Tapan Kumar Gandhi (Ph.D.) ***FNAE, SMIEEE***
Associate Professor, Department of Electrical Engineering
Indian Institute of Technology Delhi
Cadence Chair Professor in Artificial Intelligence & Automation
Convener, Computer Technology
Chairperson, Project Prakash Charitable Trust
Adjunct Faculty, School of AIDE, IIT Jodhpur
Email: tgandhi@ee.iitd.ac.in, Ph. : 011-26591153



Education	▪ Postdoctoral research associate, Dept. of Brain and Cognitive Sciences**, MIT, USA** (Research Advisor: Prof. Pawan Sinha, Deptt. of Brain and Cognitive Sciences, MIT USA) ▪ Ph.D.: 2007-2011, (Biomedical Engineering) IIT Delhi jointly with MIT USA **(MIT PhD. Fellowship)** ***Thesis title*: Behavioral & Neurophysiological Correlates of Object Representation and Evidence of Neural Plasticity** (Research Advisor: Prof. Pawan Sinha, Deptt. of Brain and Cognitive Sciences, **MIT USA**; Prof. Sneh Anand, Deptt. of CBME, **IIT Delhi**) ▪ M.Tech.: 2004-2006, (Bioelectronics) Tezpur University, Assam ***Thesis title: Electro-oculogram based multimode embedded controller to assist severely disabled*** ▪ M.Sc.: 2001-2003, (Electronics) Sambalpur University, Odisha ▪ B.Sc.: 1998-2001, (Physics), Fakir Mohan College, Odisha
Professional Experience	▪ **(4 Years, 3months) Associate Professor:** March' 2019- Till Date, EE, IIT Delhi, India ▪ **(1 Year) Cadence Chair Professor in Artificial Intelligence:** March 2022-Till Date, EE, IIT Delhi, India ▪ **(5 Years) Chairperson Project Prakash Charitable Trust:** 2018: Till Date, India ▪ **(4 Years)** Asst. Professor: Apr'2015- Mar' 2019, IIT Delhi, India ▪ **(3 Years, 1 Months)** Post Doc: 2012-2015, BCS, MIT USA ▪ **(~7 Months)** Research Associate: 2011-2012, SCEH, New Delhi ▪ (1 Month) INSPIRE Faculty, DIPAS, DRDO **(Total: 11 Years, 09 Months) (**upto June 2023**)**
Thesis Supervision	▪ Masters: 30 Completed ▪ **Ph.D.: 9 Completed**, 12 Comprehensives Completed, 4 in Progress
Projects & Consultancies **(PI: 476.5 Lakhs)** **(Co-PI: 270 Lakhs)**	▪ PI: 6 Projects (635 Lakhs, Externally Funded), **2 Completed with outstanding Grade** ▪ **PI: 4** Projects (51.5 Lakhs, Internally Funded) ▪ **Co-PI:** 2 Projects (2500 Lakhs, 1 externally funded and 1 Consultancy from Samsung, 1 from DGGI, Govt. of India), Completed.
Publications & Patents	▪ **Journal Papers:** Total: 74 (1 in ***Nature*** Neuroscience, 5 in ***PNAS,*** 1 article in **Science**, 1 in ***Current Biology***, 1 in ***Plos Biology***) **(9 Papers>10 Impact Factor)** ▪ **Conference Proceedings:** 70 International, 30 National ▪ **Book Edited:** 3 ▪ **Patents: 3** Patents filed & **3** in Process
Citation Record	▪ Google Scholar Citations: 3487, h-index: 23, i10-index: 45 https://scholar.google.co.in/citations?user=VyIA2PwAAAAJ&hl=en
Societal Impact	• Providing Training/ dissemination of knowledge nearly 100 young scientists from India and Abroad every year on Brain Mapping & AI. This year, I organized only for budding women Scientist. • Providing sight restoration intervention and education to Visually Impaired. • Guiding and helping various University/ Colleges to boost their Research & Development

New Courses Developed (3)	(1) Computational Neuroscience, (2) Computational Perception and Cognition, (3) Healthcare Technology
Lab Development	▪ Neurocomputing Laboratory (With high-end equipment from project funds), Block-2, 305 ▪ Perception Engineering Experimental Facility, Block-2, 326
Development/ Translation to Technology **(Possible Startup)**	• Potable AI based Eye movement Perimetry Device • '**Nataraj**' to Diagnose Epilepsy (Patent Filed), under clinical Trial at AIIMS. • '**WinV**' to enhance functional vision in Low Vision Individuals. • '**Smart Shoes**'/Portable Plannter Pressure measurement system. • 'Smart **Document Reader'** for low vision Individuals • **Ivin Device** for Precise Drug Delivery into Human Vitreous
Impact/Contributions to Science, Society and Engineering	▪ Refinement of **Nobel Prize Winning "Critical Period Hypothesis"** of sensory learning. ▪ Contributed in understanding of Autism and possible qualitative diagnosis techniques. ▪ **Biggest message to Society:** Treatment to curably blind humans shouldn't be denied based on age. ▪ **Instrumental in restoration of sight to more than 700 Blind Humans in India.** ▪ Already provided and in process of refining the process of intelligent learning in machines.
Administrative Responsibility	**Department Level:** ▪ Faculty in-charge for basic electrical engineering, Embedded UG lab since 2017 ▪ Founded and in-charge of Neurocomputing Lab ▪ Founded and in-charge of Perception Engineering Expt. Facility **Institute Level:** ▪ Institute Representative in GATE/JAM/IIT JEE Exams ▪ Convenor for Institute of Eminence Strategic Planning, IIT Delhi ▪ Faculty for Behavioral training to IIT Delhi non-teaching staff ▪ Strategy Planning & Implementation Committee ▪ Brain science and Technology Workshop (TEQIP/CEP)/ Year since 2016 ▪ Hosted two international students from Harvard University in my lab (GROW Fellowship), two from MIT. **Outside Institute Level:** ▪ **Chairperson, Project Prakash Charitable Trust, New Delhi (Restoring sight and providing education to Visually Impaired) (*www.Prakashtrust.org*)** ▪ Adjunct Faculty, School of AI & Data Science, IIT Jodhpur ▪ Partner of Vision Projects, European Union ▪ Invited international committee member to review Vision Projects, European Union 2018 ▪ Expert member in Early Career Award, TARE Scheme, SUPRA, SRG, CRG, NPDF, POWER (SERB), Neurotools, DBT, Govt. of India ▪ **Super Mentor, KIIT TBI and Innovation** ▪ Expert member, Selection committee, NBRC, Haryana ▪ Committee Member of KIIT-TBI NIDHI PRAYAS Project Screening, Bhubaneswar ▪ Expert Panel member to select Scientist in UNESCO MGIEP, New Delhi ▪ Industry Relevant Research and Development (IRRD) Workshop (SERB): 14.5 Lakhs ▪ Expert for Research Symposium, SGGSIE&T, Nanded ▪ Member in various expert & Research Committees, AIIMS New Delhi ▪ Involved in technology development, CoE, Neurodevelopmental Disorder, AIIMS

	▪ Delivered ~ 150 invited Talks (including session chairs) in India and one each in Harvard U, Yale U (Generated US $ 20,000), Copenhagen U & U of Groningen ▪ **Active collaborations with AIIMS, ICGEB (MoU), NIMHANS, MIT, Harvard U, Yale U, U Groningen (MoU), NJIT USA**
Awards and other Professional activities	▪ Elected Fellow of Indian National Academy of Engineering (2022) ▪ Cadence Chair Professor in Artificial Intelligence & Automation (2022-2027) ▪ Fellow IETE ▪ SRISTI: GYTI Award 2019 for artificial Biomarkers of Knee Osteoarthritis ▪ Double Gold medals from Ex-President, Dr APJ Abdul Kalam (Topper of all topper in M.Sc.) ▪ **NASI-Young Scientist Platinum Jubilee Award 2015** ▪ INSPIRE Faculty (Engineering) Award **(Outstanding Grade)** ▪ IIT Delhi Industry Day Award 2018, Open House Award, 2016,2017,2018 ▪ INDICON 2015, 2016 Award & few other Research awards on international Platforms ▪ Senior Member, IEEE ▪ Few other Awards
Media Highlights	▪ Research Highlights Published in The Hindu News Paper & Wall Street Journal ▪ GEO magazine article, Germany (Dec 2017) ▪ Coverage in **SCIENCE Magazine** (Featured article and also the cover page) MIT & Harvard News Article, New York Times, Boston Globe etc.
Extra-Curricular Activities	▪ Editor-in-Chief IETE Journal of Research ▪ Member of IIT Delhi Football team ▪ (Involved in Childhood blindness alleviation and providing education to these children for better integration to mainstream society.

