

Faculty Profile of Dr. P. B. Pankajavalli



Dr. P. B. Pankajavalli
Assistant Professor
Department of Computer Science

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Research Area

- Internet of Things
- Wireless Sensor Networks
- Ad-hoc Networks

Education & Career

Education

Ph. D.,

Subject : Computer Science

Institution : Mother Teresa Women's University

Affiliated University : Mother Teresa Women's University

Year of Award: 2013

M.E.,

Subject: Computer Science & Engineering

Institution: Nandha Engineering College

Affiliated University: Anna University

Year of Award :2011

M.Phil.,

Subject: Computer Science

Institution: Kongu Arts & Science College

Affiliated University: Bharathiar University

Year of Award :2008

M.C.A.,

Subject: Computer Applications

Institution : Vellalar College for Women

Affiliated University : Bharathiar University

Year of Award : 2003

B. Sc.,

Subject: Computer Science

Institution: Vellalar College for Women

Affiliated University: Bharathiar University

Year of Award: 2000

Career**At Bharathiar University (Reverse Order)**

Assistant Professor :16/10/2015 to Till Date

Past Experience

Assistant Professor(Sr.Gr) : from 01/06/2015 to 15/10/2015 at PSG College of Technology

Assistant professor : from 05/06/2013 to 31/05/2015 at PSG College of Technology

Assistant professor : from 02/06/2003 to 20/04/2013 at Kongu Arts & Science College

Awards

Membership

International Association for Engineers [IAENG]

Type of Membership : Life Member

Visits

Collaborators

Others

Projects

Funded Project (Ongoing)

1.Development of a neuro-fuzzy system for IOT sensor data to identify stomach cancer diseases based on exhaled gas from humans
Dr.E.Chandra / Dr.R.Porkodi/Dr.P.B.Pankajavalli
RUSA 2.0
2 years(December 2020 - December2022)
Rs.12,88,000

Funded Project (Completed)

1. A System for Sensing and Controlling the Stress Level of Computer Users Using IoT,
P.B.Pankajavalli,
DST-ICPS,
December 2018 – December 2021,
Rs. 24,98,810

Research Guidance

- [Post Doc.](#)
- [Ph.D.](#)
- [M.Phil.](#)
- [M.Sc.](#)

Ongoing

Title

Name

Completed

Title

Name

Ongoing

Student Name: A. Muniyappan

Title of Thesis: Wireless Networks (Research Area)

Year of Award: -

Status: Ongoing

Student Name: G.S. Karthick

Title of Thesis: Internet of Things with analytics (Research Area)

Year of Award: -

Status: Submitted

Completed

Student Name: N.Priya

Title of Thesis: Investigation on Various Communication Fault in Wireless Sensor Networks to Provide Fault Tolerance for Un-interrupted Communication

Year of Award: 2022

Student Name: M. Sridhar

Title of Thesis: Wireless Sensor Networks (Research Area)

Year of Award: 2022

Ongoing

Completed

Student Name: Dharani R

Title of Thesis: An Energy Efficient Cluster Head Election in MANET based on Possible Paths and Node Residual Energy

Year of Award: 2019

Status: Completed

Student Name: Pavithra P

Title of Thesis: Non-Invasive Breath Analysis using Bagged Decision Tree for Prediction and Classification of Diabetes Mellitus

Year of Award: 2018

Status: Completed

Student Name: Muthumalathi M

Title of Thesis: Efficient Clock Synchronization Using Energy Based Proportional Integral and Least Common Multiple Protocol in Wireless Sensor Networks

Year of Award: 2018

Status: Completed

Student Name: Vishnu Monishan M

Title of Thesis: Implementation of Optimal Scheduling Algorithm on IoT-Based Smart garbage Disposal System

Year of Award: 2018

Status: Completed

Student Name: Saranya V

Title of Thesis: Secure Clustering Energy Efficient Routing Protocol in Wireless Sensor Networks

Year of Award: 2017

Status: Completed

Student Name: Ramya Mary E

Title of Thesis: Four Wheeler Detection and Intimation of Spot using IoT

Year of Award: 2017

Status: Completed

Ongoing

Completed

Student Name: Dhivya Dharshini S

Title of Project: Workers Interact Clients Quotation using Web Application

Year of Award: 2022

Status: Completed

Student Name: Manivannan S

Title of Project: Kongu Matrimonial Website

Year of Award: 2022

Status: Completed

Student Name: Pavithra J

Title of Project: Mobile repair Shop Management System

Year of Award: 2022

Status: Completed

Student Name: Shalini B

Title of Project: Modified Energy Efficient references Broadcast Time Synchronization in WSN

