interpretation skills.

- *Math Puzzles*- A collection of puzzles, that teach problem solving skills, develops perspective and logical thinking.
 - *Cryptic Messages*- Illustration of secret code concepts. Helps in critical thinking, enhances problem solving Numbers- Involves activities to teach the concepts of numbers, helps to identify the types. Improves problem solving skills, helps to develop logical thinking.
 - skills.
 - *Mandala Art*- A fun-filled adventure of learning through coloring using both hands. Helps to develop motor skills, balanced hand motions and writing skills.
 - *Construct Words*- Art of formation of different words. Helps to learn new words. Improve language and spelling skills.
 - *Hidden Words*- A collection of word search concepts based on the given titles. Helps to learn new words. Improve language skills and observation skills.
 - *Wisdom in Words*- A Collection of Inspiring Quotes that teaches valuable life lessons. Helps to develop perspective and positive thinking.
 - *Sudoku*- A collection of number games with easy, medium and hard levels. Helps to improve problem solving skills, concentration and logical thinking.
 - *Trace the patterns*- A collection of simple patterns to complex patterns. Developed to improve handwriting skills. Benefits include fine motor skills development and pressure control.
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PERSONAL INFORMATION

D.O.B: 12-05-1984

Spouse Name and Occupation: Manivannan K, Embedded Developer

Children: 2

Nationality: Indian

Address: #112/302, 11th cross, 2nd Main, NGEF Layout, Nagarbhavi main road, Bengaluru-560072