PUBLICATIONS

Publications in peer-reviewed Journals (8 Papers in **more than 10 Impact Factor** journal)

1. C. Ralekar, **T. K. Gandhi** and S. Chaudhury (2023). Collaborative Human Machine Attention Module for Character Recognition. *IEEE Trans. Artif. Intell.*, 2023 (In Press), Impact Factor: 6.95

2. G. Pavani P., B. Biswal and **T. Gandhi** (2023). Simultaneous multiclass retinal lesion segmentation using fully automated RILBP-YNet in diabetic retinopathy. *Biomedical Signal Processing and Control, Elsevier,* Vol. 86, Part B, September 2023, 105205,), Impact Factor: 5.076

3. R. S. Soans, R. J. Renken, R. Saxena, R. Tandon, F. W. Cornelissen, and **T. K. Gandhi** "A framework for the continuous evaluation of 3D Motion Perception in Virtual Reality," *IEEE Trans. Biomed. Eng.,* doi: 10.1109/TBME.2023.3271288, 2023 (In Press), Impact Factor: 4.75

4. C. A. Pedersini, A. Miller, N.P., and **T. K. Gandhi***, "White Matter Plasticity Following Sight-Recovery in Congenitally Blind Patients," *PNAS*, 2023 (In Press), Impact Factor: 12.78

5. J. Maheswari, S.D. Joshi, **T. K. Gandhi**, "Analysing the Brain Networks corresponding to the Facial Contrast-Chimeras. *Perception,* 2023 (In Press), Impact Factor: 1.9

6. R. Dev, S. Kumar, **T. K. Gandhi,** "Tracking Brain Transitions", *IEEE Sensors Lett.*, 2023 (In Press), Impact Factor: 3.04

7. **T. K.Gandhi**, S.S.A. Zaidi, S.Ganesh, X. Boix, and P. Sinha., "Face Localization after early and extended Blindness," *Dev. Sci.*, 2023 (In Press), Impact Factor: 5.01

8. C. B. Kumar, A.K. Mondal, M. Bhatia, B. K. Panigrahi, and **T. K. Gandhi**, "Self-Supervised Representation learning Based OSA detection method using single channel ECG signal," *IEEE Trans. Instrum. Meas.*, 2023 (In Press), Impact Factor: 4.0

9. S. Gautam, **T. K. Gandhi**, and B. K. Panigrahi, "WMCP-EM: An integrated dehazing framework for visibility restoration in single image," *Comput. Vis. Image Underst.*, vol. 229, p. 103648, 2023, Impact Factor: 3.8

10. P. Singh, **T. K. Gandhi**, and others, "Reorganization of resting-state brain network functional connectivity across human brain developmental stages," *Brain Res.*, vol. 1800, p. 148196, 2023, Impact Factor: 3.2

11. D. Konar, S. Bhattacharyya, **T. K. Gandhi**, B. K. Panigrahi, and R. Jiang, "3D Quantum-inspired self-supervised tensor network for volumetric segmentation of medical images," *IEEE Trans. Neural Networks Learn. Syst.*, doi: 10.1109/TNNLS.2023.3240238, 2023, Impact Factor: 14.26

12. P. Gupta, P. Shah, S. Shrestha, S. Gilad-Gutnick, S. Ganesh, **T. K. Gandhi**, and P. Sinha, "Vulnerability of facial attractiveness perception to early and multi-year visual deprivation," *Dev. Sci.*, vol. 26, no. 1, p. e13258, 2023, Impact Factor: 5.01

13. S. Ahuja, B. K. Panigrahi, and **T. K. Gandhi**, "Enhanced performance of Dark-Nets for brain tumor classification and segmentation using colormap-based superpixel techniques," *Mach. Learn. with Appl.*, vol. 7, p. 100212, 2022, Impact Factor: 6.7

14. R. S. Soans, R. J. Renken, R. Saxena, R. Tandon, **T. K. Gandhi**, and F. W. Cornelissen, "Exploring the potential of portable visual fields assessment using Virtual-Reality and eye movement based perimetry," in *PERCEPTION,* 2022, vol. 51, p. 158, Impact Factor: 1.9

15. J. Maheshwari, S. D. Joshi, and **T. K. Gandhi**, "Real-Time Automated Epileptic Seizure Detection by analysing Time Varying High Spatial Frequency Oscillations," *IEEE Trans. Instrum. Meas.*, 2022, Impact Factor: 4.0

16. R. Wadhawan and **T. K. Gandhi**, "Landmark-aware and Part-based Ensemble Transfer Learning Network for Static Facial Expression Recognition from images," *IEEE Trans. Artif. Intell.*, 2022, Impact Factor: 6.95

17. T. Kaur and **T. K. Gandhi**, "Classifier Fusion for Detection of COVID-19 from CT Scans," *Circuits, Syst. signal Process.*, pp. 1–18, 2022, Impact Factor: 2.31

18. E. Striem-Amit, S. Sen, N. Tong, X. Wang, **T. K. Gandhi**, V. Mahajan, S. Ben-Ami, S. Gilad-Gutnick, Y. Bi, and P. Sinha, "Individual differences of brain plasticity in early visual deprivation and sight restoration," *J. Vis.*, vol. 22, no. 14, p. 3483, 2022, Impact Factor: 2.1

19. S. Ahuja, B. K. Panigrahi, N. Dey, A. Taneja, and **T. K. Gandhi**, "McS-Net: Multi-class Siamese network for severity of COVID-19 infection classification from lung CT scan slices," *Appl. Soft Comput.*, vol. 131, p. 109683, 2022, Impact Factor: 8.263

20. G. Pavani, B. Biswal, and **T. K. Gandhi**, "Multistage DPIRef-Net: An effective network for semantic segmentation of arteries and veins from retinal surface," *Neurosci. Informatics*, vol. 2, no. 4, p. 100074, 2022, Impact Factor: 4.08

21. P. Tripathi, M. A. Ansari, **T. K. Gandhi**, R. Mehrotra, M. B. Bin Heyat, F. Akhtar, C. C. Ukwuoma, A. Y. Muaad, Y. M. Kadah, M. A. Al-Antari, and others, "Ensemble Computational Intelligent for Insomnia Sleep Stage Detection via the Sleep ECG Signal," *IEEE Access*, vol. 10, pp. 108710–108721, 2022. Impact Factor: 3.36

22. K. Lohia, R. S. Soans, D. Agarwal, R. Tandon, R. Saxena, and **T. K. Gandhi**, "Stereopsis following surgery in children with congenital and developmental cataracts: A systematic review and meta-analysis," *Surv. Ophthalmol.*, 2022, Impact Factor: 6.197

23. A. Giri, L. Kumar, N. Kurwale, and **T. K. Gandhi**, "Anatomical harmonics basis based brain source localization with application to epilepsy," *Sci. Rep.*, vol. 12, no. 1, p. 11240, 2022, Impact Factor: 4.996

24. P. Gupta, P. Shah, S. G. Gutnick, M. Vogelsang, L. Vogelsang, K. Tiwari, **T. K.Gandhi**, S. Ganesh, and P. Sinha, "Development of visual memory capacity following early-onset and extended blindness," *Psychol. Sci.*, vol. 33, no. 6, pp. 847–858, 2022, Impact Factor: 7.09

25. R. Hafiz, **T. K. Gandhi**, S. Mishra, A. Prasad, V. Mahajan, X. Di, B. H. Natelson, and B. B. Biswal, "Higher Limbic and Basal Ganglia volumes in surviving COVID-negative patients and the relations to fatigue," *Neuroimage: Reports*, vol. 2, no. 2, p. 100095, 2022, Impact Factor: 6.55

26. H. Padole, S. D. Joshi, and **T. K. Gandhi**, "Early Detection of Alzheimer's Disease Using Graph Signal Processing and Deep Learning.," *Intell. Autom. Soft Comput.*, vol. 31, no. 3, 2022, Impact Factor: 1.65

27. S. Gautam, **T. K. Gandhi**, and B. K. Panigrahi, "A Model-based dehazing scheme for unmanned aerial vehicle system using radiance boundary constraint and graph model," *J. Vis. Commun. Image Represent.*, vol. 74, p. 102993, 2021, Impact Factor: 2.6

28. T. Kaur, **T. K. Gandhi**, and B. K. Panigrahi, "Automated Diagnosis of COVID-19 using Deep Features and Parameter Free BAT Optimization," *IEEE J. Transl. Eng. Heal. Med.*, vol. 9, pp. 1–9, 2021, Impact Factor: 3.31

29. R. S. Soans, R. J. Renken, J. John, A. Bhongade, D. Raj, R. Saxena, R. Tandon, **T. K. Gandhi**, and F. W. Cornelissen, "Patients Prefer a Virtual Reality Approach Over a Similarly Performing Screen-Based Approach for Continuous Oculomotor-Based Screening of Glaucomatous and Neuro-Ophthalmological Visual Field Defects," *Front. Neurosci.*, vol. 15, 2021, Impact Factor: 4.6

30. A. Giri, L. Kumar, and **T. K. Gandhi**, "Cortical Source Domain Based Motor Imagery and Motor Execution Framework for Enhanced Brain Computer Interface Applications," *IEEE Sensors Lett.*, 2021, Impact Factor: 2.36

31. S. Azimi, R. Wadhawan, and **T. K. Gandhi**, "Intelligent Monitoring of Stress Induced by Water Deficiency in Plants Using Deep Learning," *IEEE Trans. Instrum. Meas.*, vol. 70, pp. 1–13, 2021, Impact Factor: 3.6

32. S. Ahuja, B. K. Panigrahi, N. Dey, V. Rajinikanth, and **T. K. Gandhi**, "Deep transfer learning-based automated detection of COVID-19 from lung CT scan slices," *Appl. Intell.*, vol. 51, no. 1, pp. 571–585, 2021, Impact Factor: 3.325

33. **T. K. Gandhi**, K. Tsourides, N. Singhal, A. Cardinaux, W. Jamal, D. Pantazis, M. Kjelgaard, and P. Sinha, “Autonomic and Electrophysiological Evidence for Reduced Auditory Habituation in Autism,” *J. Autism Dev. Disord.*, vol. 51, no. 7, pp. 2218–2228, 2021, Impact Factor: 3.4

34. J. Ye, P. Gupta, P. Shah, K. Tiwari, **T. K. Gandhi**, S. Ganesh, F. Phillips, D. Levi, F. Thorn, S. Diamond, and others, “Resilience of temporal processing to early and extended visual deprivation,” *Vision Res.*, vol. 186, pp. 80–86, 2021, Impact Factor: 2.53

35. G. P. Pappu, B. Biswal, **T. K. Gandhi**, and M. V. S. Sai Ram, “Classification of neovascularization on retinal images using extreme learning machine,” *Int. J. Imaging Syst. Technol.*, vol. 31, no. 3, pp. 1536–1550, 2021, Impact Factor: 1.9

36. T. Kaur, A. Diwakar, P. Mirpuri, M. Tripathi, P. S. Chandra, **T. K. Gandhi**, and others, “Artificial Intelligence in Epilepsy,” *Neurol. India*, vol. 69, no. 3, p. 560, 2021, Impact Factor: 2.7

37. S. Azimi and **T. K. Gandhi**, “3-D maximum likelihood estimation sample consensus for correspondence grouping in 3-D plant point cloud,” *IEEE Sensors Lett.*, vol. 5, no. 6, pp. 1–4, 2021, Impact Factor: 2.31