Year of Award: 2022

Status: Completed

Student Name: Vinitha J

Title of Project: Plant Growth Monitoring System using IoT Analytics

Year of Award: 2022

Status: Completed

Student Name: Vishnu Prasath S

Title of Project: MDG Integration for Microsoft Office

Year of Award: 2022

Status: Completed

Student Name: Aravind V A

Title of Project: Doctor Finder Web Application

Year of Award: 2021

Status: Completed

Student Name: Padmavathi A

Title of Project: Building System

Year of Award: 2021

Status: Completed

Student Name: Santhiya K
Title of Project: Online Spa and Saloon Booking System
Year of Award: 2021
Status: Completed

Student Name: Swetha R
Title of Project: Online Employee Feedback System
Year of Award: 2021
Status: Completed

Student Name: Vinitha S
Title of Project: Applying Anti Collision System in Cloud for Medical Reports
Year of Award: 2020
Status: Completed

Student Name: Krishnaveni S
Title of Project: Automatic Criminal Identification System
Year of Award: 2020
Status: Completed

Student Name: Ponmozhi U N
Title of Project: Institute Resource Planning
Year of Award: 2020
Status: Completed

Student Name: Deepika G
Title of Project: Credit Card Fraud Detection
Year of Award: 2020
Status: Completed

Student Name: Uthradevi M
Title of Project: Call Centre Management
Year of Award: 2020
Status: Completed

Student Name: P.S. Sureiya
Title of Project: Real-Time Numerical 0-5 Counting Based on Hand gesture
Recognition in Image Processing
Year of Award: 2019
Status: Completed

Student Name: Saranya. N. M

Title of Project: Implementation of Website for Petals Shopping

Year of Award: 2019

Status: Completed

Student Name: Poornima. R

Title of Project: Data Fetching in Image Processing

Year of Award: 2019

Status: Completed

Student Name: LakshmiPriya. S

Title of Project: Energy Efficient and Energy Balanced Fault Tolerance
Clustering Using Cuckoo Search in Wireless Sensor Networks

Year of Award: 2019

Status: Completed

Student Name: Indumathi. S

Title of Project: Website Builder and Editor

Year of Award: 2019

Status: Completed

Student Name: Bharathi. P

Title of Project: Long Term Evolution Uplink Process in Multiple Input Multiple
Output

Year of Award: 2019

Status: Completed

Student Name: V. Vignesh

Title of Project: Face Detection based Vehicle Security System Using
Wireless Networks

Year of Award: 2018

Status: Completed

Student Name: S. Sumithra

Title of Project True Location App

Year of Award: 2018

Status: Completed

Student Name: Karpagam.E

Title of Project: Automatic Home Light Brightness Control System

Year of Award: 2018

Status: Completed

Student Name: Gurudarshan. M

Title of Project: SLE Protocol Migration from Red Book to Blue Book Version for Chandrayaan-2

Year of Award: 2018

Status: Completed

Student Name: S.Zennathsameema

Title of Project: Automatic Human Pressure Sensing and Indicator : An IoT Experiment

Year of Award: 2017

Status: Completed

Student Name: M.Vishnu Monishan

Title of Project: Myclassroom : Department Website

Year of Award: 2017

Status: Completed

Student Name: M. Sridhar

Title of Project: A System for Monitoring and Detecting Mudslides in Mountain Area Using Internet of Things

Year of Award: 2017

Status: Completed

Student Name: R. Saikumar

Title of Project: Hydration Reminding Smart Bottle: IoT Experimentation

Year of Award: 2017

Status: Completed

Student Name: P.Pavithra

Title of Project: Alcohol Sensed Door Control System

Year of Award: 2017

Status: Completed

Student Name: D.Malathi

Title of Project: Action Plan System

Year of Award: 2017

Status: Completed

Student Name: G.S. Karthick

Title of Project: Kidney Stone Formation Avoidance System by Monitoring pH Level in Urine using IoT

Year of Award: 2017

Status: Completed

Research Publication

- [International](#)
- [National](#)
- [Patents](#)
- [Conferences](#)
- [Books / Chapters](#)
- [Database](#)

1. [A Study and Performance Evaluation of DSR Protocol For Manets Using Ns2](#)

P. B. Pankajavalli, and N. Arumugam

International J. of Engg. Research & Indu. Appls. (IJERIA), 2, 29-36 (2009).

