

Sethu Institute of Technology
An Autonomous Institution
Pulloor, Kariapatti – 626 115, Virudhunagar



Department of Electronics and Communication Engineering			
NAME	Dr.R.Tamilselvi		
DATE OF BIRTH	18.09.1979		
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EDUCATIONAL QUALIFICATION	B.E (ECE), M.Tech. (Advanced Communication Systems), Ph.D		
DESIGNATION	Professor/ECE		
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EXPERIENCE	INDUSTRY	TEACHING	TOTAL
	--	16 Years	16 Years
DATE OF JOINING THE INSTITUTION	25.07.2013		
AREA OF SPECIALIZATIONS	Biomedical Signal & Image Processing		
COURSES TAUGHT	1. Analog Communication 2. Digital Communication 3. Wireless Communication systems Control Engineering		
RESEARCH FOCUS	Biomedical Signal & Image Processing, Computer Vision and Pattern Recognition		
RESEARCH GUIDANCE (Number of Scholars)	4		
SUBJECT COMPUTANCY	1. Analog Communication 2. Digital Communication 3. Wireless Communication systems 4. Control Engineering		
NO OF PAPERS PUBLISHED	NATIONAL JOURNALS	INTERNATIONAL JOURNALS	CONFERENCES



	10	50	50
PG SPECIALIZATION	Advanced Communication Systems		
Ph.D. SPECIALAIZATION	Medical Image Processing		
PROJECTS CARRIED OUT	30		
PATENTS(FILED/GRANTED)	Filed(10) Granted(3)		
TECHNOLOGY TRANSFERED	Nil		
NO OF BOOKS PUBLISHED	5		

Academic Credentials

Level	Degree	Specialization	University	Year of Completion
UG	B.E	ECE	Bharathidasan University	1998
PG	M.Tech	Advanced Communication Systems	Sastra University	2002
Ph.D	Ph.D	Medical Image Processing	Anna University, Chennai	2014

Details of Conference Publication

1. Meenambigai V, Pabitha Muthu P, Tamilselvi R, Parisa Beham M, Nandhineeswari S, and Ahamed Sheriff K M “Firmware Over-The-Air (FOTA) Update for Industrial IOT solutions” Published at the International Conference on Innovation, Sustainability and Applied Sciences (ICISAS), 2025 at Curtin University Dubai
2. A.Sabah Afroze, R. Tamil Selvi , M. Parisa Beham, J. Judith, S. Sathiya Pandiya Lakshmi, M.Bharkavi Sandhiya ,K .M. Ahamed Sheriff7” Assessment of risk of osteoarthritis in knee using thermal Images.” Published at the International Conference on Innovation, Sustainability and Applied Sciences (ICISAS), 2025 at Curtin University Dubai
3. S M Seeni Mohamed Aliar Maraikkayar, R Tamilselvi, M Parisa Beham, KShanmuga Priya, M Gayathri, M ,K Ahamed Sheriff6 “FMD-Net: A Hybrid Deep Learning Framework for Automated and Sustainable Detection of Fetal Movements in Ultrasound Imaging” Published at the International Conference on Innovation, Sustainability and Applied Sciences (ICISAS), 2025 at Curtin University Dubai.
4. R. Geetha, S.Arulselvi, R.Tamilselvi, M.Parisa Beham, Alavikunhu Panthakkan, Wathiq Mansoor, Hussain Al Ahmad, “Analysing Osteoporosis Detection: A Comparative Study of CNN and FNN” Electrical Engineering and Systems Science, Image and Video Processing-2024
5. R. Geetha, S.Arulselvi, R.Tamilselvi, M. Parisa Beham and S. Nandhineeswari ” Hybrid CNN-RNN Approach for Accurate Prediction of Osteoporosis” International conference on Innovation, Sustainability and Applied Sciences ICISIS 2024
6. Geetha Ramamoorthy, Arulselvi Subramanian, Tamilselvi Rajendran, Parisa BehamMohamed “Comparative Analysis of Image Denoising Techniques for Osteoporosis Detection Using DXA and X-ray Imaging” Biomedical and Pharmacology Journal -2024
7. Machine Learning Based Osteoarthritis Detection Methods in Different Imaging Modalities: A Review- A Sabah Afroze, R Tamilselvi, MG Parisa Beham Current Medical Imaging-2023.
8. BIOPHYSIT: A Novel Biophysical Profile Database for Fetal Stress Measurement in High-Risk Pregnancies S M A Maraikkayar, R Tamilselvi, MP Beham Biomedical and Pharmacology Journal 16-2023.
9. Brain tumor segmentation in multimodal MRI images using novel LSIS operator and deep learning T Ruba, R Tamilselvi, MP Beham Journal of Ambient Intelligence and Humanized Computing-2023.