38. R. S. Soans, A. Grillini, R. Saxena, R. J. Renken, **T. K. Gandhi**, and F. W. Cornelissen, “Eye-movement--based assessment of the perceptual consequences of glaucomatous and neuro-ophthalmological visual field defects,” *Transl. Vis. Sci. Technol.*, vol. 10, no. 2, p. 1, 2021, Impact Factor: 2.3

39. S. Azimi, T. Kaur, and **T. K. Gandhi**, “A deep learning approach to measure stress level in plants due to nitrogen deficiency,” *Measurement*, vol. 173, p. 108650, 2021, Impact Factor: 5.131

40. T. Kaur and **T. K. Gandhi**, “Deep convolutional neural networks with transfer learning for automated brain image classification,” *Mach. Vis. Appl.*, vol. 31, no. 3, pp. 1–16, 2020, Impact Factor: 2.983

41. D. Konar, S. Bhattacharyya, **T. K. Gandhi**, and B. K. Panigrahi, “A quantum-inspired self-supervised network model for automatic segmentation of brain MR images,” *Appl. Soft Comput.*, vol. 93, p. 106348, 2020, Impact Factor: 8.263

42. J. Maheshwari, S. D. Joshi, and **T. K. Gandhi**, “Tracking the Transitions of Brain States: An Analytical Approach Using EEG,” *IEEE Trans. Neural Syst. Rehabil. Eng.*, vol. 28, no. 8, pp. 1742–1749, 2020, Impact Factor: 3.4

43. J. Maheshwari, M. Bhatia, P. Swami, **T. K. Gandhi**, and S. D. Joshi, “Impact of CPAP on LF Power, HF Power and LF--HF Ratio in Patients with Severe OSA During Split Night Study,” *Sleep Vigil.*, vol. 4, no. 1, pp. 23–28, 2020, Impact Factor: 2.29

44. S. Gautam, **T. K. Gandhi**, and B. K. Panigrahi, “An Improved Air-Light Estimation Scheme for Single Haze Images Using Color Constancy Prior,” *IEEE Signal Process. Lett.*, vol. 27, pp. 1695–1699, 2020, Impact Factor: 2.53

45. T. Kaur, **T. K. Gandhi**, G. S. Bisht, and I. Adhikari, “Prevalence of foot problems and its related associations in Intellectually Disable (Special Olympic) Indian population,” *Foot*, vol. 42, p. 101650, 2020, Impact Factor: 1.32

46. H. Padole, S. D. Joshi, and **T. K. Gandhi**, "Graph wavelet-based multilevel graph coarsening and its application in graph-CNN for alzheimer's disease detection," *IEEE Access*, vol. 8, pp. 60906–60917, 2020, Impact Factor: 4.1

47. A. Giri, L. Kumar, and **T. K. Gandhi**, "Brain Source Localization in Head Harmonics Domain," *IEEE Trans. Instrum. Meas.*, vol. 70, pp. 1–10, 2020, Impact Factor: 4.0

48. G. Dey, A. Ganguli, B. Bhattacharjee, and **T. K. Gandhi**, "Electrical response-based technique for estimation of degree of moisture saturation in cement concrete and mortar in drying and wetting cycle," *Constr. Build. Mater.*, vol. 262, p. 120855, 2020, Impact Factor: 4.41

49. P. Sinha, S. Crucilla, **T. K.Gandhi**, D. Rose, A. Singh, S. Ganesh, U. Mathur, and P. Bex, "Mechanisms underlying simultaneous brightness contrast: early and innate," J. *Vision Res.*, vol. 173, pp. 41–49, 2020, Impact Factor: 2.53

50. T. Gupta, **T. K. Gandhi**, R. K. Gupta, and B. K. Panigrahi, "Classification of patients with tumor using MR FLAIR images," *Pattern Recognit. Lett.*, vol. 139, pp. 112–117, 2020, Impact Factor: 1.99

51. R. D. Bharath, R. Panda, J. Raj, S. Bhardwaj, S. Sinha, G. Chaitanya, K. Raghavendra, R. C. Mundlamuri, A. Arimappamagan, M. B. Rao, **T. K. Gandhi**, and others, "Machine learning identifies 'rsfMRI epilepsy networks' in temporal lobe epilepsy," *Eur. Radiol.*, vol. 29, no. 7, pp. 3496–3505, 2019, Impact Factor: 4.1

52. P. Swami, M. Bhatia, M. Tripathi, P. S. Chandra, B. K. Panigrahi, and **T. K. Gandhi**, "Selection of optimum frequency bands for detection of epileptiform patterns," *Healthc. Technol. Lett.*, vol. 6, no. 5, pp. 126–131, 2019, Impact Factor: 2.1

53. **T. K. Gandhi**, A. K. Singh, P. Swami, S. Ganesh, and P. Sinha, "Emergence of categorical face perception after extended early-onset blindness," *PNAS.*, vol. 114, no. 23, pp. 6139–6143, 2017, Impact Factor: 12.78

54. P. Swami, **T. K. Gandhi**, B. K. Panigrahi, M. Bhatia, J. Santhosh, and S. Anand, "A comparative account of modelling seizure detection system using wavelet techniques," *Int. J. Syst. Sci. Oper. Logist.*, vol. 4, no. 1, pp. 41–52, 2017, Impact Factor: 2.1

55. A. Kalia, **T. K. Gandhi**, G. Chatterjee, P. Swami, H. Dhillon, S. Bi, N. Chauhan, S. Das Gupta, P. Sharma, S. Sood, and others, "Assessing the impact of a program for late surgical intervention in early-blind children," *Public Health*, vol. 146, pp. 15–23, 2017, Impact Factor: 1.74

56. T. Gupta, **T. K. Gandhi**, and B. K. Panigrahi, "Multi-sequential MR brain image classification for tumor detection," *J. Intell. Fuzzy Syst.*, vol. 32, no. 5, pp. 3575–3583, 2017, Impact Factor: 1.4

57. P. Swami, **T. K. Gandhi**, B. K. Panigrahi, M. Tripathi, and S. Anand, "A novel robust diagnostic model to detect seizures in electroencephalography," *Expert Syst. Appl.*, vol. 56, pp. 116–130, 2016, Impact Factor: 8.665

58. K. Tsourides, S. Shariat, H. Nejati, **T. K. Gandhi**, A. Cardinaux, C. T. Simons, N.-M. Cheung, V. Pavlovic, and P. Sinha, "Neural correlates of the food/non-food visual distinction," *Biol. Psychol.*, vol. 115, pp. 35–42, 2016, Impact Factor: 3.94

59. **T. K. Gandhi**, A. Kalia, S. Ganesh, and P. Sinha, "Immediate susceptibility to visual illusions after sight onset," *Curr. Biol.*, vol. 25, no. 9, pp. R358--R359, 2015, Impact Factor: 10.83

60. S. Ganesh, P. Arora, S. Sethi, **T. K. Gandhi**, A. Kalia, G. Chatterjee, and P. Sinha, “Results of late surgical intervention in children with early-onset bilateral cataracts,” *Br. J. Ophthalmol.*, vol. 98, no. 10, pp. 1424–1428, 2014, Impact Factor: 2.4

61. P. Sinha, M. M. Kjelgaard, **T. K. Gandhi**, K. Tsourides, A. L. Cardinaux, D. Pantazis, S. P. Diamond, and R. M. Held, “Autism as a disorder of prediction,” *PNAS*, vol. 111, no. 42, pp. 15220–15225, 2014, Impact Factor: 12.78

62. A. Kalia, L. A. Lesmes, M. Dorr, **T. K. Gandhi**, G. Chatterjee, S. Ganesh, P. J. Bex, and P. Sinha, “Development of pattern vision following early and extended blindness,” *PNAS*, vol. 111, no. 5, pp. 2035–2039, 2014, Impact Factor: 12.78

63. **T. K. Gandhi**, S. Ganesh, and P. Sinha, “Improvement in spatial imagery following sight onset late in childhood,” *Psychol. Sci.*, vol. 25, no. 3, pp. 693–701, 2014, Impact Factor: 4.43

64. P. Sinha, G. Chatterjee, **T. K.Gandhi**, and A. Kalia, “Restoring vision through ‘Project Prakash’: the opportunities for merging science and service,” *PLoS Biol.*, vol. 11, no. 12, p. e1001741, 2013, Impact Factor: 10.3

65. **T. K. Gandhi**, P. Bhowmik, A. Mohapatra, S. Das, S. Anand, and B. K. Panigrahi, “Epilepsy diagnosis using combined duffing oscillator and PNN Model,” *J. Bioinforma. Intell. Control*, vol. 1, no. 1, pp. 64–70, 2012.

66. **T. K. Gandhi**, N. Suresh, and P. Sinha, “EEG responses to facial contrast-chimeras,” *J. Integr. Neurosci.*, vol. 11, no. 02, pp. 201–211, 2012, Impact Factor: 2.12

67. **T. K.. Gandhi**, B. K. Panigrahi, J. Santhosh, and S. Anand, “Contribution of brain waves for visual differences in animate and inanimate objects in human brain,” *J. Comput. Theor. Nanosci.*, vol. 9, no. 2, pp. 233–242, 2012, Impact Factor: 2.22

68. **T. K. Gandhi**, P. Chakraborty, G. G. Roy, and B. K. Panigrahi, “Discrete harmony search based expert model for epileptic seizure detection in electroencephalography,” *Expert Syst. Appl.*, vol. 39, no. 4, pp. 4055–4062, 2012, Impact Factor: 8.665

69. R. Periyasamy, **T. K. Gandhi**, S. R. Das, A. C. Ammini, and S. Anand, “A Screening Computational Tool for Detection of Diabetic Neuropathy and Non-Neuropathy in Type-2 Diabetes Subjects,” *J. Med. Imaging Heal. Informatics*, vol. 2, no. 3, pp. 222–229, 2012, Impact Factor: 0.643

70. **T. K. Gandhi**, A. Khurana, J. Santhosh, and S. Anand, “Configurational imagery experience in sighted and visually impaired children,” *J. Indian Acad. Appl. Psychol.*, vol. 37, pp. 128–133, 2011.

71. R. Held, Y. Ostrovsky, B. de Gelder, **T. K. Gandhi**, S. Ganesh, U. Mathur, and P. Sinha, “The newly sighted fail to match seen with felt,” *Nat. Neurosci.*, vol. 14, no. 5, pp. 551–553, 2011, Impact Factor: 24.97

72. **T. K.. Gandhi**, B. Panigrahi, and S. Anand, “A comparative study of wavelet families for EEG signal classification,” *Neurocomputing*, vol. 74, pp. 3051–3057, 2011, Impact Factor: 5.779

73. **T. K. Gandhi**, M. Trikha, J. Santhosh, and S. Anand, “Development of an expert multitask gadget controlled by voluntary eye movements,” *Expert Syst. Appl.*, vol. 37, no. 6, pp. 4204–4211, 2010, Impact Factor: 8.665

74. **T. K. Gandhi**, B. K. Panigrahi, M. Bhatia, and S. Anand, "Expert model for epileptic seizure detection in EEG Signature," *Expert Syst. Appl.*, vol. 37, no. 4, pp. 3513–3520, 2010, Impact Factor: 8.665

Featured Article in SCIENCE

A1. Out of Darkness (2015). **Science,** Vol. 350, Issue 6259, pp. 372-375, *DOI: 10.1126/science.350.6259.372.*
(My Research is covered in this Science Article and the Cover page is given to our work)

Conference Proceedings

1. A. Samantaray, T. Kaur, S. Singhal, and **T. K Gandhi**, "Remote Assistance in Cervical Cancer Screening using Microsoft Hololens 2: An Augmented-Reality Based Approach," in Proceedings of *IEEE International Conference on Recent Advances in Electrical, Electronics & Digital Healthcare Technologies, 2023 (REEDCON2023),* Jamia Millia Islamia, New Delhi, 4-5th May, 2023 (Accepted for Publication).

2. R. Gupta, A. Bhongade, and T. K. Gandhi, "Hand 3D Trajectory Estimation for BCI Application," in Proceedings of *IEEE International Conference on Recent Advances in Electrical, Electronics & Digital Healthcare Technologies, 2023 (REEDCON2023),* Jamia Millia Islamia, New Delhi, 4-5th May, 2023 (Accepted for Publication).

3. A. Bhongade, R. Gupta, **T. K. Gandhi**, and Prathosh AP, "A Portable Low-Cost Respiration Rate Measurement System for Sleep Apnea Detection**,**" In *Proceedings of EMBC 45th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Sydney, Australia* 24-27th July 2023(Accepted for Publication)

4. C. B. Kumar, A. Bhongade, **T. K. Gandhi**, and B. K. Panigrahi, "Recognition of Obstructive Sleep Apnea from a Single Lead Electrocardiogram Signal Using a ResNet Model," in Proceedings of *14th International Conference on Computing, Communication, and Networking Technologies (ICCCNT 2023),* IIT Delhi, pp. 1–5, 6-8th July, 2023 (Accepted for Publication)

5. R. Gupta, A. Bhongade, and **T. K. Gandhi**, "Multimodal Wearable Sensors-based Stress and Affective States Prediction Model," in *Proceedings of 9th International Conference on Advanced Computing and Communication Systems (ICACCS)*, Coimbatore, India, vol. 1, pp. 30–35, March 17-18, 2023.

6. R. Dev, S. Kumar, and **T. K. Gandhi**, "Does Spatial Location of The Electrodes in EEG Matter for Tracking the Brain States?," in *Proceedings of National Conference on Communications (NCC)*, IIT Guwahati, India, pp. 1–5, 23 - 26 February, 2023.

7. P. Tripathi, M. A. Ansari, **T. K. Gandhi**, R. Mehrotra, C. Singh, A. Singh, and S. Chauhan, "A Robust R Peak Recognition Procedure of a cardiac Signal using Modified Db 20 Wavelet Transform," in *Proceedings of International Conference on Power, Instrumentation, Energy and Control (PIECON)*, Aligarh, India, pp. 1–6, 10-12 February, 2023.

8. P. Tripathi, M. A. Ansari, **T. K. Gandhi**, R. Mehrotra, L. Layba, S. Gupta, and M. Junaid, "A Comparative Analysis on 1D & 2D ECG applying Data Compression Approaches," in *Proceedings of International Conference on Artificial Intelligence and Smart Communication (AISC)*, Greater Noida, India, pp. 261–266, 27-29 January 2023.

9. A. Bhongade, R. Gupta, and **T. K. Gandh**i, "Automatic Detection of Sleep Apnea from Single-lead ECG Signal Using Machine Learning," in *Proceedings of International Conference on Futuristic Technologies (INCOFT)*, Belgaum, India , pp. 1–5, 25-27 November, 2022.

10. A. Gupta, A. Valecha, S. Mishra, and **T. K. Gandhi**, "Text Based Diagnosis of COVID-19 using Data Mining Techniques: A Comparative Study," in *Proceedings of IEEE 19th India Council International Conference (INDICON)*, Kochi, India, pp. 1–6, November 2022.

11. A. Bhongade, R. Gupta, and **T. K. Gandhi**, "Machine Learning-Based Gait Characterization Using Single IMU Sensor," in *Proceedings of IEEE International Conference on Computing, Communication, and Intelligent Systems (ICCCIS)*, Greater Noida, India, pp. 263–266, November 2022.

12. E. Gupta, S. Azimi, and **T. K. Gandhi**, "Characterizing Water Deficiency induced stress in Plants using Gabor filter based CNN," in *Proceedings of IEEE IAS Global Conference on Emerging Technologies (GlobConET)*, Arad, Romania, pp. 91–95, May 2022.

13. S. Madan, A. Diwakar, S. Chaudhury, and **T.K Gandhi**, "Pneumonia Classification Using Few-Shot Learning with Visual Explanations," in *Proceedings of Intelligent Human Computer Interaction: 13th International Conference, IHCI 2021,* Kent, OH, USA, pp. 229–241, December 2021, Revised Selected Papers, 2022.

14. S. Gupta, **T. K. Gandhi**, and P. Sinha, "Understanding Structure Induced Functional Connectivity in Brain using EEG," in *Proceedings of Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC)*, Tokyo, Japan, pp. 1281–1288, December 2021.

15. S. Gupta and **T. K. Gandhi**, "Face perception in the human brain as a small-world network," in *PERCEPTION*, vol. 50, no. 1_ SUPPL, England, pp. 104–105, January 2021.

16. S. Ahuja, B. K. Panigrahi, and **T. K. Gandhi**, "Fully automatic brain tumor segmentation using DeepLabv3+ with variable loss functions," in *Proceedings of 8th International Conference on Signal Processing and Integrated Networks (SPIN)*, Noida, India, pp. 522–526, August 2021.

17. S. Madan, S. Chaudhury, and **T. K. Gandhi**, "Automated detection of COVID-19 on a small dataset of chest CT images using metric learning," in *Proceedings of 2021 International Joint Conference on Neural Networks (IJCNN)*, Shenzhen, China, pp. 1–8, July 2021.

18. S.Garg, **T. K. Gandhi** and B.K. Panigrahi. Social Network measures association with social and intelligent behaviors in Dolphin network, In *Proceedings of IEEE 11th International Conference on Cloud Computing, Data Science & Engineering*, U. P, India, pp. 655-659, January 2021

19. S. Ahuja, B. K. Panigrahi, **T. K. Gandhi** and U. Gautam, Deep learning-based computer-aided diagnosis tool for brain tumor classification, In *Proceeding of 11thInternational Conference on Cloud Computing, Data Science & Engineering*, U. P, India, pp. 854-859, January 2021.

20. A. Giri, L. Kumar, **T. K. Gandhi**. Robust EEG Source Localization Using Subspace Principal Vector Projection Technique, In *Proceeding of IEEE 28th European Signal Processing Conference (EUSIPCO)*, Amsterdam, Netherlands, pp. 1075-1079, January 2021

21. S. Azimi, T. Kaur, **T. K. Gandhi**. BAT Optimized CNN Model Identifies Water Stress in Chickpea Plant Shoot Images. In *Proceeding of IEEE 25th International Conference on Pattern Recognition (ICPR)*, Milan, Italy, pp. 8500-8506, January 2021.

22. C. Ralekar, **T. K. Gandhi** and S. Chaudhury. Collaborative Human Machine Attention Module for Character Recognition. In *Proceeding of IEEE 25th International Conference on Pattern Recognition (ICPR)*, Milan, Italy, pp. 9874-9880, January 2021.

23. T. Kaur and **T. K. Gandhi**. Automated Diagnosis of COVID-19 from CT Scans Based on Concatenation of Mobilenetv2 and ResNet50 Features, In *Proceeding of 5th IAPR International Conference On Computer Vision & Image Processing* (CVIP) (1), IIIT Allahabad, India, pp. 149–160, December 2020.

24. A. Diwakar, T. Kaur, C. Ralekar, and **T. K. Gandhi**. Deep Learning Identifies Brain Cognitive Load Via EEG Signals. In *Proceeding of IEEE 17th India Council International Conference (INDICON)*, New Delhi, India, pp. 1-5, December 2020.

25. S. Azimi and T. K. Gandhi. Water Stress Identification in Chickpea Images using Machine Learning. In *Proceeding of IEEE 8th R10 Humanitarian Technology Conference (R10-HTC)*, Kuching, Malaysia, pp. 1-6, December 2020.

26. S. Azimi, T. Kaur and **T. K. Gandhi**. Water Stress Identification in Chickpea Plant Shoot Images Using Deep Learning. In *Proceeding of IEEE 17th India Council International Conference (INDICON)*, New Delhi, India, pp. 1-7, December 2020.

27. S. Gupta, **T. K. Gandhi** and P. Sinha. Dynamic Functional Connectivity Reveals Stages of Face Perception in Brain. In *Proceeding of IEEE 17th India Council International Conference (INDICON)*, New Delhi, India, pp. 1-8, December 2020.

28. S. Madan, A. Diwakar, **T. K. Gandhi** and S. Chaudhury. Unboxing the Blackbox - Visualizing the Model on Hand Radiographs in Skeletal Bone Age Assessment. In *Proceeding of IEEE 17th India Council International Conference (INDICON)*, New Delhi, India, pp. 1-6, December 2020.

29. S. Madan, **T. K. Gandhi** and S. Chaudhury. Bone age assessment for lower age groups using triplet network in small dataset of hand X-rays. In *Proceeding of 12th International Conference on Intelligent Human Computer Interaction (IHCI2020)*, Daegu, South Korea, November 2020.

30. S. Charu, S. P. Mishra and **T. K. Gandhi**. Vision to Language: Captioning Images using Deep Learning, In *Proceeding of 2020 International Conference on Artificial Intelligence and Signal Processing (AISP)*, Amaravati, India, pp. 1-8, January 2020.

31. T. Kaur and **T. K. Gandhi**. Automated Brain Image Classification Based on VGG-16 and Transfer Learning. In *Proceeding of IEEE International Conference on Information Technology (ICIT)*, Bhubaneswar, India, pp. 94-98, December 2019,

32. A. Haritosh, C. Ralekar, T. Kaur and **T. K. Gandhi**. Human Visual Learning Inspired Effective Training Methods. In *Proceeding of IEEE 16th India Council International Conference (INDICON)*, Rajkot, India, pp. 1-4, December 2019.

33. S Gupta, **T. K. Gandhi**. Identification of Neural Correlates of Face Recognition Using Machine Learning Approach. In *Proceeding of Computer Vision and Machine Intelligence in Medical Image Analysis*, Sikkim, India, pp. 13-20, February 2019

34. C. Ralekar, S. Choudhary, **T. K. Gandhi**, S. Chaudhury. Intelligent Identification of Ornamental Devanagari Characters Inspired by Visual Fixations. In *Proceeding of IEEE International Conference on Document Analysis and Recognition Workshops (ICDAR)*, vol. 5, Sydney, NSW, Australia, pp 14-19, September 2019

35. S. Gilad-Gutnick, G. Kurian, P. Gupta, K. Tiwari, P. Shah, S. Raja, S. Ben-Ami, **T. K. Gandhi**, S. Ganesh, and P. Sinha, "Development of facial expression recognition following extended blindness: The importance of motion," *J. Vis.*, vol. 19, no. 10, p. 21a--21a, 2019.

36. N. P. Miller, **T. K. Gandhi**, P. Sinha, and B. Rokers, "White-Matter plasticity following sight-restoration in congenitally blind patients," *J. Vis.*, vol. 19, no. 10, p. 277d--277d, 2019.

37. **T. K. Gandhi**, P. Swami, S. Gupta, and P. Sinha, "Detecting Simultaneity Following Late Sight Onset in Congenital Cataract Blinds," in *PERCEPTION*, 2019, vol. 48, pp. 181–182.

38. S Azimi, B Lall, **T. K. Gandhi**. Performance Evalution of 3D Keypoint Detectors and Descriptors for Plants Health Classification. In *Proceeding of IEEE 16th International Conference on Machine Vision Applications (MVA)*, Tokyo, Japan, pp. 1-6, May 2019

39. H. Padole, S.D. Joshi, **T. K. Gandhi**. Early Detection of Alzheimer's Disease using Graph Signal Processing on Neuroimaging Data. In *Proceeding of IEEE 2nd European Conference on Electrical Engineering and Computer Science,* Bern, Switzerland, pp. 302-306, December 2018.

40. S Garg, **T. K. Gandhi**, BK Panigrahi. Identifying Gender Specific Interaction Pattern: A Social Network Approach. In *Proceeding of IEEE 8th International Advance Computing Conference (IACC)*, Greater Noida, India, pp. 168-173, December 2018.

41. A Gupta, S Khandelwal, T**. K. Gandhi**. Blind navigation using ambient crowd analysis. In *Proceeding of IEEE 8th International Advance Computing Conference (IACC)*, Greater Noida, India, pp. 131-135, December 2018.

42. T Singhal, A Khare, N Gupta, **T. K. Gandhi**. 3D-Printed Sole with Variable Density using Foot Plantar Pressure Measurements. In *Proceeding of IEEE 8th International Advance Computing Conference (IACC)*, Greater Noida, India, pp. 136-141, December 2018.

43. C Ralekar, P Saha, **T. K. Gandhi**, S Chaudhury. Effect of Devanagari Font Type in Reading Comprehension: An Eye Tracking Study. In *Proceeding of International Conference on Intelligent Human Computer Interaction*, Allahabad, India, pp. 136-147, December 2018

44. A. Giri, L. Kumar, **T. K. Gandhi**. EEG dipole source Localization in hemispherical harmonics domain. Proceedings, In *Proceeding of IEEE APSIPA Annual Summit and Conference*, Hawaii, USA, pp. 679-684, November 2018

45. S Gautam, **T. K. Gandhi**, BK Panigrahi. An Advanced Visibility Restoration Technique for Underwater Images. In *Proceeding of 25th IEEE International Conference on Image Processing (ICIP),* Athens, Greece, pp. 1757-1761, October 2018

46. **T. K. Gandhi**, P Swami, S. Gupta, P. Sinha. Detecting simultaneity following late sight onset in congenital cataract blinds. In *Proceedings of J. Perception (ECVP Abstract),* Trieste, Italy, vol. 48, pp. 181-182, August 2018.

47. S. K.Wupadrasta, A. Giri, L. Kumar, **T. K. Gandhi**. Hemispherical Harmonics based Brain Source Localization. In *Proceeding of Human Brain Mapping conference*, Singapore, pp. 17-21, June 2018.

48. S. Gautam, **T. K. Gandhi** and B. K. Panigrahi, Single image dehazing using image boundary constraint and nearest neighborhood optimization, In *Proceeding of Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP)*, Hyderabad, India, pp. 1-5, December 2018.

49. P.V. Tirumani, S. Das, P. Swami, **T. K. Gandhi**. A Low-Noise Low-Cost EEG Amplifier for Neural Recording Applications. In *Proceeding of Advanced Computational and Communication Paradigms*, Sikkim, India, pp. 581-589, September 2017.

50. C. Ralekar, **T. K. Gandhi**, S. Chaudhury. Unlocking the Mechanism of Devanagari Letter Identification Using Eye Tracking. In *Proceeding of International Conference on Pattern Recognition and Machine Intelligence*, Kolkata, India, pp. 219-226, December 2017

51. J. Kar, A. Chordia, **T. K. Gandhi**, SC Sharma. Isolated word speech recognition using larynx vibrations. In *Proceeding of IEEE Region 10 Symposium (TENSYMP)*, Cochin, India, pp. 1-5, July 2017.

52. S. Deedwaniya and **T. K. Gandhi**. An ensemble approach for brain computer interface applications. In *Proceeding of IEEE Region 10 Humanitarian Technology Conference* (R10-HTC), Agra, India, pp. 1-4, December 2016

53. G. Choudhary and **T. K. Gandhi**. Indexing facial attractiveness and well beings using machine learning. In *Proceeding of IEEE Region 10 Humanitarian Technology Conference* (R10-HTC), Agra, India, pp. 1-6, December 2016

54. P. Shree, P. Swami, V. Suresh, **T. K. Gandhi**. A novel technique for identifying attentional selection in a dichotic environment. In *Proceeding of IEEE Annual India Conference (INDICON)*, Bangalore, India, pp. 1-5, December 2016.

55. A. V. Pai, J. Bellare, **T. K. Gandhi**. Chemoretina: An alternate approach to retinal prosthesis: Visual stimulation strategy using chemicals. In *Proceeding of IEEE Annual India Conference (INDICON)*, Bangalore, India, pp. 1-4, December 2016.

56. **T. K. Gandhi** and S. Chouhan. Alteration of Brain Network in subjects exposed to High altitude. In *Proceedings of OHBM 2016 Annual meeting (poster presentation),* Geneva, Switzerland, June 2016

57. D. S. T. Behera, A. Kumar, P. Swami, B. K. Panigrahi, and **T. K. Gandhi**. Detection of epileptic seizure patterns in EEG through fragmented feature extraction. In *Proceeding of IEEE 3rd International Conference on Computing for Sustainable Global Development*, New Delhi, India, pp. 2539-2542, March 2016

58. T. Gupta, **T. K. Gandhi**, and B. K. Panigrahi. Classification of post contrast T1 weighted MRI brain images using support vector machine. In *Proceeding of IEEE 3rd International Conference on Computing for Sustainable Global Development*, New Delhi, India, pp. 2560-2563, March 2016

59. Neha and **T. K. Gandhi**. Resting state fMRI analysis using Seed based and ICA methods. In *Proceeding of IEEE 3rd International Conference on Computing for Sustainable Global Development*, New Delhi, India, pp. 2551-2554, March 2016

60. C. Ralekar, S.K. Roy and **T. K. Gandhi**. Emotion Classification from EEG Signals. In *Proceeding of IEEE 3rd International Conference on Computing for Sustainable Global Development*, New Delhi, India, pp. 2543-2546, March 2016.

61. P. Swami, **T. K. Gandhi**, B. K. Panigrahi, M. Bhatia, and S. Anand. Locating ictal activities over human scalp with automated detection using EEG signals. In *Proceeding of 3rd International Conference on Signal Processing and Integrated Networks (SPIN)*, Noida, India, pp.600-604, February 2016.

62. P. Swami, **T. K. Gandhi**, B. K. Panigrahi, M. Bhatia, and S. Anand. Detection of ictal patterns in electroencephalogram signals using 3D phase trajectories. In *Proceeding of IEEE Annual India Conference (INDICON)*, New Delhi, India, pp. 1-6, December 2015.

63. **T. K. Gandhi**, S. Chouhan, S.B. Singh. Delineating Default mode and Central Executive Control network in subjects exposed to high altitude, In *Proceedings of SfN*, presentation No: 751.01*(poster presentation),* Chicago, USA, October 2015.

64. **T. K. Gandhi**, K. Gomboy & S. Chandola. Designing a 3D Virtual Reality IES (Imaging, Evaluation and Suggestion) Diagnostic System. In *Proceedings of Immersion 2015,* Paris, France, September 2015.