2. [BADSR: An Enhanced Dynamic Source Routing Algorithm for Manets Based on Ant and Bee Colony Optimization](#)

P. B. Pankajavalli, and N. Arumugam

European Journal of Scientific Research 53, 576-581 (2011).

3. [Energy Efficient Data Gathering for Throughput Maximization with Multicast Protocol in Wireless Sensor Networks,](#)

S.Gokilarani, and P.B.Pankajavalli,

International Journal of Emerging Technology and Advanced Engineering, 2, 192 – 196 (2012).

4. [Performance Improvement of Multicast Protocol in Wireless Sensor Networks,](#)

P. B. Pankajavalli, and N. Arumugam,

International Journal of Scientific Research, 2, 96-98 (2013).

5. [Mining the Usage of Data Plans for Mobile Customers using Clustering Algorithm](#)

P.B. Pankajavalli, B. Manimozhi, and Narendhiran

International Journal of Applied Engineering Research 10,14247-14254 (2015).

6. [Survey of Accident Avoidance Prevention and Detection scheme using Internet of Things,](#)

E. Ramya Mary, and P.B. Pankajavalli,

International Journal of Emerging Trends and Technology, 6,121 -125 (2017).

7. [Survey on Clustering Energy Efficient in Wireless Sensor Networks,](#)

V.Saranya, and P.B.Pankajavalli,

International Journal of Advanced Research in Computer Science,8,511-514 (2017).

8. [A System for Monitoring the Electricity Sub-Station using Internet of Things,](#)

P.B.Pankajavalli, G.S.Karthick, M.Sridhar and, A.Muniyappan,

International Journal of Advance Research in Science & Engineering, 06, 682-690, (2017).

9. [A Comparative Analysis and Performance Evaluation of Classification Algorithm to Predict Diabetes Mellitus,](#)

P.Pavithra, and P.B.Pankajavalli,

Journal of Emerging Technologies and Innovative Research, 5, 15-21 (2018).

10. [Mobility-Zonal Based Stable Election Routing Protocol For Wireless Sensor Networks,](#)

M. Muthumalathi, and P. B. Pankajavalli,

IPASJ International Journal of Computer Science (IJCS), 6, 001 - 009 (2018).

11. [IoT-Based Non-Invasive Breath Analysis using Bagged Decision Tree for Prediction and Classification of Diabetes Mellitus,](#)

P.Pavithra, P.B.Pankajavalli, and G.S.Karthick,
Journal of Advanced Research in Dynamical and Control Systems, 11, 1377-1382
(2019).

12. [Implementation of Novel Optimal Scheduling and Routing Algorithm on IoT-Based Garbage Disposal System,](#)

M.VishnuMonishan, P.B.Pankajavalli, and G.S.Karthick,
International Journal of Innovative Technology and Exploring Engineering, 08,
768-772, (2019).

13. [Efficient Clock Synchronization using Energy Based Proportional Integral and Least Common Multiple Protocol in Wireless Sensor Networks,](#)

M. Muthumalathi, P.B Pankajavalli, and N. Priya,
Journal of Engineering Science and Technology Review, 12, 144 - 51 (2019).

14. [Energy Hole Avoidance Based Efficient Data Transmission Scheme Using Improved EDGR Protocols,](#)

M.Sridhar and P.B.Pankajavalli,
International Journal of Scientific & Technology Research, 8, 3059-3062, (2019).

15. [Enhancement of Opportunistic Co-Occurrence of U-LTE And Wi-Fi/IoTin 5 GHZ Using Cognitive Radio,](#)

A. Muniyappan, and P. B. Pankajavalli,
International Journal of Innovative Technology and Exploring Engineering (IJITEE),
8, 25-31(2019).

16. [A Survey on Energy Efficient Load Balanced Energy Hole Avoidance Routing Protocols in WSN,](#)

M.Sridhar and P.B.Pankajavalli
International Journal of Research in Dynamics & Control System, 11,1492-1496,
(2019).

17. [Internet of Things in Animal Healthcare \(IOTAH\): Review of Recent Advancements in Architecture, Sensing Technologies and Real-Time Monitoring,](#)

G.S.Karthick, M.Sridhar, and P.B.Pankajavalli,
Springer SN Computer Science, 01, 1-16, (2020).

18. [Effective Usage of Exhaled Volatile Organic Compounds in Disease Diagnosis: A Comprehensive Review,](#)

G.S.Karthick, and P.B.Pankajavalli,
Indian Journal of Public Health Research & Development, 10, 246-251, (2020).