10. Brain tumor segmentation using J Gate-Att ResUNet–A novel deep learning approach T Ruba, R Tamilselvi, MP Beham Biomedical Signal Processing and Control 84-2023.
11. A Review on Imaging Techniques and Artificial Intelligence Models for Osteoporosis Prediction. SA Inigo, R Tamilselvi, MP Beham Current Medical Imaging-2023.
12. Segmentation of a Brain Tumour using Modified LinkNet Architecture from MRI Images T Ruba, R Tamilselvi, MP Beham, M Gayathri-2023 Journal of Innovative Image Processing.
13. Novel Digital Filter Design for Noise Removal in Fetal ECG Signals MJ Seeni Mohamed Aliar Maraikkayar, R Tamilselvi, MG Parisa Beham, The Open Biomedical Engineering Journal -2023.
14. Machine Learning Based Osteoarthritis Detection Methods in Different Imaging Modalities: A Review. R Tamilselvi, P Beham Current Medical Imaging-2023.
15. Performance enhancement of patch antenna using nano composite substrate for modern wireless communication systems M Pandimadevi, R Tamilselvi, MP Beham Materials Today: Proceedings-2023.
16. D.Sabarinathan, M.Parisa Beham, R.Tamilselvi and SMM Roomi, "Ulcer Net: Multilevel Attention Network for Diabetic foot Ulcer Segmentation", 2023.
17. S.M.Seeni Mohamed Aliar Maraikkayar, R.Tamilselvi, M.Parisa Beham, T.Ruba, B.Archana, "An Automated Approach for Detecting Fetal Stress Using CTG Signal", Dickensian journal, 2022.
18. S.M.Seeni Mohamed Aliar Maraikkayar, R.Tamilselvi, M. Parisa Beham and K. Shanmuga Priya, "Analysis of Amniotic Fluid in fetal Assessment from biophysical profile", Dickensian journal 2022.
19. S.M.Seeni Mohamed AliarMaraikkayar, R Tamilselvi, "Analysis of Biophysical profile in fetal assessment", 2022.
20. A Sabah Afroze, R Tamilselvi and M.Parisa Beham, "Easy analyzer for bone risk condition" Dickensian journal 2022.
21. M Pandimadevi, R Tamilselvi. "Design and Fabrication of Flexible Antenna Using Foam Substrate for WiMAX Applications Micro-Electronics and Telecommunication Engineering" 2021.
22. M Pandimadevi, R Tamilselvi, M ParisaBeham, "Design and simulation of flexible jute antenna with performance validation on bending and soaking conditions", Textile Research Journal, 2021.
23. S.Bagyaraj, R.Tamilselvi, M.ParisaBeham, V.Kalaiarasi, A.Ishwarya Lakshmi, V.Harrini and D.Vaithiyanathan, "Detection of Bone Cancer in X-Ray Images", Volume: 63 Issue: 3 , 2020.
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35. M.Pandimadevi, R.Tamilselvi, A. Saba Afroze, M. Parisa Beham Design Issues of Flexible Antenna -A Review, International Journal of Advanced Trends in Computer Science and Engineering 2019
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Conferences:

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4. S.M.Seeni Mohamed Aliar Maraikkayar, R.Tamilselvi, M.Parisa Beham, An Automated Approach for the detection of Amniotic fluid index using modified Af-Net Deep Learning Architecture- ISCA Conference 2023.
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7. M.Parisa Beham M.Pandimadevi,**R.Tamilselvi** "Performance enhancemen of patch antenna using Nano composite substrate for modern wireless communication systems" ISSN 2214-7853, 2022
8. M.Uma Maheshwari **Dr.R.Tamilselvi**, Dr.M.Parisa Beham and Dr M.AmjathHasan "Automated Pneumonia Detection Method using Hybrid Semantic Segmentation Network ICTSGS – 2021" , [ECS Transaction, Volume 107, Number 1, 2022] SPAST , Nov 2022
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14. R.Tamilselvi, A.Nagaraj, M.ParisaBeham and M.BharkaviSandhiya,"BRAMSIT: A Database for Brain Tumor Diagnosis and Detection", ICBSII 20, SSN College of Engineering, 2020
15. M.ParisaBeham, N.Kayalvizhi, **R.Tamilselvi** and A.Nagaraj"MAMMSIT: A Database For The diagnosis and detection of Breast Cancer in Mammography images", ICBSII 20, SSN College of Engineering, 2020
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21. S.M.NaziaFathima, **R.Tamilselvi**, M.Parisa Beham and Nagaraj, “Enhancement of X-Ray Images and Analysis of Statistical Parameters for detection of Osteoporosis”, ICBSII 19, SSN College of Engineering, March15-16, 2019.
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Book Chapter/Book Published

1. M.Parisa Beham ,**R.Tamilselvi**, S.Ramya, K.Shanmugapriya, J.Judith “Remote Sensing and Information System”, Shanlax Publications, Vasantha Nagar, Madurai 2025, 978-93-61-63-680-6
2. Mrs.A.Sabah Afroze, Dr.**R.Tamilselvi**, J.Judith, Dr.M.Parisa Beham, “ Revolutionizing Osteoarthritis Diagnosis: Cutting-Edge Thermal Imaging and Deep learning Paradigms” IGI Global Publication 2025,
3. S.M.Nazia Fathima, **R.Tamilselvi** and M.Parisa Beham, “Role of X-rays in Assessment of Bone Mineral Density – A Review”, chapter6, Innovations in Electronics and Communication Engineering, Lecture Notes in Networks and Systems 65, © Springer Nature Singapore Pte Ltd. 2019. DOI:. ISBN No. 978-981-13-3765-9
4. **R.Tamilselvi** and M.Parisa Beham, “Performance Analysis of Nanoparticles in healthcare and Biomedical Applications”, chapter2, Innovations in Electronics and Communication Engineering, Lecture Notes in Networks and Systems 65, © Springer Nature Singapore Pte Ltd. 2019. ISBN No. 978-981-13-3765-9
5. **R.Tamilselvi** and M.Parisa Beham, “Detection and Classification of Exudates and Non-Exudates in Retinal Images”, chapter1, Innovations in Electronics and Communication Engineering, Lecture Notes in Networks and Systems 65, © Springer Nature Singapore Pte Ltd. 2019. ISBN No. 978-981-13-3765-9
6. **R.Tamilselvi** and M.Parisa Beham, “Accurate Classification of Cancer in Mammogram Images”, chapter8, Innovations in Electronics and Communication Engineering, Lecture Notes in Networks and Systems 65, © Springer Nature Singapore Pte Ltd. 2019. ISBN No. 978-981-13-3765-9

Title of the project	Funding agency	Name of the Principal Investigator / Co-Principal Investigator	Amount	Duration
Fetal Stress Monitoring Device	DST-SEED	Dr. R Tamilselvi Dr. M. Parisa beham	21.48 lakhs	3years

Prosthetic Arm for Amputees	EDII-IVP	Mr.S.M.Seeni Mohamed Aliar , Mr.K. Rajkumar, Dr. R Tamilselvi Dr. M. Parisa Beham	2 Lakhs	1 year
Neonatal care device	EDII-IVP	Dr. R Tamilselvi Dr. M. Parisa Beham	2 Lakhs	2 years
E-cotton	NIAM	Dr. M. Parisa Beham Dr R Tamilselvi	25 Lakhs	3 years
AI and IoT Enabled Smart Aquaculture System	EDII-IVP	Dr R Tamilselvi Dr. M. Parisa Beham	2 Lakhs	2 years
Femcare wearable prenatal monitoring device	Hyundai Motor India Foundation	Dr R Tamilselvi Dr.M.ParisaBeham	15 Lakhs	2 years
Greywater Reuse System Design and Economic Analysis for Residences in Village	UBAN	Dr R Tamilselvi Dr. M. Parisa Beham	1 Lakh	1 year
Accurate Classification and detection of Osteoarthritis using thermal images in Knee	MSME 1.0	Mrs.A.Sabah Afroze, Dr.R. Tamilselvi, Dr. M. Parisa Beham	15 Lakhs	2 Years
Bionic Arm for Amputees	MSME 1.0	Mr.S.M.Seeni Mohamed Aliar Dr. R Tamilselvi, Dr.M.Parisa Beham	15 Lakhs	2 Years
Sanitary Napkin Disposal machine	MSME 1.0	Mrs.A.Sabah Afroze, Dr.R. Tamilselvi, Dr. M. Parisa Beham	15 Lakhs	2 Years
Tyre Pressure Regulator	MSME 1.0	Dr R Tamilselvi, Dr.M.Parisa Beham	15 Lakhs	2 Years
Femcare – wearable prenatal monitoring device	MSME 2.0	Dr .R.Tamilselvi, Dr.M.Parisa Beham	15 Lakhs	2 Years
Amnisen	Nidhi prayas	Dr R Tamilselvi, Dr. M. Parisa Beham	10 Lakhs	1 Year
Kashaya Machine	EDII-IVP	Dr R Tamilselvi, Dr. M. Parisa Beham Mrs.T.Ruba	2 Lakhs	2 years
Malgo	EDII-IVP	Dr .R.Tamilselvi, Dr. M. Parisa Beham	2 Lakhs	2 Years

Garbo	EDII-IVP	Dr. R.Tamilselvi, Dr.M.Parisa Beham	2 Lakhs	2 Years
IOT Based Air Quality Monitoring	EDII-IVP	Dr R Tamilselvi, Dr.M.Parisa Beham	2 Lakhs	2 Years
Aquaculture	EDII-IVP	Dr R Tamilselvi, Dr.M.Parisa Beham	2 Lakhs	2 Years
Osteochex	EDII-IVP	Dr R Tamilselvi, Dr.M.Parisa Beham	2 Lakhs	2 Years
Air to Water	EDII-IVP	Dr R Tamilselvi, Dr.M.Parisa Beham	2 Lakhs	2 Years
Bacterial Detection	EDII-IVP	Dr R Tamilselvi, Dr.M.Parisa Beham	2 Lakhs	2 Years
Ultrasound Based Low Cost Belt for the Detection of Osteoporosis in Postmenopausal Women	DST	Dr.R.Tamilselvi, Dr. M. ParisaBeham	23 Lakhs	3Years
WEECARE	EDII TN(Voucher B)	Dr.R.Tamilselvi, Dr. M. ParisaBeham	6.41Lakhs	2years
Prosthetic Arm	EDII TN(Voucher B)	Dr.R.Tamilselvi, Dr. M. ParisaBeham	5 Lakhs	2years
Lactoscan	EDII TN	Dr.R.Tamilselvi, Dr. M. ParisaBeham	2.5 Lakhs	2years
Lungcare	EDII TN	Dr.R.Tamilselvi, Dr. M. ParisaBeham	2.5 Lakhs	2years
Smartshoe	EDII TN	Dr.R.Tamilselvi, Dr. M. ParisaBeham	2.5 Lakhs	2years
FETOVISION	IIT Palakkad	Dr.R.Tamilselvi, Dr. M. ParisaBeham	10Lakhs	1Years
DUOCARE	Thirissur	Dr.R.Tamilselvi, Dr. M. ParisaBeham	1 Lakhs	1Years
BMD	SEEDBRAIN 3.0	Dr.R.Tamilselvi, Dr. M. ParisaBeham	0.1 lAKHS	-
DUOCARE	HTIC Parivaratan	Dr.R.Tamilselvi, Dr. M. ParisaBeham	14Lakhs	1Years

Thaiseicare	HTIC Nidhiprayas	Dr.R.Tamilselvi, Dr. M. ParisaBeham	7Lakhs	1 Years
Tomato Storage	Tomato Grant Challenge	Dr.T.Ruba, Mrs.M.Uma Maheshwari Dr.R.Tamilselvi, Dr. M. ParisaBeham	90,000	1 Year
Osteochex	MSME 4.0	Mrs.M.Uma Maheshwari Dr.R.Tamilselvi, Dr. M. ParisaBeham	15 Lakhs	2 Year
Smart Shoe	MSME 4.0	Mr.A.Nagaraj Dr.R.Tamilselvi, Dr. M. ParisaBeham	8.5 Lakhs	2 Year
Foot Ulcer	MSME 4.0	Dr.T.Ruba, Dr.R.Tamilselvi, Dr. M. ParisaBeham	7.5 Lakhs	2Year
Advanced wound care treatment accessible to everyone - through a cost- effective NPWT solution made in India	MSME 4.0	Dr.R.Tamilselvi, Dr. M. ParisaBeham	15 Lakhs	2 Year
AI Driven Animal Detection	Niral Thiruvizha	Mrs.M.Uma Maheshwari Dr.R.Tamilselvi, Dr. M. ParisaBeham	10,000	1 Year
Paddy	Niral Thiruvizha	Mr.A.Nagaraj Dr.R.Tamilselvi, Dr. M. ParisaBeham	10,000	1 Year
Grow Smart	Niral Thiruvizha	Dr.T.Ruba, Dr.R.Tamilselvi, Dr. M. ParisaBeham	10,000	1 Year
IOT Enabled monitoring System for Poultry	Niral Thiruvizha	Dr.T.Ruba, Dr.R.Tamilselvi, Dr. M. ParisaBeham	10,000	1 Year

PATENTS APPLIED			
Inventors	Patent Title	Patent No.	Year
S.M.NaziaFathima, R.Tamilselvi and M.ParisaBeham	A Portable Hand-Held X- Ray Based BMD Meter	061COP-001/India	2018
R.Tamilselvi , M.ParisaBeham	A Movable Medirobo For Immovable Elderly People	E-2/2805/2019-CHE/India.	2019

R. Tamilselvi, M.ParisaBeham	Non Invasive Fetal stress monitoring device	E-2/3785/2019-CHE/India 26.11.19	2019
M.ParisaBeham, R. Tamilselvi	Smart Hundi- Acoin counting gadget	E-2/3786/2019-CHE/India 26.11.19	2019
R. Tamilselvi	A system and methodology Air pressure Stabilization and Pumping Apparatus	2020102069(Granted)	2020
R. Tamilselvi, M.Parisa Beham,T.Ru ba	Go Green Sanitary Pads	Temp/E- 1/63574/2021-CHE	2021
R. Tamilselvi, M.ParisaBeham	Smart Nose for Early detection of Diseases and Pests in Mangoes	Temp/E-1/73431/2022-CHE	2022
R. Tamilselvi, M.ParisaBeham	system and device for amniotic fluid measurement	202341054676 A	2023
R. Tamilselvi, M.ParisaBeham	An apparatus for cotton crop monitoring system in argo-field through Sensors	202341054677 A	2023
M.ParisaBeham, R. Tamilselvi	System and apparatus for smart baby care pad sensor and alert system	202341054349 A	2023

Details of Journal Publication (Till Dec 2020):

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S.M.NaziaFathima, R. Tamilselvi and M.ParisaBeham	A Portable Hand-Held X-Ray Based BMD Meter	061COP-001/India	2018
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R.Tamilselvi, M.ParisaBeham	Smart Nose for Early detection of Diseases and Pests in Mangoes	Temp/E-1/73431/2022-CHE	2022
R.Tamilselvi, M.ParisaBeham	system and device for amniotic fluid measurement	202341054676 A	2023
R.Tamilselvi, M.ParisaBeham	An apparatus for cotton crop monitoring system in argo-field through Sensors	202341054677 A	2023
M.ParisaBeham, R.Tamilselvi	System and apparatus for smart baby care pad sensor and alert system	202341054349 A	2023
S M Seeni Mohammed Aliar Maraikkaya, Dr.R.Tamilselvi, Dr.M.Parisa Beham, Ms.K.Shanmugapriya	Duocare sterilization Unit for Medical and Industrial Applications	434486-001	2025
Mrs.A.Sabah Afroze Dr.R.Tamilselvi, Dr.M.Parisa Beham, Ms.J.Judith	Multilevel sanitary Napkin Incinerator	434490-001	2025

Expert Lecture Delivered :

1.Dr.R.Tamilselvi ,Attendent National level seminar on Tips to Publish Research Articals in Reputed Journals at solaimalai college of engineering

2.Dr.R.Tamilselvi ,Attendent National level seminar on FDP&MDP at solaimalai college of engineering