# **BIO DATA**

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WoS Researcher ID: https://publons.com/wos-op/researcher/AAO-5172-2021/

VIDWAN Id: https://vidwan.inflibnet.ac.in/profile/211465

**Researcher Id: B-8105-2013** 



Video Surveillance, Image Processing, Brain Signal Processing and Remote Sensing

#### **Courses Taught**

- ✓ UG: Artificial Intelligence and Robotics, Nature and Bio-inspired Computing, Social Computing,
  Python Programming, Data Structures, Operating Systems, Unix Internals, Java Programming,
  Advanced Java Programming, Software Engineering, User Interface Design, Object Oriented Analysis
  and Design, Business Intelligence, Microprocessors and Microcontrollers
- ✓ **PG:** Deep Learning, Soft Computing, Digital Imaging, Fuzzy Logic Theory & its Applications, Machine Learning Techniques, Advanced Operating Systems, Distributed Computing

#### **Educational Qualifications**

- ✓ **Ph.D.**, 2011, Faculty of ICE, Anna University Chennai, "Multi-view based Human action recognition and behavior understanding using shape features"
- ✓ M.Tech, 2005, CSE, Indian Institute of Technology Madras, "Content based video indexing and retrieval system" First Class with Distinction 8.44 CGPA
- ✓ **B.E,** 1997, CSE, Thiagarajar College of Engineering, Madurai, "Image Morphing", *First Class with Distinction 77.67%*

## Work Experience @ NATIONAL ENGINEERING COLLEGE

Designation	Duration
Professor & Head	10.05.2018 - till date
Professor	13.07.2015 - 09.05.2018
Associate Professor (Sr.Grade)	13.02.2012 - 12.07.2015
Asst. Professor	01.06.2007 - 12.02.2012
Sr. Lecturer	22.05.2006 - 31.05.2007
Lecturer	15.06.1998 - 21.05.2006

## **Professional Memberships**

✓ Member in IEEE, IEEE(CS), ISTE, IE(I)

**Countries visited:** INDONESIA



#### **Professional Awards**

- ✓ Prof. H.N.Mahabala Endowment prize [Best M.Tech thesis] from IIT Madras in 2005.
- ✓ IE(I)Young Engineer Award for the year 2008-2009 from IE(I), Kolkatta.
- ✓ Best TNSCST Project for the year 2010-2011 from TNSCST, Chennai.
- ✓ Received Plaque and Certificate from Institution of Engineers India (IE(I)), Kolkata for the successful completion of IE(I) sponsored project entitled "Design of Adaptive Coal Mine Rescue Robot using WSNs" in 30<sup>th</sup> Indian Engineering Congress during December 17-20, 2015 at Guwahati, Assam.
- ✓ IEEE Professional achiever award for the year 2016-2017.
- ✓ Presented best student project among Asia Pacific region at IEEE-R10 HTC, Indonesia and received Rs.41,000/- as Travel grant from IEEE-HAC during December 2019.
- ✓ NVIDIA DLI Ambassador since February 2021.
- ✓ Faculty Mentor for IEEE-PGDSPF'21 PG-project and won II Prize worth Rs.10,000/from IEEE Madras section during Nov 2021.

## **Sponsored R&D Projects**

Agency Name	Agency Name Project Title From T		То	Amount (Rs.)
NVIDIA Corporation	NVIDIA GPU Grant – Academic Seed Program	Dec	1,25,000	
EPICS in IEEE	casTalk: A smart Cloud Platform for casual talk between normal and deaf people	Dec 2016	Mar 2018	5,24,402
IE(I), Kolkatta	Design of Adaptive Coal Mine Rescue Robot using WSNs	Apr 2014	Mar 2015	20,000
TNSCST, RFID based traffic control and monitoring system		Aug 2010	Mar 2011	6,000
AICTE, Real-time Human Activity New Delhi Recognition System		Aug 2007	Sep 2009	3,70,000
DST, New Delhi	Real-time Multi Human Tracking and activity recognition system	Feb 2006	Mar 2009	14,41,200

### **Supervisor Recognition**

- ✓ Recognized under Anna University Chennai since Feb 2014 [Ref. No. 2340090]
- ✓ PhD Scholars Awarded: 2, Awaiting viva: 4 & in progress: 4

### Intl. Journal Publications (SCI & Scopus Indexed)

- 1. Human facial expression recognition using MANFIS model, V Gomathi, K Ramar, AS Jeevakumar, World Academy of Science, Engineering and Technology 50, 2009.
- 2. A neuro fuzzy approach for facial expression recognition using LBP histograms, V Gomathi, K Ramar, AS Jeevakumar, Int. J. of Computer Theory and Engineering 2 (2), 245, 2010.
- 3. An adaptive region based color texture segmentation using fuzzified distance metric, G Uma Maheswari, K Ramar, D Manimegalai, V Gomathi, Applied soft computing, 11 (2), 2011. (IF:5.472)
- Human action recognition using monotonic triangular context based shape Features, V Gomathi, K Ramar, Int. J. of innovative computing information and control, 7(5 B), 2011.
- 5. A region based an adaptive color texture segmentation using similarity measure of symbolic object approach, G Uma Maheswari, K Ramar, D Manimegalai, V Gomathi, Advanced Engineering Informatics, Vol.33, pp.2167-2173, 2011.
- 6. XML based approach for object oriented medical video retrieval using neural networks, S Thanga Ramya, P Rangarajan, V Gomathi, Journal of Medical Imaging and Health Informatics 6 (3), 2016. (IF:0.659)
- 7. Comprehensive review on fusion techniques for spatial information enhancement in hyperspectral imagery, A Mookambika, V Gomathi, Multidimensional Systems and Signal Processing, 37 (5), 2016. (IF:1.81)
- 8. Pervasive health monitoring through video-based activity information integrated with sensor-cloud oriented context-aware decision support system, JayaLakshmi M, V Gomathi, Multimedia Tools and Applications, 2018. (IF:2.313)
- 9. Fundus Image Classification Using Wavelet Based Features in Detection of Glaucoma, Selvathi D, Prakash N. B, Gomathi V, Hemalakshmi G. R., Biomed Pharmacol J 2018;11(2).
- Sensor-Cloud based Precision Agriculture Approach for Intelligent Water Management,
   JayaLakshmi M, V Gomathi, International Journal of Plant Production, 14, pages177–186(2020). (IF:1.169)
- 11. α-cut induced Fuzzy Deep Neural Network for change detection of SAR images, S.Kalaiselvi, V.Gomathi, 95(2020), 106510, https://doi.org/10.1016/j.asoc.2020.106510 (IF:5.472)
- Air quality prediction through regression model, Aarthi, A., Gayathri, P., Gomathi,
   N.R., Kalaiselvi, S., Gomathi, V., International Journal of Scientific and Technology
   Research, 2020.
- 13. An Efficient Technique for Disease Prediction by using enhanced Machine Learning Algorithms for Categorical Medical Dataset, Veera Anusuya V., Gomathi V., Information Technology and Control, Vol.50, No.1, 2021, pp. 102-122, https://doi.org/10.5755/j01.itc.50.1.25349 (IF:1.228)

- TGSL-Dependent Feature Selection for Boosting the Visual Sentiment Classification, Usha Kingsly Devi Karuthakannan and Gomathi Velusamy, Symmetry, Vol.13, No.8, 1464, Aug 2021, https://doi.org/10.3390/sym13081464 (IF:2.713)
- Kernel eigenmaps based multiscale sparse model for hyperspectral image classification,
   A.Mookambiga, V.Gomathi, Signal Processing: Image Communication, 2021. Vol.99,
   November 2021, https://doi.org/10.1016/j.image.2021.116416 (IF:3.256)
- 16. A unique approach of person re-identification using auto-track regression framework, M. L. Sworna Kokila, V. Gomathi, Journal of Intelligent and Fuzzy Systems, <a href="https://dx.doi.org/10.3233/JIFS-201977">https://dx.doi.org/10.3233/JIFS-201977</a>, Vol. 42, No. 4, pp. 4277-4294, 2021. (IF:1.737)
- 17. Indian Sign language Recognition through Hybrid ConvNet-LSTM Networks, Muthu Mariappan H., Gomathi V., Emitter-International Journal of Engineering and Technology, Vol.9, No.1, Aug 2021, <a href="https://doi.org/10.24003/emitter.v9i1.613">https://doi.org/10.24003/emitter.v9i1.613</a> (ESCI WoS Indexed)
- 18. Sensor-based Human Activity Recognition using fuzzified Deep CNN architecture with λ-max method, Gomathi V., Kalaiselvi S., Thamaraiselvi D, Sensor Review, Vol.42, No.2, pp.250-262, Jan 2022. <a href="http://dx.doi.org/10.1108/SR-06-2021-0195">http://dx.doi.org/10.1108/SR-06-2021-0195</a> (IF:1.583)
- 19. Image captioning using detectors and swarm based learning approach for word embedding vectors, Lalitha B., Gomathi V., Computer Systems Science and Engineering, Vol. 44, No.1, pp.173–189, 2023 <a href="https://doi.org/10.32604/csse.2023.024118">doi:10.32604/csse.2023.024118</a> (IF:1.486)

### **Highlights of Conference Participations**

**IEEEXplore / AIP Proceedings [Scopus Indexed]** 

- 1. A Frame work for Content Based Video Indexing and Retrieval System: CBVIR, V Gomathi, ICCTIT'05.
- 2. Human action recognition using triangular context base shape features, K Ramar, V Gomathi, IHCI'10.
- 3. Unsupervised monitoring of urban land use and land cover change detection in multitemporal images, N Sathya, S Kalaiselvi, V Gomathi, KG Srinivasagan, ICECS'14.
- 4. A Registration Technique for Medical Images using Fuzzy-SIFT Matching, MJ Adaline, S Kalaiselvi, V Gomathi, KG Srinivasagan, ICIIECES'14.
- 5. An Enhanced Underground Pipeline Water Leakage Monitoring And Detection System Using Wireless Sensor Network, M JayaLakshmi, V Gomathi, ICSNS'15.
- 6. Secure communication between wireless medical sensor networks and data servers using pallier and elgamal key cryptosystem, A. Vasukidevi, M JayaLakshmi, V Gomathi, ICCTIDE'16.
- 7. Crowd Scene analysis using Deep Learning Network, Santhini C, Gomathi V, ICCTCT'18.
- 8. Framework for advanced weather forecasting technique using DMaaS in Cloud, Veera Anusuya V., Gomathi V, ICCTCT'18.
- 9. Review based on Image Understanding Approaches, Lalitha B., Gomathi V., ICCTCT '18.

- 10. Human vision reconstruction using brain activity profile, Rathi K, Gomathi V, ICCCA'18.
- 11. Real-Time Recognition of Indian Sign Language, Muthu Mariappan H, Dr.Gomathi V, ICCIDS'19. [Best Paper award]
- 12. Psychological person-centric guiding mechanisms for managing distractions of in-attentive student, V Latha, V Gomathi, Alagappa University, 11-12 July 2019, CPBPE'19.
- 13. Forecasting the outbreak and spread of COVID-19 in India and TamilNadu using logistic growth and SIR models, S Geetha and S Rajeswari, V Gomathi, and V Latha, AICTE sponsored Online Conference on Data Science and Intelligent Information Technology, 2021. AIP Procs. Vol. 2444, No.020004. https://doi.org/10.1063/5.0078248
- 14. Air Quality Prediction using Remote Sensing, R.Raja Selvi, M. Shruthi, G.Nithya, S.Kalaiselvi, M.Jayalakshmi, and V.Gomathi, AICTE sponsored Online Conference on Data Science and Intelligent Information Technology, 2021. AIP Procs. Vol. 2444, No.040005. <a href="https://doi.org/10.1063/5.0078338">https://doi.org/10.1063/5.0078338</a>
- Road Segmentation from remote sensing images using fuzzy based convolutional neural network, J. Hebzibah, S.Kalaiselvi, V.Anitha and V.Gomathi, AICTE sponsored Online Conference on Data Science and Intelligent Information Technology, 2021. AIP Procs. Vol. 2444, No.040007. https://doi.org/10.1063/5.0078336
- 16. Automatic Prediction of Plant Leaf Diseases Using Deep Learning Models: A Review, M. Asta Lakshmi, V.Gomathi, 5<sup>th</sup> International Conference on Electrical, Electronics, Communication, Computer and Optimization Techniques (ICEECCOT), Dec 2021. DOI: 10.1109/ICEECCOT52851.2021.9708043

#### **Abroad Conference Participations**

- Occlusion Detection and Handling for multi human tracking in Video Surveillance Systems, K Ramar, V Gomathi, Dalian University of Technology, CHINA, ISME'09.
- 2. Human Facial Expression Recognition using MANFIS Model, MALAYSIA, ICCISE'09.
- 3. Presented "CasTalk An Intelligent Sign Language to Speech Translator" prototype model at IEEE R10-HTC 2019 Humanitarian Technology Project Competition, held at Universitas Indonesia, Depok City, Indonesia November 12-14, 2019. [with Rs.41,000/- Intl. Travel grant from IEEE-HAC]

#### **Co-ordination of Initiatives**

- ✓ Establishing Image Processing Research Centre with Rs.46 Lakhs Seed Fund from NEC.
- ✓ NVIDIA DLI Ambassador and recognized course instructor for Deep Learning since Feb 2021.
- ✓ Established Centre-of-Excellence NEC-VVDN AI & ML Research work on Computer Vision during April 2020-March 2022 in collaboration with VVDN Technologies, Chennai.
- ✓ Signed MoU with Viable Technologies, Chennai for Web Enterprise Management since January 2022.

- ✓ Signed MoU with Bennett University, Greater Noida as Head-Lead Zone Partner for AI-Deep Learning (leadingindia.ai) research initiative during Aug 2018 March 2021.
- ✓ Signed MoU with UiPath Academic Alliance for global certifications in Robotic Process Automation since August 2019.
- ✓ Signed MoU with Adroit Soft India (P) Ltd, Chennai for Research Innovation in Full stack development since July 2018.
- ✓ Signed MoU with Red Hat Academy, Mumbai for Global Red Hat certifications since September 2018.
- ✓ Remote Centre Coordinator for IIT Bombay Remote Centre for Learning.
- ✓ Staff Counselor, IEEE Computer Society Student Chapter, NEC since June 2018.

#### **Professional Activities**

**Technical Events Organized:** 

Technical Events Organized:			
Event Title	Agency	Amount	Duration
One day National level Technical symposium "COMPONEC-05"	TCS	20000	22.09.2005
A two day DIT sponsored National seminar on "Recent trends		27000	
and issues in video data analysis for surveillance"	DIT	35000	23.12.2008-24.12.2008
National conference on Advanced Networking and Image processing	DST,TCS, DRDO	200000	05.03.2010-06.03.2010
Continuing Education Programme on "Advanced C,C++ Programming"			Aug 2008 to Jan 2009
Technical Seminar by Dr. Gaurav Sharma, University of Rochester, USA			29.08.2012
Value Added Course on "Java Application Development" – Set 1			Even Sem 2014-2015
2days DST sponsored workshop on Advancements in Visual Sensor	_ ~-	27000	
Networks and its impact on public safety & security	DST	35000	08.01.2015-09.01.2015
Value Added Course on "Java Application Development" – Set 2			Odd Sem 2015-2016
2 days DBT sponsored workshop on :Modern computing			
technologies for Affective Brain Computer Interface (ABCI)	DBT	50000	08.01.2016-09.01.2016
IEEE-International Conference on Computing Technologies and	IEEE,TCS, BRNS,		
Intelligent Data Engineering ICCTIDE-16	ISRO	205000	07.01.2016-09.01.2016
Value Added Course on "Business Intelligence Solution Development"			Even Sem 2015-2016
			19th June, 2nd July,
4 days Quality based Professional Training Programme			8th-9th August – 2016
Industrial Training Programme on "Data Science and Machine	EPICs in	60000	24-26, Nov 2017
Learning"	IEEE	00000	24-20, INOV 2017
Research Interaction on "Deep Learning using GPU for Computer Vision	EPICs in	15000	27.01.2018
Applications"	IEEE		27.01.2016
IARCS sponsored 2 days Instructional course on "Applied Game	IARCS,	Technical	07.09.1.12019
Theory"	Delhi	support	07-08, July 2018
DST-SERB sponsored 2 days national workshop on "Machine Learning	DST-SERB,		
Techniques for WSN: Networks to Application Perspective"	New Delhi	50000	17-18, Nov. 2018
Anna University approved FDTP on "Design and Analysis of	ALL CI	Self-	
Algorithms"	AU Chennai	supporting	Dec 2018
Bennett University sponsored 3 days hands-on workshop on "AI and	DII M ' I	10000	20.20 D 2010
Deep Learning"	BU, Noida	10000	28-30 Dec 2018
IEEE Madras section sponsored Symposium IEEEMASSYMP- 2019	IEEE (ITS)	5000	9, March 2019
by Cluster 3 – IEEE (ITS)	, , ,		
2 Days workshop on "Insights in AI & Deep Learning"	NEC	Self-	August 2019
TNSCST sponsored 2 Days symposium - COMPONEC'19	TNSCST	supporting 20000	12-13, Sep 2019
1113C51 sponsored 2 Days symposium - COIVII OIVEC 17	INSCSI	20000	12-13, Sep 2019

Event Title	Agency	Amount	Duration
Anna University approved FDTP on "Compiler Design"	AU Chennai	18000	16-21 Dec 2019
CIIL sponsored 2 days National Seminar on "Recent Trends &	CIIL,		
Research Directions of Deep Learning in Natural Language	Bangaluru	30000	29-30, Jan 2020
Processing"			
IEEE MAS section sponsored 2 days workshop on "Machine	IEEE MAS	10000	31 Jan & 1 Feb 2020
Learning using Python"			
CIIL sponsored 2 days National Seminar on "Research avenues in Deep	CIIL,	30000	14&15, Feb 2020
Learning for Natural Language Processing"	Bangaluru		
CRSI sponsored 2 days Instructional workshop on "Emerging research	CRSI, Kolkatta	25000	28&29 Sep 2020
frontiers in Quantum Safe Cryptography"			
IEEE MAS section sponsored 2 days workshop on "Machine Learning	IEEE MAS	10000	29 & 30 Jan 2021
using Python"			
AICTE sponsored National Online Conference on Data Science and	AICTE, New	Self-	14 & 15 May 2021
Intelligent Information Technology	Delhi	supporting	-
ATAL-FDP on "Predictive Intelligence Models and its Applications"	AICTE	93000	12 – 16 July 2021
	Training and		·
	Learning		
	Academy		
	(ATAL)		
IEEE CS-USA sponsored National Level Virtual Project Exhibition	IEEE CS-USA	14379(\$197)	18 Dec 2021
2021(ProExpo'21)			
IARCS sponsored 4 days Instructional course on "Randomized	IARCS,	Technical	21-22&28-29, Jan 2022
Algorithms, Derandomization and Applications"	Delhi	support	

# **Expert Lectures Delivered (during past 10+ Years):**

S.No	Title	Venue	Date
1.	Guest Lecture on "Outcome based Education: An	· ·	02.09.2022
	Assessment"	College, Sattur	
2.	Guest Lecture on "Science & Technology for sustainable future"	Science Centre, Tirunelveli	11.05.2022
3.		Managanian Condensor	05 05 2022
3.	TNSCST – MSU In Service Training Plenary Talk on "Role & responsibilities of Teachers; Importance of		05.05.2022
	Teaching Skills"	University, Tirunerven	
4.		Kumaraguru College of Technology,	04.02.2022
	for Decision Making"	Coimbatore	
5.	Guest Lecture on "Artificial Intelligence in Security and	GCE, Tirunelveli	19.11.2021
	Face Recognition"		
6.	National Workshop on Computational tools for	Kristu Jayanti College, Bangaluru	08.10.2021
	Research – "Deep Learning"		
7.			10.08.2021
	Schemes"	Chennai	
8.	ATAL FDP - Security and privacy issues for human-	NEC, Kovilpatti	15.07.2021
	centered predictive intelligence		
9.	1 0	Kristu College, Bangaluru	11.01.2021
	Applications"		
10.	ATAL FDP - MIS : Optimizing Search	MEPCO Schlenk Engg. College,	07.01.2021
		Sivakasi	
	AICTE STTP - Deep Learning approaches for	Syedammal Engineering College,	25.07.2020,
	classification	Ramnad	16.08.2020
	AICTE STTP - Soft computing techniques for AI		15.07.2020,
	problems	Chennai	08.08.2020,
			18.09.2020
13.	IE(I) STTP - Deep learning for Healthcare Applications	KCET, Coimbatore	21.07.2020
14.	Machine Learning using Python	GCE, Tirunelveli	27.09.2019

	Recent trends in Computing	Sri SRNM College, Sattur	31.07.2019
	Embedding Deep learning in IoT Healthcare Devices	CSIR Seminar, NEC, Kovilpatti	31.01.2019
	Hands-on session on Neural Network ToolBox	IEEE Students Branch, NEC	24.01.2019
		*	
	AU Chennai FDTP on DAA	NEC, Kovilpatti	04.12.2018
	Machine Learning Techniques for Big Data	CSI Students Chapter, NEC	15.02.2018
	Raspberry Pi for Computer Vision	ISTE Students Branch, NEC	03.02.2018
	Domains for Human Cognition Development	Anna University, Chennai	07.10.2017
	Python for Beginners	IEEE Students Branch, NEC	09.09.2017
	Python Programming with Functions	GCE, Tirunelveli	16.08.2017
	NLP – Understanding & Generation	NEC, Kovilpatti	05.10.2016
	Hands-on session on EEGLAB Toolbox for BCI	ISTE, NEC, Kovilpatti	29.09.2016
	Real-time applications of PRML in MATLAB	NEC, Kovilpatti	11.08.2016
	Hands-on session on Neural Network ToolBox	IEEE Students Branch, NEC	05.08.2016
28.	Recent advancements in Image Processing	VVV College for Women, Virudhunagar	17.07.2016
29	Security in Cyberspace	IEEE Students' Chapter, NEC	09.04.2016
	Big Data Technologies	NECSI'16 Symposium, NEC	09.03.2016
	Information theoretic Entities	IEEE Students Branch, NEC	05.03.2016
	Big Data Technologies	CSI, NEC, Kovilpatti	09.10.2015
	Research avenues in Medical Image Processing	Sathakathulla Appa	25.08.2015
	The source of th	College, Tirunelveli	20.00.2010
3/1	Hands-on session on Neural Network ToolBox	IEEE Students Branch, NEC	07.08.2015
	Multimodal biometric authentication	Sri Saradha College for women,	25.07.2015
55.		Tirunelveli	23.07.2013
36.	Cloud computing approaches for genome informatics	NEC, Kovilpatti	09.07.2015
37.	Hands on session on Video processing ToolBox	NEC, Kovilpatti	09.01.2015
	Digital Image Processing using MATLAB	IEEE Students' Chapter,	06.09.2014
		NEC, Kovilpatti	
39.	Applications of Soft Computing Tools	Mohandas College of Engg. & Tech,	
		Trivandrum, Kerala	08.04.2014
40.	Food processing using NDT	NEC, Kovilpatti	08.04.2014 04.10.2013
	Food processing using NDT  Research Issues on Non Destructive Evaluation	,	
41.	Research Issues on Non Destructive Evaluation	NEC, Kovilpatti	04.10.2013
41.	Research Issues on Non Destructive Evaluation Verifiable Evidence Security	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti	04.10.2013 20.09.2013 02.08.2013
41. 42. 43.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning	NEC, Kovilpatti NEC, Kovilpatti	04.10.2013 20.09.2013
41. 42. 43. 44.	Research Issues on Non Destructive Evaluation Verifiable Evidence Security	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore NEC, Kovilpatti	04.10.2013 20.09.2013 02.08.2013 03.06.2013
41. 42. 43. 44.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning  NP Completeness in AU sponsored FDP	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore	04.10.2013 20.09.2013 02.08.2013 03.06.2013 10.06.2013
41. 42. 43. 44. 45.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning  NP Completeness in AU sponsored FDP  Multi-resolution Analysis using Wavelets	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore NEC, Kovilpatti MEPCO Schlenk Engg. College, Sivakasi	04.10.2013 20.09.2013 02.08.2013 03.06.2013 10.06.2013 22.05.2013
41. 42. 43. 44. 45.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning  NP Completeness in AU sponsored FDP  Multi-resolution Analysis using Wavelets  Computational Models for Cognitive Science	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore NEC, Kovilpatti MEPCO Schlenk Engg. College,	04.10.2013 20.09.2013 02.08.2013 03.06.2013 10.06.2013
41. 42. 43. 44. 45.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning  NP Completeness in AU sponsored FDP  Multi-resolution Analysis using Wavelets  Computational Models for Cognitive Science  Research Issues & Challenges in Video Processing	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore NEC, Kovilpatti MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti MSU, Tirunelveli	04.10.2013 20.09.2013 02.08.2013 03.06.2013 10.06.2013 22.05.2013
41. 42. 43. 44. 45. 46. 47. 48.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning  NP Completeness in AU sponsored FDP  Multi-resolution Analysis using Wavelets  Computational Models for Cognitive Science	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore NEC, Kovilpatti MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti MSU, Tirunelveli Anna University (TRC), Tirunelveli	04.10.2013 20.09.2013 02.08.2013 03.06.2013 10.06.2013 22.05.2013 02.02.2013 17.12.2012
41. 42. 43. 44. 45. 46. 47. 48.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning  NP Completeness in AU sponsored FDP  Multi-resolution Analysis using Wavelets  Computational Models for Cognitive Science  Research Issues & Challenges in Video Processing  Image Understanding and Motion Analysis	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore NEC, Kovilpatti MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti MSU, Tirunelveli	04.10.2013 20.09.2013 02.08.2013 03.06.2013 10.06.2013 22.05.2013 02.02.2013 17.12.2012 13.12.2012
41. 42. 43. 44. 45. 46. 47. 48. 49.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning  NP Completeness in AU sponsored FDP  Multi-resolution Analysis using Wavelets  Computational Models for Cognitive Science  Research Issues & Challenges in Video Processing  Image Understanding and Motion Analysis  Semantic Image Analysis	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore NEC, Kovilpatti MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti MSU, Tirunelveli Anna University (TRC), Tirunelveli MEPCO Schlenk Engg. College, Sivakasi	04.10.2013 20.09.2013 02.08.2013 03.06.2013 10.06.2013 22.05.2013 02.02.2013 17.12.2012 13.12.2012
41. 42. 43. 44. 45. 46. 47. 48. 49.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning  NP Completeness in AU sponsored FDP  Multi-resolution Analysis using Wavelets  Computational Models for Cognitive Science  Research Issues & Challenges in Video Processing  Image Understanding and Motion Analysis  Semantic Image Analysis  Applications of NNs in Nuclear Reactor Monitoring	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore NEC, Kovilpatti MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti MSU, Tirunelveli Anna University (TRC), Tirunelveli MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti	04.10.2013 20.09.2013 02.08.2013 03.06.2013 10.06.2013 22.05.2013 17.12.2012 13.12.2012 12.10.2012 28.09.2012
41. 42. 43. 44. 45. 46. 47. 48. 49. 50.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning  NP Completeness in AU sponsored FDP  Multi-resolution Analysis using Wavelets  Computational Models for Cognitive Science  Research Issues & Challenges in Video Processing  Image Understanding and Motion Analysis  Semantic Image Analysis	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore NEC, Kovilpatti MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti MSU, Tirunelveli Anna University (TRC), Tirunelveli MEPCO Schlenk Engg. College, Sivakasi	04.10.2013 20.09.2013 02.08.2013 03.06.2013 10.06.2013 22.05.2013 02.02.2013 17.12.2012 13.12.2012
41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning  NP Completeness in AU sponsored FDP  Multi-resolution Analysis using Wavelets  Computational Models for Cognitive Science  Research Issues & Challenges in Video Processing  Image Understanding and Motion Analysis  Semantic Image Analysis  Applications of NNs in Nuclear Reactor Monitoring  Feature Extraction for video processing  Hands on workshop - Soft Computing in MATLAB	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore NEC, Kovilpatti MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti MSU, Tirunelveli Anna University (TRC), Tirunelveli MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti R.M.D. Engineering College, Chennai Dr.G.U.Pope College of Engineering, Sawyerpuram	04.10.2013 20.09.2013 02.08.2013 10.06.2013 22.05.2013 22.05.2013 17.12.2012 13.12.2012 12.10.2012 28.09.2012 23.06.2012 22.03.2012
41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51.	Research Issues on Non Destructive Evaluation  Verifiable Evidence Security  Unsupervised Learning  NP Completeness in AU sponsored FDP  Multi-resolution Analysis using Wavelets  Computational Models for Cognitive Science Research Issues & Challenges in Video Processing Image Understanding and Motion Analysis Semantic Image Analysis  Applications of NNs in Nuclear Reactor Monitoring Feature Extraction for video processing	NEC, Kovilpatti NEC, Kovilpatti NEC, Kovilpatti PSG Tech, Coimbatore NEC, Kovilpatti MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti MSU, Tirunelveli Anna University (TRC), Tirunelveli MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti MEPCO Schlenk Engg. College, Sivakasi NEC, Kovilpatti R.M.D. Engineering College, Chennai Dr.G.U.Pope College of Engineering,	04.10.2013 20.09.2013 02.08.2013 03.06.2013 10.06.2013 22.05.2013 17.12.2012 13.12.2012 12.10.2012 28.09.2012 23.06.2012

55.	Fuzzy logic based embedded system design	Einstein College of Engineering, Tirunelveli	30.09.2011
56.	Medical Image Analysis and their issues	NEC, Kovilpatti	06.08.2011
57.	Application of Soft computing in Electrical Engg.	NEC, Kovilpatti	05.08.2011
58.	Bioinformatics and its design issues	Sri Vidya College of Engg, Virudhunagar	10.03.2011
59.	Advances in facial biometrics	Sri Vidya College of Engg, Virudhunagar	23.08.2010
60.	Recent trends and Research Issues in Image Processing	Bharath Niketan College of Engg, Theni	19.03.2010

### **Technical Events Attended:**

Venue	Duration	Event Title
Pondicherry Academic College, Pondicherry	18.05.1999 to 07.06.1999	21 Days AICTE sponsored Induction Programme for Engineering Education
NEC. Kovilpatti	26.02.2000	ISTE Convention on "Teaching – Learning Strategy"
IITM, Chennai	27.03.2005 to 29.03.2005	3 Days Quality Improvement Training Programme on "Teaching Methodologies" sponsored by NITTTR, Chennai
NEC, Kovilpatti	14.09.2006 to 16.09.2006	Two days workshop on "PhD Aspirants meet on Academic Research : An Industrial Perspective"
NITT, Trichy	05.12.2007	One day DST sponsored seminar on "Image and Video processing & analysis"
NEC, Kovilpatti	16.05.2008 to 17.05.2008	Two day National seminar on "Pattern recognition for Multimedia content analysis"
MEPCO, Sivakasi	22.08.2008 to 23.08.2008	Two days CSIR National Seminar on "Multimedia Signal Processing"
NEC, Kovilpatti	30.11.2009 to 04.12.2009	Five days "Mission10X" workshop
NEC, Kovilpatti	31.03.2010 to 01.04.2010	Two days advanced Workshop on "Course Planning" sponsored by Wipro Systems, Bangalore
NEC, Kovilpatti	28.01.2011 to 29.01.2011	Two days CSIR sponsored National Seminar on "Research Issues in Wearable Computing"
Cognizant Technology Systems, Chennai	30.06.2011 to 01.07.2011	Two days Cognizant - ICT academy of Tamilnadu sponsored Faculty Development Programme on "RIPLLE- 2011"
NEC, Kovilpatti	14.02.2013	One day Special Lecture on "Advances in Image Processing" by Dr.R.Balasubramanian, IIT Roorkee
TCE, Madurai	29.04.2013	One day NBA Evaluator/Resource person Workshop on "Outcome based Education" (Phase – I)
TCE, Madurai	09.05.2013 to 11.05.2013	Three days NBA Evaluator/Resource person Workshop on "Outcome based Education" (Phase – II)
NEC, Kovilpatti	08.11.2014 to 09.11.2014	Two days TN&P ISTE Convention, at NEC, Kovilpatti
NEC, Kovilpatti	28.11.2014 to 30.11.2014	Three days Ignite HR orientation Programme
NEC, Kovilpatti	18.11.2015 to 20.11.2015	Formulation of Research & Development Grant Proposals by Scientists and Technologists – 3 Days
NITT, Treihy	27.11.2015 to 28.11.2015	Two days workshop on "Video Analytics" under Indo-US 21st Century Knowledge Initiative Programme

Leela Ambience, Gurgaon	18.03.2016 to 20.03.2016	3 <sup>rd</sup> World Summit on "Outcome Based Accreditation"
NEC, Kovilpatti	08.01.2016 to 09.01.2016	Two days DBT sponsored National workshop on Modern computing technologies for Brain Computer Interface (ABCI)
Amrita, Kerala	06.05.2016	National Nodal Centre Conference
IIT Kanpur	14.07.2016 – 25.08.2016	Elite certification for NPTEL course on "How the Brain Creates Mind"
Chennai Statistical Institute	Jan–Mar 2017	Golden Elite certification for NPTEL course on "Programming, Data Structures and Algorithms in Python" (20 Hrs) 91%
IIT Kanpur	July–Sep 2017	Elite certification for NPTEL course on "Cognition, Transformation and Lives"
IIT Hyderabad, Telangana	5 <sup>th</sup> Mar – 9 <sup>th</sup> Mar' 2018	5 days GIAN course on "Programming GPUs & Accelerators: A Principled Quantitative Approach"
KLE Technological University, Karnataka	11 <sup>th</sup> – 13 <sup>th</sup> Aug 2018	3 Days leadingindia.ai workshop on "Deep Learning and AI"
IIT Madras	Aug-Oct, 2018	Elite certification for NPTEL course on "Deep Learning – Part 1"
IIT Karaghpur	July-Sep, 2019	Elite certification for NPTEL course on "Psychology for Every Day"
	8-12, February, 2020	Faculty Empowerment Programme on "Teaching, Learning and Assessment with MOOC platform and Open Education Resources"
AICTE, New Delhi	11-15, May 2020	Online UHV workshop on "Inculcating Universal human values in Technical Education"
IEEE	24 Oct 2020	Mentor for IEEEXtreme 14.0 Hackathon Global Coding Contest
NVIDIA DLI Institute	15 Jan 2021	Certification of Competency in Fundamentals of Deep Learning
NVIDIA DLI Institute	21 May 2021	Certification of Competency in Deep Learning for Healthcare Image analysis
IEEE	Oct 2021	Mentor for IEEEXtreme 15.0 Hackathon Global Coding Contest
NVIDIA DLI Institute	23 March 2022	Certification of Competency in Applications of AI in Predictive Maintenance
IIT Karaghpur	Jan-Mar, 2022	Elite certification for NPTEL course on "Emotional Intelligence"