19. [A Review on Human Healthcare Internet of Things: A Technical Perspective,](#)

G.S.Karthick, and P.B.Pankajavalli,
Springer SN Computer Science, 01, 1-19, (2020).

20. [An Optimization of Distributed Voronoi Based Collaboration for Energy Efficient Geographic Routing in Wireless Sensor Networks,](#)

M.Sridhar and P.B.Pankajavalli
Cluster Computing, 23, 1741-1754, (2020).

21. [An Efficient Machine Learning Framework for Stress Prediction via Sensor Integrated Keyboard Data](#)

P. B. Pankajavalli, G. S. Karthick and R. Sakthivel,
IEEE Access, 9, 95023-95035, (2021).

22. [An Independent Constructive Multi-class Classification Algorithm for Predicting the Risk Level of Stress Using Multi-modal Data](#)

P. B. Pankajavalli, G. S. Karthick
Arabian Journal for Science and Engineering, 1-16,(2022).

23. [Chronic obstructive pulmonary disease prediction using Internet of things-spiro system and fuzzy-based quantum neural network classifier](#)

G. S. Karthick, P.B. Pankajavalli
A Theoretical Computer Science, (2022).

Details of Patent : Warp Beam Level Monitoring and Intimating Knotting Service
Using Wireless Networks

International / National: National

Date of Filing :07/06/2018

Application No.201841021261 A

1. P.B.Pankajavalli, K.G.Santhiya, V.Krishnaveni, Security Aware Routing Protocol for Wireless Adhoc Networks, DST Sponsored National State Level Seminar, Kone Yadava Women's College, Madurai,India, 24/09/2004 & 25/09/2004.

2. P.B.Pankajavalli, E-governance, National level Conference, Ethiraj College for Women, India 03/01/2006 & 04/01/2006.

3. P.B.Pankajavalli, An Analysis of QOS in Ad hoc Networks, UGC Sponsored National Conference, Gobi Arts & Science College, India, 09/03/2007 & 10/03/2007.

4. P.B.Pankajavalli, N. Arumugam, Simulation Based Analysis of DSR Protocol for MANETs, National level Conference, Sengunthar Engineering College, India, 14/08/2008.

5. P.B.Pankajavalli, N. Arumugam, A study on Performance Comparison of MANET Routing Protocols, Surya Engineering College, India, National level Conference, 21/03/2009.

5. P.B.Pankajavalli, N. Arumugam, A Study of Variation of Route Cache for DSR in MANETs, National level Conference, Sri Vasavi College, India,19/09/2009.

6. P.B.Pankajavalli, N. Arumugam, Issues Involved in Route Cache and Solutions for Dynamic Source Routing Protocol – A Study, National level Conference, Navarasam Arts & Science College for Women, India, 30/01/2020.

7. P.B.Pankajavalli, N. Arumugam, Introducing a Limiting Factor to Reduce Delay in Extended DSR – A Proposed idea, National level Conference, M.P. Nachimuthu M.Jaganathan Engineering College, India, 29/01/2011.

8. P.B.Pankajavalli, N. Arumugam, Improving the performance Hand of in 4G Wireless Network Using MS CTP Protocol National level Conference, Navarasam Arts and Science College for Women, India, 05/02/2011.