65. A. L. Cardinaux, K. Tsourides, H. Nejati, D. Jin, **T. K. Gandhi**, M. M. Kjelgaard, P. Sinha. Reduced Anticipatory Responses during dynamic object interaction in Autism. In *Proceedings of International meeting for Autism Research*, Salt Lake City, UT, USA, May 2015

66. A. L. Cardinaux, H. Nejati, C.K. Rogers, K. Tsourides, **T. K. Gandhi**, M. M. Kjelgaard, P. Sinha. Decreased habituation to naturalistic stimuli in Autism. In *Proceedings of International meeting for Autism Research*, Salt Lake City, UT, USA, May 2015.

67. P. Swami, S. Anand, B. K. Panigrahi, **T. K. Gandhi**, and J. Santhosh (2015). Application of photoplethysmography for brain-computer interface: a pilot study. In *Proceedings of IEEE International Conference on Reliability, Infocom Technologies and Optimization*, Noida, India, pp. 1-4, September 2015.

68. **T. K. Gandhi**, P. Swami, A. Kalia, V. Mahajan, S. Gorlin, M. Meng, S. Ganesh, H. Mahajan, S. Whitfield- Gabrieli, P. Sinha. Development of face perception following the onset of sight in congenitally blind humans. In *Proceedings of SfN*, poster: 780.04/A51 (*poster presentation*), Washington, D.C., November 2014

69. **T. K. Gandhi**. Establishing cross-modal sensory mapping for development of autonomous learning system. In *Proceedings of IEEE Brain Grand Challenges Conference*, Washington D.C., November 2014

70. **T. K. Gandhi**, P. Swami, A. Kalia, V. Mahajan, M. Meng, S. Gorlin, S. Ganesh, S. Whitfield-Gabrieli, P. Sinha. Emergence of resting state functional connectivity across face selective cortical regions in congenital late sight-onset blind individuals. In *Proceedings of 4th Biennial conference on resting brain connectivity*, Poster 63A (*poster presentation*), Cambridge, MIT, September 2014.

71. **T. K. Gandhi**, S. Chouhan, S. A. Anteraper, R. Kumar, K. Ray, U. Panjwani, S. Whitfield-Gabrieli, S. B. Singh. Hyper connectivity in DMN and hypo connectivity in ECN in subjects exposed to High altitude. In *Proceedings of 4th Biennial conference on resting brain connectivity*, Poster 62C (*poster presentation*), Cambridge, MIT, September 2014.

72. P. Swami and **T. K. Gandhi**. Assistive Communication System for Speech Disabled Patients Based on Electro-Oculogram Character Recognition. In *Proceedings of IEEE International Conference on Computing for Sustainable Global Development*, New Delhi, India, pp. 373 – 376, March 2014

73. M.M. Kjelgaard, **T. K. Gandhi**, K. Tsourides, D. Pantazis & P. Sinha. Causal Underpinnings of Sensory Hypersensitivites in Autism. In *Proceedings of International meeting for Autism Research (IMFAR)*, Atlanta, Georgia, USA, May 2014

74. M.M. Kjelgaard, J. Chew, **T. K. Gandhi**, N. Sindhal, and P. Sinha. Perception of Emotion in Speech Prosody by Blind & Autistic Individuals. In *Proceedings of ASHA National Conference*. Chicago, Illinois, November 2013

75. **T. K. Gandhi**, A. Kalia, G. Chatterjee and P. Sinha. Emergence of face-localization abilities following extended congenital blindness, In *Proceedings of Vision Sciences Society Annual Meeting*, 16.422, Naples, Florida, May 2013

76. P. Swami, **T. K. Gandhi** and S. Anand. Do you recognize me? The neural marker to familiar faces. In *Proceedings of Front. Neuroinform. Conference Abstract: Neuroinformatics*., Stockholm, Sweden July 2013

77. G. Chatterjee, A. Kalia, **T. K. Gandhi** and P. Sinha. Global motion coherence performance after extended congenital blindness: stretching the window, In *Proceedings of Vision Sciences Society Annual Meeting*, 10th May, 16.421, Naples, Florida, May 2013

78. A. Kalia, L. Lesmes, M. Dorr, **T. K. Gandhi**, G. Chatterjee, P. Bex and Pawan Sinha. Development of Contrast Sensitivity Following Extended Congenital Blindness, In *Proceedings of Vision Sciences Society Annual Meeting*, 24.13, Naples, Florida, May 2013

79. P. Swami, R. Singh, **T. K. Gandhi** and S. Anand. A Novel Embedded Approach for the Development of Wireless Electro-oculogram Based Human-Computer Interface, In *Proceedings of IEEE 2nd International Conference on Parallel, Distributed and Grid Computing*, Solan, India, pp. 252-255, December 2012

80. **T. K. Gandhi**, N. Singhal and P.Sinha. Reduced habituation to auditory sequences in autism, In *Proceedings of Society for neuroscience*, New Orleans, USA, October 2012

81. **T. K. Gandhi**, P.Swami, A.Kalia, G. Chaterjee and P. Sinha. Development of face localization after extended congenital blindness. In *Proceedings of J. Perception (ECVP Abstract)*, Alghero, Italy, vol. 41, pp. 68, September 2012

82. P. Swami, **T. K. Gandhi**, S. Ray and S. Anand. A Novel Topology for Design and Development of Wireless Electro-oculogram Biopotential Amplifer, In *Proceedings of IEEE International Conference on Emerging Trends (ICET-12)*, Durgapur, India, pp.7-12, March 2012

83. A. Kalia, **T. K. Gandhi**, P. Swami, G. Chatterjee and P. Sinha. Measurement of contrast sensitivity functions shows recovery from extended blindness. In *Proceedings of J. Perception (ECVP Abstract)*, Alghero, Italy, vol. 41, pp. 154, September 2012.

84. P. Sinha, **T. K. Gandhi**, A. Kalia and G. Chatterjee. Early susceptibility to visual illusions after treatment for early-onset blindness. In *Proceedings of J. Perception (ECVP Abstract)*, Alghero, Italy, vol. 188, pp. 154, September 2012.

85. G. Chatterjee, A.Kalia, **T. K. Gandhi**, P.Swami, P.Sinha. Global motion coherence performance after extended blindness: stretching the window. In *Proceedings of J. Perception (ECVP Abstract)*, vol. 188, pp. 158, September 2012.

86. P. R. Pal, N. P. Mohanty, and **T. K.Gandhi**, "Entropy based detection & evaluation of epileptic seizure," *Int. J. Appl.*, vol. 4, no. 1, pp. 73–77, 2011.

87. P. Sinha, S. Gorlin, and **T. K. Gandhi**, "Changes in cortical functional organization after initiation of sight in the congenitally blind," *J. Vis.*, vol. 11, no. 11, p. 427, 2011.

88. P.Pal, N. Mohanty, A. Kushwahal, B. Singh, B. Mazumdar, **T. K. Gandhi**. Feature extraction for evaluation of Muscular Atrophy, In *Proceedings of IEEE International conference on Computational Intelligence and Computing Research*, Coimbatore, India, pp. 194-197, December 2010.

89. R.Sahu, T. Parija, B. Mohapatra, B.Rout, S. Sahu, R. Panda, P. Pal, **T. K. Gandhi**. Chaos based nonlinear analysis of epileptic seizure, In *Proceedings of IEEE International conference on emerging trends in Engineering and Technology*, Goa, India, pp. 594-598, November 2010

90. **T. K. Gandhi**, P. Sinha, and S. Anand, "Impairment in sensory reactivity of children with autism spectrum disorder," in *PSYCHOPHYSIOLOGY*, 2010, vol. 47, pp. S23--S23.

91. R. Panda, P.S. Khobragade, P.D. Jambhule, S.N. Jengthe, P.R. Pal, **T. K. Gandhi**. Classification of EEG signal using wavelet transform and support vector machine for epileptic seizure detection, In *Proceedings of IEEE International conference on System in Medicine and Biology*, Kharagpur, India, pp. 405-408, December 2010

92. **T. K. Gandhi**, A. Jena, A.B. Pal, D. Prusty, P. Das, S. Pandit, R. Panda and P. Pal. Novel Approach for Brain Computer Interfacing. In *Proceedings of IEEE 1st International Conference on Integrated Intelligent Computing*, Bangalore, India, pp.218-221, August 2010

93. **T. K. Gandhi**, P. Swami, P. Sinha and S. Anand. Top down processing of faces in human brain: a behavioral study, In *Proceedings of IEEE International Conference on Methods and Models in Computer Science (ICM2CS)*, New Delhi, India, pp. 1-5, December 2009.

94. Y. Ostrovsky, M. Moulson, M. Meng, K. Choi, **T. K. Gandhi**, and P. Sinha, "Haptic and visual defragmentation of shapes," *J. Vis.*, vol. 9, no. 8, p. 896, 2009.

95. B.Ghosh, P. Swami, **T. K. Gandhi**, J. Santhosh and S. Anand. Interhemispheric interaction and cause of hindrance during Handedness activity: An Electro-Physiological Evidence. In *Proceedings of IEEE International Conference on Multimedia, Signal processing, and Communication technologies*, Aligarh, India, pp 193-196, March 2009.

96. **T. K. Gandhi**, S.More, Sneh Anand. Statistical signal detection techniques to understand haptic representation of objects in visually impaired, In *Proceedings of Bulletin of Calcutta Statistical Association*, 2009

97. **T. K. Gandhi**, P. Sinha, J. Santhosh and S. Anand. Effects of early visual impairment on spatial encoding of complex pattern in human brain. In *Proceedings of* Frontiers in Human Neuroscience 10th International Conference on Cognitive Neuroscience, Bodrum, Turkey, vol. 9, no. 01.376, September 2008

98. **T. K. Gandhi**, M. Trikha, J. Santhosh, and S. Anand. VHDL based Electro Oculogram Signal Classification. In *Proceedings of 15th* International Conference on Advanced Computing and Communications, Guwahati, Assam, pp 153-158, December 2007.

99. M. Trikha, **T. K. Gandhi** and A.Bhandari. Multiple Channel Electrooculogram Classification using Automata. In *Proceedings of IEEE International Workshop on Medical Measurements and Applications*, Warsaw, Poland, pp 1-5, May 2007

100. A.Bhandari, M.Trikha and **T. K. Gandhi**. Automatic Electrooculogram Classification for Microcontroller Based Interface Design. In *Proceedings of IEEE Systems and Information Engineering Design Symposium*, Charlottesville, VA, USA, pp. 1-6, April 2007

Edited/Written Volumes

1. **T. K. Gandhi**, D.Konar, B.Sen, K. Sharma, Advanced Computational Paradigms and Hybrid Intelligent Computing (2021), Springer Publishers.

2. **T. K. Gandhi**, S. Bhattacharyya, S. De, D. Konar, S. Dey, Advanced Machine Vision Paradigms for Medical Image Analysis (2020), Academic Press Inc.
3. S. Bhattacharyya, **T. K. Gandhi**, K. Sharma, P. Dutta. Advanced Computational and Communication Paradigms: Proceedings of International Conference on ICACCP 2017, Volume 1 ((Lecture Notes in Electrical Engineering), Springer Publishers.

Consultancy and Sponsored Project Experience

Projects (PI)

Sl. No.	Title	Funding Agency	Amount	Period	Name of PI and Co-PIs
1.	Neurocomputing and Cognitive Intelligence.	MeitY	231 Lakhs	May'20-Apr'23	**T.K. Gandhi (Lead)** J. Jayadeva
Abstract: Understanding neural mechanism in Human Brain and developing technology for Neurodevelopmental problems.					
2.	3D Motion Perception in children with Eye-movement disorders.	DST	77.25 Lakhs	Mar'20-Feb'23	**T.K. Gandhi (Lead)** R. Saxena, (AIIMS)
Abstract: Understanding mechanism of 3D motion perception in normal development and in various Eye movement disorders for developing Engineering solutions for the problem.					
3.	Development of Augmented Reality (AR) enabled tool for guidance in Cervical Cancer screening by visual inspection method in single visit approach.	SERB	33.82 Lakhs	Feb'21-Jan'23	S. Singhal (AIIMS) **T.K. Gandhi**
Abstract: We are developing a system to remotely assist a healthcare worker in collecting a biopsy sample from the cervix by a trained practitioner using the Microsoft Hololens 2 headset					
4.	Development of Virtual Therapy for neurodevelopmental Disorders	MoHFW	47.55 Lakhs	Mar'19-Feb' 23	**T.K.Gandhi** S.Gulati
Abstract: In this project, we are developing various virtual therapies using AR/VR for Autism and Cerebral Palsy subjects.					
5.	Seizure Detection, Prediction and Evaluation: An Intelligent Model	SERB	51 Lakhs	May'15-April'18	**T.K.Gandhi (Lead)** B.K. Panigrahi M. Tripathi (AIIMS)
Abstract: In this project, epilepsy signals were acquired, analysed to understand the patterns of various stages of Epilepsy					
6	**Centre of Excellence for Epilepsy - Phase - II**	DBT	2493.59 Lakhs	May'18-April'23	M.Tripathi (AIIMS) **T.K. Gandhi** Pravat Mandal
Abstract: Development of precise Epilepsy management system					
7	Advanced epilepsy research: a multidisciplinary approach	PSA's Office, Govt. of india	118 Lakhs	Mar'18-Feb'21	**T.K. Gandhi(Lead)** S. Chandra (AIIMS)
Abstract: To develop a portable Epilepsy diagnosis system, which can be used even in tertiary healthcare system with ease.					
8	National Programme on Perception Engineering-(NPPE) Phase II	MeitY	260 Lakhs	Mar'2014-Feb'18	S. Chaudhury I.N. Kar **T.K. Gandhi**
Abstract: Experimentations were conducted to understand the mechanism of sensory perception, which helps in advancing development of AI systems.					
9	Characterising Autism Spectrum Disorder	DST	35 Lakhs	Feb'11-Jan'16	**T.K. Gandhi**
Abstract: To understand the visual processing deficit in neurodevelopmental disorders like Autism.					

10	Evaluating ocular motion as a tool for characterizing visual field defects	IRD, IIT Delhi	10 Lakhs	Mar'19-Feb'21	**T.K. Gandhi(Lead)** R. Saxena (AIIMS)
Abstract: To understand and characterise eye movement disorders for development of efficient Diagnostic techniques.					
11	Developing reinforcement based AI model for improvising the predictive skills of individuals with autism	IRD, IIT Delhi	10 Lakhs	Jan'20-Dec'22	**T.K. Gandhi(Lead)** S.Gulati
Abstract: To understand and characterize the sensory processing deficit in Autism Spectrum Disorder and developing reinforcement based tool for the development of sensory modalities.					
12	Project InCyte: Enhancing Medical Pathology	MIT Global Partnerships Seed Fund: India	$20,000.00	Jan'19-Dec'20	P. Sinha **T.K. Gandhi**
Abstract: To understand the technological gap in digital pathology and prepare road map to mitigate the problem.					
13	Multimodal Natural Interaction project	Samsung R&D Institute India(SRI)	20 Lakhs	Jan'2016-Dec'2017	S. Chaudhury **T.K. Gandhi**
Abstract: To create the framework for multimodal interaction in digital domain.					
14	Development of portable eye-movement-based automated perimeter	DST	72.93 Lakhs	Mar'22-Feb'24	**T.K. Gandhi(Lead)** R. Saxena (AIIMS)
Abstract: To develop an AR/VR based portable smart perimeter to diagnose various vision related problems					
15	Role of Artificial Intelligence (AI) in Autism Spectrum Disorder	DBT	47 Lakhs	Just Approved	**T.K. Gandhi(Lead)** S.Gulati (AIIMS)
Abstract: Design of the AI models for improvising the predictive skills in children with autistic spectrum disorders in visual, auditory and tactile domains					
16	AI model for Diagnosis and Prognosis of Diabetic foot Ulceration	ICMR	43 Lakhs	Just Approved	**T.K. Gandhi(Lead)** G. Bisht (Max Multispecialty Hospital)
Abstract: To develop AI models for ulcer localization and risk grading in real-time					
17	Development of Multiple Cues Driven Model of Healthy Cognitive Aging and its Application for Adaptive User Interface Design	CSRI, DST	200 Lakhs	Submitted	**T.K. Gandhi(Lead)**
Abstract:					
18	A randomized controlled trial of the effectiveness of Transcranial Direct Current Stimulation (tDCS) for Treatment of Major Depression	Under IRD MFIRP Scheme in Collaboration with AIIMS	20 Lakhs	Just Approved	**T.K. Gandhi(Lead)** Rohit Verma (AIIMS)
Abstract: To evaluate the changes in electrical brain activity to quantify treatment progress with tDCS in Major Depressive Disorder (MDD)					
19	Developing AI model/s for non-invasive diagnosis and prognosis of NAFLD -A pilot study	DBT	251 Lakhs	Just Approved	**T.K. Gandhi(Lead: IITD)** Shiv Kumar Sarin (Lead: ILBS)
Abstract: To develop low cost point-of-care tools for non-invasive diagnosis and prognosis of NAFLD by making use of clinical variables, laboratory parameters, and/or imaging biomarkers as an alternative to liver biopsy					
20	Brain Wave Entrainment for Welfare and Warfare Applications	SERB	385.43 Lakhs	Submitted	**T.K. Gandhi(Lead)** Ritesh Netam (AIIMS) Ranjan Nanda(ICGEB)
Abstract: To understand the resting state EEG dynamics after cortical stimulation and finding out the short term/long term impact in Brain cognition					

Projects (Co-PI)

https://www.indiascienceandtechnology.gov.in/research/centre-excellence-epilepsy-phase-ii?field_area_id=4746 (Centre of Excellence for Epilepsy - Phase – II, 24,93,59,792)

- Received MIT Global Partnerships Seed Fund: India (grant in the amount of $20,000.00) for the project titled "Project InCyte: Enhancing Medical Pathology.", 1st Jan 2019-Dec 2020.
- Consltancy: Multimodal Natural Interaction project, Samsung R&D Institute India (SRI) – Delhi, Ref.: FT/03/1862/1863/2016, 20Lakhs (One Year). **Completed**
- National Perception Engineering project - Deity, Govt. of India. (250 Lakhs). **Completed**

Invited Talks

Some of the Invited talk/keynote in National and International platform in last four years.

S. No.	Date	Talk Details	Venue
Year: 2023			
1.	09-03-23	IBRO spring School on Computational Neuroscience and AI	IIT Delhi
2.	27-01-23	Keynote Talk on "Understanding Brain Science, Advancing AI" in Conference on 'Next Generation AI: Inspiration from Brain Sciences"	IIT Jodhpur
3.	09-01-23	Invited Lecture on "Brain, Computation and Learning"	IISc Bengaluru
4.	06-01-23	Invited Talk in SERB sponsored workshop "Advancement of AI in Healthcare"	IIIT Una, Himachal Pradesh
Year: 2022			
5.	15-12-22	INAE Fellow Induction Talk "Listening to Brain: Advancing Science, Serving Humanity"	BARC, Mumbai
6.	13-12-22	Delivered Talk on " Explanation of Visual Learning using DNN" under the KARYASHALA Scheme funded by SERB	IIT Patna
7.	24-11-22	Talk on " Smart Diagnosis of COVID using Voice Signal"	INDICON 2022 Kochi
8.	6-04-22	Talk on "Contribution of AI based solutions in combating the current COVID-19 pandemic scenario",	NIT Silchar, Assam
9.	12-03-22	Talk on "Science of Intelligence is the Precursor of advancing AI",	Shyama Prasad Mukherji College, Delhi University
10.	25-02-22	Invited talk in FDP on "Computational Biology"	Goutam Buddha University, UP
11.	24-02-22	Expert talk in AICTE-QIP Sponsored Online One Week Short Term Course on "Issues and challenges of Grid Connected Renewable Energy Sources (ICGCRE-22)"	Jamia Millia Islamia, New Delhi
12.	23-02-22	Invited Talk on " Science of Intelligence"	KIIT University, Odisha
13.	22-02-22	Key Speaker in FDP on Computational Neuroscience and Applications of AR/VR in healthcare	Tezpur University, Assam
14.	03-01-22	Key Speaker in Seminar on Cloud Computing and Big data; Challenges and Opportunities, AICTE-ISTE Faculty Development Program	Infinity College, Sagar, MP
Year: 2021			

15.	21-12-21	Expert Talk on “Understanding Neural Mechanism in Cognitive Processing”	NIT Durgapur.
16.	22-11-21	Expert Talk on Ability and Inability of AI (Fundamental science is the key for translational technology development)	GIET, Odisha
17.	13-11-21	Key Speaker in WSCM 2021: Special Guest Session on “Learning to See”	IIT Mandi
18.	12-11-21	Key Speaker in workshop on Cutting Edge Research works in Science and Technology. Followed by Research Proposal Drafting	Poornima College of Engineering, Jaipur
19.	11-11-21	Key note talk in “International Symposium on computer vision and machine intelligence in medical Image analysis.	Sikkim Manipal Institute of Technology
20.	26-10-21	Talk on “Understanding and Interventions in ASD” (IBRO)	NEHU, Shillong
21.	23-10-21	Expert Talk on “Path to Cutting Edge Research: Challenges & Opportunities”	Guru Ghasidas Central University, Bilaspur, India
22.	15-09-21	Expert Talk on Cognitive IoT Challenges and opportunities.	Oriental college of Engineering, MP
23.	9-09-21	Invited as Resource person for an KTU sponsored online FDP on Industrial Instrumentation and Automation	Online
24.	5-09-21	Invited as Guest lecturer in Epilepsy Conclave by on “Recent advances in epilepsy management” followed by a panel discussion on the following topic: “Machine Learning Applications on Neuroimaging for Diagnosis and Prognosis of Epilepsy”	Dr. Reddy's Laboratories Ltd.
25.	27-08-21	Expert Talk at ATAL AICTE FDP program on Network Science	Amity University, Jaipur
26.	2-08-21	Expert Lecture	Panjab University, Chandigarh
27.	16/17/18-08-21	Guest Lecture on Signal and Systems	Raisoni College of Engineering and Technology, Nagpur, Maharashtra
28.	31-07-21	Key Speaker in AICTE Sponsored One Week Short Term Training Program on "Advanced Technology to bridge the gap between Medical Science and Engineering for the benefit of Mankind". [Phase I (26.07.21 - 31.07.21) & Phase II (23.08.21 - 28.08.21)].,	JIS College of Engineering, West Bengal
29.	26-07-21	Expert talk in the five days IEEE Sponsored International Workshop (virtual mode) on Optimization and Intelligence in Engineering Applications (IEEE OIEA-2021)	NIT Silchar
30.	21-07-21	Talk on “IoT and its application”	Infinity Management and Engineering College, MP.
31.	20-07-2021	Invited talk in a FDP “Challenges and Opportunities in Biomedical Signal Processing”	Gandhi Institute of Engineering & Technology, Odisha
32.	29-06-21	Expert Lecture Understanding Electrical activity in Human Brain using Soft computing techniques & It's inferences	NIT Patna

33.	27-06-21	Global Odiya Talk, " Application of AI in COVID management"	Online
34.	22-06-21	Expert Lecture on Computational neuroscience and computer vision in healthcare Application	Goutam Budh University
35.	04-06-21	Expert Lecture	Dr. Mahalingam College of Engineering & Technology, TN
36.	26-03-21	Guest Lecture in IEEE KGP section EMBS SBC	Online
37.	26-03-21	Expert Talk on IoT & ML towards smart eco system (TEQIP)	Coimbatore Institute of Technology
38.	22-03-21	Keynote in ICACCP 2021	SMIT, Sikkim
39.	20-03-21	Expert Talk on Application of MATLAB in Image and signal processing	Ojaswini Institute, MP
40.	8-03-21	Expert Lecture on MRI Image processing in (FDP)	NIT Hamirpur
41.	8-03-21	Expert Lecture on MR Physics (FDP)	NIT Hamirpur
42.	6-03-21	Expert talk on "Integrating Research in Basic Science with Applied Pharmaceutical Science" Restoring sight to Visually Impaired"	Roland Institute of Pharmaceutical Sciences, Brahmapur
43.	6-03-21	Expert Lecture in STTP under AICTE-AQIS "Developing R&D culture in Educational Institutes through Project Based learning"	Poornima college of Engineering, Jaipur
44.	02-02-21	Expert Lecture in STTP on "Artificial Intelligence and its Real World Applications	KMBB College of Engineering
45.	20-01-21	Expert talk on Computational Biology	MNIT Jaipur
46.	19-01-21	Expert talk on AI Applications in Smart Grid	OIST Bhopal
47.	18-01-21	Invited talk on " Healthcare Technology: Challenges & Opportunities" in a FDP ' Emerging technologies in Healthcare at	L.D College of Engineering, Ahmedabad
48.	07-01-21	Expert talk in TEQIP sponsored course on the "Machine Learning in Digital Image Processing"	G. B. Pant Institute of Engineering and Technology, Pauri Garhwal Uttarakhand
Year: 2020			
49.	22-12-20	Keynote Talk in International Conference on Applied Scientific Computational Intelligence using Data Science ASCI 2020 on " Future of Machine Intelligence"	Manipal University, Jaipur
50.	19-12-20	Delivered talk on "Understanding the first step of Ground breaking Research and Development"	KMBB, Odisha
51.	14-12-20	Invited Talk in a Short Term Training Program (STTP) under AICTE-AQIS "Developing R&D culture in Educational Institutes through Project Based learning" Phase-II (December 14-19, 2020)	Poornima College of Engineering, Jaipur, Rajasthan
52.	12-12-20	Talk in AICTE sponsored STTP under AQIS on "Advance & Emerging Trends in Signal Processing and Machine Learning" on "Understanding the need of Signal Processing & ML in medical Imaging"	GIET UNIVERSITY, Odisha
53.	11-12-20	Invited talk on " Understanding applications of Machine Learning in healthcare and vice versa	IIEST Shibpur, WB

		" in short term course on "Machine Learning in Healthcare"	
54.	23-11-20	Invited lecture in FDP on "Machine Learning and its Applications in Image Processing"	Indira Gandhi Delhi Technical University for Women (IGDTUW), New Delhi
55.	23-10-20	Expert lecture on "Cognitive inspired Embedded/IoT Systems"	Sri Krishna College of Engineering and Technology, Tamil Nadu
56.	29-09-20	Invited Talk on "Computational Techniques in Image and Signal Processing", in an AICTE-QIP sponsored STC program	SLIET Longowal
57.	23-09-20	Expert lecture in workshop on "Modern Trends in Image Processing in Medical Application" on the topic "MRI/fMRI Image Processing: Challenges & Opportunities"	VVP Engineering College, Rajkot
58.	21-09-20	Expert Lecture on " Understanding concepts of signal processing and machine learning"	Coimbatore Institute of Technology, Coimbatore
59.	22-09-20	Expert Lecture in a GUJCOST sponsored online STTP on "Modern Trends in Image Processing in Medical Applications"	V.V.P. Engineering College, Rajkot
60.	28-02-20	Invited talk in TEQIP Program on ML & AI	BPUT, Odisha
61.	17-01-20	Invited talk in International workshop on Science of Intelligence	IIT Jodhpur
Year: 2019			
62.	17-12- 19	Invited talk	Sophia women's College, Ajmer
63.	16-12- 19	Invited talk on Artificial Intelligence	Chitkara University, organized by IIT Roorkee
64.	4-10-19	Invited talk in a TEQIP program	Atal Vihari Vajpayee Engg. Himachal Pradesh
65.	20-9-19	Invited talk in FDP	JNU, New Delhi
66.	10-09-19	Invited talk in Research workshop	AKTU, Lucknow
67.	10-08-19	Invited talk in an FDP program	VJIT, Hyderabad
68.	08-08-19	Invited talk in a FDP Program	Rajasthan Technical University
69.	29-03-19	Delivered lecture on Brain signal processing	AIIMS, Haridwar
70.	08-03-19	Invited talk in medical Imaging workshop	KIIT University, Bhubaneswar
71.	27-02-19	Invited talk and session chair in an international Conference	SMIT, Sikkim
72.	18-02-19	Invited Talk and judge in Technical Hackathon	VSSUT
73.	10-01-19	Invited talk in International Conference on Distributing computing and IoT	KIIT University, Bhubaneswar
74.	05-01-19	Invited Talk	Banasthali University
Year: 2018			
75.	19-12-18	Invited talk and collaborative research work	The University of Groningen, Laboratory of Experimental Opthalmology, University Medical Center Groningen, Netherlands
76.	6-12-18	Invited Talk	NIT Surathkal

77.	17-09-18	Invited Talk in a TEQIP funded workshop	Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Sonipat
78.	17-05-18	Invited talk on "Brain-Machine Interfacing: Challenges and Opportunity" on 50th world Telecom and information society Day	CSIR-CEERI, Pilani, Rajasthan
79.	22-04-18	Invited talk on Technology for Sleep in Sleep medicine	IIT Delhi
80.	20-04-2018	Invited talk on Smart City	ITS Engineering College, Greater Noida
Year: 2017			
81.	22-12-17	Invited talk in a Science Camp (for 11th and 12th standard students)	IIT Bhubaneswar
82.	21-12-2017	Keynote talk at IEEE International conference on Man- Machine Interfacing,	CV Raman College of Engg, Bhubaneswar
83.	12-11-2017	Invited Talk in an International conference "Brain modes 2017"	NBRC
84.	23-10-17	Invited talk in IEEE Computer Society	PVPSIT College, Vijayawada
85.	18-09-17	Invited Talk on Applications of pattern recognition & Machine Learning in Medical Science	JNU, New Delhi
86.	07-09-17	Invited talk & session chair in International Conference	SIMT, East Sikkim, Sikkim, India
87.	26-05-17 to 05-06-17	Invited talk and collaborative research	MGH Harvard University, USA



(Tapan K. Gandhi, Ph.D.)