9. P.B.Pankajavalli, N. Arumugam, A Performance Analysis of Extended DSR & DSR with limiting factor, National level Conference, Hindusthan College of Engineering and Technology, India, 03/03/2011 & 04/03/2011.
10. P.B.Pankajavalli, N. Arumugam, An Hybrid Approach Of Bio Inspired Algorithm Towards DSR In MANET, University of Malaya, Kuala Lumpur, Malaysia, August 2011.
11. P.B.Pankajavalli, Strategies for Global Competitiveness for Higher Education System in India, National level Conference, KPR Institute of Engineering and Technology India, 10/12/2015 & 11/12/2015.
12. P.B.Pankajavalli, G.S. Karthick, A System for Monitoring and detecting Mudslides in mountain Area using Arudino Microcontroller, International Conference on data Security, Kalasalingam University, India, 11/12/2017 & 13/12/2017.
13. P.B.Pankajavalli, P.Pavithra, Alcohol Sensed Door control System using Arudino Microcontroller, International Conference on data Security, Kalasalingam University, India, 11/12/2017 & 13/12/2017.
14. P.B.Pankajavalli, V.Vignesh, G.S.Karthick, Implementation of Haar Cascade Classifier for Vehicle Security System based on Face Authentication using Wireless Networks, Springer- International Conference on Computer Networks and Inventive Communication Technologies (ICCNCT-2018), RVS Technical Campus, India, 26/04/2018 & 27/04/2018.
15. N.Priya, P.B.Pankajavalli, Distributed Energy Efficiency for Fault Tolerance Using Cuckoo Search in Wireless Sensor Networks, International Conference on Sustainable Communication Networks and Application, Surya Engineering College, India, 30/07/2019 & 31/07/2019.
16. P.B.Pankajavalli, G.S.Karthick, A Unified Framework for Stress Forecasting Using Machine Learning Algorithms, Springer- International Conference on Advances in Computational Intelligence and Informatics (ICACII-2019), Anurag Group of Institutions, India 20/12/2019 & 21/12/2019.
17. P.B.Pankajavalli, G.S.Karthick, Improved Stress Prediction using Differential Boosting Particle Swarm Optimization Based Support Vector Machine Classifier, Springer- International Conference on Intelligent Sustainable Systems (ICISS 2021), SCAD College of Engineering and Technology, India, 26/02/2021 &

27/02/2021.

18. M. Sridhar and P.B. Pankajavalli, “ An Adaptive Scheme for Detection of Attack in Energy-Aware Dual-Path Geographic Routing(EDGR)”, at International Conference on Innovative Computing and Communications, Shaheed Sukhdev College of Business Studies, University of Delhi, New Delhi. 19/02/2022 & 20/02/2022.

19. M. Muniyappan and P.B. Pankajavalli, “ QoS- Aware Resource Allocation with Enhanced Uplink transfer for U-LTE-Wi-Fi/IoT using Cognitive Network at CIEMA 2022, Serbia, MCKV Institute of Engineering, West Bengal, CT Institute of Engineering, Management & Technology, Punjab India, 26/03/2022 & 27/03/2022.

20. P.B.Pankajavalli, and G.S.Karthick, “ Efficient Data Flow Graph Modeling using Free Poisson Law for Fault-Tolerant Routing in Internet of Things”, at 5th International Conference on Computer Networks and Inventive Communication Technologies(ICCNECT 2022) , RVS Technical Campus, Coimbatore, India, 01/04/2022 & 02/04/2022.

1. [Incorporating the Internet of Things in Healthcare Applications and Wearable Devices,](#)

P.B.Pankajavalli and G.S.Karthick,
IGI Global Publisher, (2019), ISBN : 9781799810902 (Edited Book)

2. [Internet of Things for Beginners](#)

P.B.Pankajavalli and G.S.Karthick,
Yessdee Publishing Pvt Ltd, (2022), ISBN:978-93-91549-24-4

3. [An IoT System for Controlling Kidney Stone Formation: A Practical Guide](#)

P.B.Pankajavalli and G.S.Karthick,
Mahi Publications (2021), ISBN:978-93-91556-17-4

4. [Service Marketing in Industry 4.0 Era](#)

Barani and P.B.Pankajavalli
Arches and Elevators publishing House, (2020), ISBN:9788194706595

5. [Technical and Societal Challenges: Examining the Profound Impacts of IoT](#)

P.B.Pankajavalli,

Internet of Things (IoT) : Technologies, Applications, Challenges, and Solutions,
CRC Press, (2017),

ISBN 9781315269849

6. [Healthcare IoT Architectures, Technologies, Applications and Issues: A Deep Insight,](#)

G.S.Karthick and P.B.Pankajavalli,

Intelligent Systems for Healthcare Management and Delivery,
IGI Global Publisher, 235-365, (2018),

ISBN :9781522570714.

7. [Architecting IoT Based Healthcare Systems Using Machine Learning Algorithms: Cloud-Oriented Healthcare Model, Streaming Data Analytics Architecture and Case Study,](#)

G.S.Karthick and P.B.Pankajavalli,

Incorporating the Internet of Things in Healthcare Applications and Wearable Devices,

IGI Global Publisher, 40-66, (2019),

ISBN :9781799810902.

8. [Internet of Things \(IoT\) Testing Framework, Testing Automation, Solutions and Practices, Challenges: A Connected Approach for IoT Applications,](#)

G.S.Karthick and P.B.Pankajavalli,

Integrating the Internet of Things into Software Engineering Practices,
IGI Global Publisher, 87-123, (2019),

ISBN :9781522577904.

Database Related Info

Alumini Reflections: