

Journals

- [1] A. Agrawal, T. Sharma, and **Nishchal K. Verma**, “A Comprehensive Exploration of Real-Time 3D View Reconstruction Methods,” *IEEE Transactions on Artificial Intelligence*, Oct. 2024. (Accepted for Publication)
- [2] A. K. Sharma and **Nishchal K. Verma**, “Guided sampling-based evolutionary deep neural network for intelligent fault diagnosis,” *Engineering Applications of Artificial Intelligence*, vol. 128, Feb. 2024.
- [3] D. Singh and **Nishchal K. Verma**, “Interval Type-3 T-S fuzzy system for nonlinear aerodynamic modeling,” *Applied Soft Computing*, vol. 150, Jan. 2024.
- [4] H. Chen, H. Luo, **Nishchal K. Verma**, and B. Jiang, “Guest Editorial: Special Issue on Artificial Intelligence Methods for Maintenance and Safety of Automation Systems,” *IEEE Transactions on Artificial Intelligence*, vol. 4, no. 4, pp. 589-591, Aug. 2023.
- [5] S. Maurya and **Nishchal K. Verma**, “Intelligent Hybrid Scheme for Health Monitoring of Degrading Rotary Machines: An Adaptive Fuzzy c-Means Coupled With 1-D CNN,” *IEEE Transactions on Instrumentation and Measurement*, vol. 72, pp. 1-10, Mar. 2023.
- [6] T. Sharma, **Nishchal K. Verma**, and S. Masood, “Mixed fuzzy pooling in convolutional neural networks for image classification,” *Multimedia Tools and Applications, Springer*, vol. 82, no. 6, pp. 8405-8421, Mar. 2023.
- [7] V. Singh and **Nishchal K. Verma**, “Gene Expression Data Analysis Using Feature Weighted Robust Fuzzy -Means Clustering,” *IEEE Transactions on NanoBioscience*, vol. 22, no. 1, pp. 99-105, Jan. 2023.
- [8] J. B. Thomas, S. G. Chaudhari, S. K. V. and **Nishchal K. Verma**, “CNN-Based Transformer Model for Fault Detection in Power System Networks,” *IEEE Transactions on Instrumentation and Measurement*, vol. 72, pp. 1-10, Jan. 2023.
- [9] N. K. Dhar, **Nishchal K. Verma**, and L. Behera, “Dynamically Triggered Control for System Connected to Network with Permissible Imperfections,” *IEEE Systems Journal*, vol. 16, no. 4, pp. 6074-6085, Dec. 2022.
- [10] V. Singh, P. Agrawal, T. Sharma, and **Nishchal K. Verma**, “Improved adaptive Type-2 fuzzy filter with exclusively two fuzzy membership function for filtering salt and pepper noise,” *Multimedia Tools and Applications, Springer*, vol. 82, no. 13, pp. 20015–20037, Dec. 2022.
- [11] A. K. Sharma and **Nishchal K. Verma**, “Quick Learning Mechanism with Cross-Domain Adaptation for Intelligent Fault Diagnosis,” *IEEE Transactions on Artificial Intelligence*, vol. 3, no. 3, pp. 381-390, Jun. 2022.
- [12] D. Singh, **Nishchal K. Verma**, A. K. Ghosh, and A. Malagaudanavar, “An application of interval type-2 fuzzy model based control system for generic aircraft,” *Applied Soft Computing*, vol. 121, May 2022.
- [13] P. K. Mishra and **Nishchal K. Verma**, “On Controller Design for Nonlinear Systems with Pure State Constraints,” *IEEE Transactions on Circuits and Systems II: Express Briefs*, vol. 69, no. 4, pp. 2236-2240, Apr. 2022.

- [14] M. Suman, A. Thakur, **Nishchal K. Verma**, D. Thakur, K. Dinesh, and R. Thakur, "Effect of protected protein on growth performance and morphometric traits in gaddi male kids," *Indian Journal of Small Ruminants (The)*, vol. 28, no. 1, pp. 210-213, Mar. 2022.
- [15] D. Singh, **Nishchal K. Verma**, A. K. Ghosh, and A. K. Malagaudanavar, "An Approach Towards the Design of Interval Type-3 T-S Fuzzy System," *IEEE Transactions on Fuzzy Systems*, Dec. 2021. (Early Access) DOI: 10.1109/TFUZZ.2021.3133083
- [16] T. Sharma and **Nishchal K. Verma**, "Single Image Dehazing and Non-Uniform Illumination Enhancement: A Z-Score Approach," *SN Computer Science, Springer*, vol. 2, no. 6, pp. 1-15, Nov. 2021.
- [17] S. Dixit, **Nishchal K. Verma**, and A. K. Ghosh, "Intelligent fault diagnosis of rotary machines: conditional auxiliary classifier GAN coupled with meta learning using limited data," *IEEE Transactions on Instrumentation and Measurement*, pp. May 2021. (Early Access) DOI: 10.1109/TIM.2021.3082264
- [18] T. Sharma and **Nishchal K. Verma**, "Adaptive interval Type-2 fuzzy filter: an AI agent for handling uncertainties to preserve image naturalness," *IEEE Transactions on Artificial Intelligence*, pp. 1-10, May 2021. (Early Access) DOI: 10.1109/TAI.2021.3077522
- [19] V. K. Tripathi, A. K. Kamath, L. Behera, **Nishchal K. Verma**, and S. Nahavandi, "An adaptive fast terminal sliding-mode controller with power rate proportional reaching law for quadrotor position and altitude tracking," *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, pp. 1-14, April 2021. (Early Access) DOI: 10.1109/TSMC.2021.3072099
- [20] N. K. Dhar, A. Nandanwar, **Nishchal K. Verma**, and L. Behera, "Online Nash solution in networked multi-robot formation using stochastic near-optimal control under dynamic events," *IEEE Transactions on Neural Networks and Learning Systems*, pp. 1-14, Jan. 2021. (Early Access) DOI: 10.1109/TNNLS.2020.3044039
- [21] **Nishchal K. Verma**, T. Sharma, S. Dixit, P. Agrawal, S. Sengupta, and V. Singh, "BIDEAL: a toolbox for bicluster analysis - generation, visualization and validation," *SN Computer Science, Springer*, vol. 2, no. 24, Jan. 2021. DOI: 10.1007/s42979-020-00411-9
- [22] V. K. Tripathi, L. Behera, and **Nishchal K. Verma**, "Finite-time super twisting sliding mode controller based on higher-order sliding mode observer for real-time trajectory tracking of a quadrotor," *IET Control Theory & Applications*, vol. 14, no. 16, pp. 2359-237, Nov. 2020. DOI: 10.1049/iet-cta.2020.0348
- [23] T. Sharma and **Nishchal K. Verma**, "Estimating depth and global atmospheric light for image dehazing using Type-2 fuzzy approach," *IEEE Transactions on Emerging Topics in Computational Intelligence*, pp. 1-10, Oct. 2020. (Early Access) DOI: 10.1109/TETCI.2020.3032970
- [24] S. Maurya, V. Singh, **Nishchal K. Verma**, and C. K. Mechefske, "Condition based monitoring in variable machine running conditions using low-level knowledge transfer with DNN," *IEEE Transactions on Automation Science and Engineering*, pp. 1-15, Oct. 2020. (Early Access) DOI: 10.1109/TASE.2020.3028151
- [25] A. K. Sharma, D. Singh, V. Singh, and **Nishchal K. Verma**, "Aerodynamic modeling of AT-TAS aircraft using Mamdani fuzzy inference network", *IEEE Transactions on Aerospace and Electronic Systems*, vol. 56, no. 5, pp. 3566-3576, Oct. 2020. DOI: 10.1109/TAES.2020.2975447
- [26] P. Singh, S. Gupta, L. Behera, **Nishchal K. Verma**, and S. Nahavandi, "Perching of nano-quadrotor using self-trigger finite time second order continuous control", *IEEE Systems Journal*, pp. 1-11, Sept. 2020. (Early Access) DOI: 10.1109/JSYST.2020.3021579

- [27] V. Singh and **Nishchal K. Verma**, “Intelligent condition based monitoring techniques for bearing fault diagnosis,” *IEEE Sensors Journal*, Sept. 2020. (Early Access) DOI: 10.1109/JSEN.2020.3021918
- [28] S. Dixit and **Nishchal K. Verma**, “Intelligent condition based monitoring of rotary machines with few samples,” *IEEE Sensors Journal*, July 2020. (Early Access) DOI: 10.1109/JSEN.2020.3008177
- [29] T. Sharma, I. Agrawal, and **Nishchal K. Verma**, “CSIDNet: compact single image dehazing network for outdoor scene enhancement,” *Multimedia Tools and Applications*, Springer, vol. 79, pp. 30769-30784, July 2020. DOI: <https://doi.org/10.1007/s11042-020-09496-z>
- [30] R. K. Sevakula and **Nishchal K. Verma**, “Balanced binary search tree multiclass decomposition with possible non-outliers,” *Springer Nature Applied Sciences*, vol. 2, May 2020. DOI: <https://doi.org/10.1007/s42452-020-2853-6>
- [31] P. Singh, P. Agrawal, A. Nandanwar, L. Behera, **Nishchal K. Verma**, S. Nahavandi, and M. Jamshidi, “Multivariable event-triggered generalised super-twisting controller for safe navigation of non-holonomic mobile robot,” *IEEE Systems Journal*, April 2020. (Early Access) DOI: 10.1109/JSYST.2020.2985730
- [32] A. Bhola, T. Sharma, and **Nishchal K. Verma**, “DCNet: Dark Channel Network for Single Image Dehazing,” *Machine Vision and Applications (MVAP)*, Springer, vol. 32, no. 62, March 2020. DOI: 10.1007/s00138-021-01173-x
- [33] N. K. Dhar, **Nishchal K. Verma**, and L. Behera, “An online event-triggered near optimal controller for Nash solution in interconnected system,” *IEEE Transactions on Neural Networks and Learning Systems*, Feb. 2020. (Early Access) DOI: 10.1109/TNNLS.2020.2969249
- [34] A. Mustafa, N. K. Dhar, and **Nishchal K. Verma**, “Event-triggered sliding mode control for trajectory tracking of nonlinear systems”, *IEEE/CAA Journal of Automatica Sinica*, vol. 7, no. 1, pp. 307-314, Jan. 2020. DOI: 10.1109/JAS.2019.1911654
- [35] P. Agrawal, T. Sharma, and **Nishchal K. Verma**, “Supervised approach for object identification using speeded up robust features,” *International Journal of Advanced Intelligence Paradigms*, vol. 15, no. 2, pp. 165-182, Feb. 2020. DOI: 10.1504/IJAIP.2020.105142
- [36] R. K. Sevakula, V. Singh, **Nishchal K. Verma**, C. Kumar and Y. Cui, “Transfer learning for molecular cancer classification using deep neural networks,” *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 16, no. 6, pp. 2089-2100, Nov.-Dec. 1 2019. DOI: 10.1109/TCBB.2018.2822803
- [37] A. Kar, N. K. Dhar, P. K. Mishra and **Nishchal K. Verma**, “Relative vehicle displacement approach for path tracking adaptive controller with multisampling data transmission,” *IEEE Transactions on Emerging Topics in Computational Intelligence*, vol. 3, no. 4, pp. 322-336, Aug. 2019. DOI: 10.1109/TETCI.2018.2865205
- [38] S. Maurya, V. Singh, and **Nishchal K. Verma**, “Condition monitoring of machines using fused features from EMD based local energy with DNN,” *IEEE Sensors Journal*, vol. 20, no. 15, pp. 8316-8327, July 2019. DOI: 10.1109/JSEN.2019.2927754
- [39] P. K. Mishra, N. K. Dhar, and **Nishchal K. Verma**, “Adaptive neural network control of MIMO nonaffine nonlinear systems with asymmetric time-varying state constraints,” *IEEE Transactions on Cybernetics*, July 2019. (Early Access) DOI: 10.1109/TCYB.2019.2923849
- [40] V. Singh, **Nishchal K. Verma**, and Y. Cui, “Type-2 fuzzy PCA approach in extracting salient features for molecular cancer diagnostics and prognostics,” *IEEE Transactions on NanoBioscience*, vol. 18, no. 3, pp. 482-489, July 2019. DOI: 10.1109/TNB.2019.2917814

- [41] P. Singh, P. Agrawal, H. Karki, A. Shukla, **Nishchal K. Verma**, and L. Behera, "Vision based guidance and switching based sliding mode controller for a mobile robot in the cyber physical framework", *IEEE Transactions on Industrial Informatics*, vol. 15, no. 4, pp. 1985-1997, Apr. 2019. DOI: 10.1109/TII.2018.2869622
- [42] A. Kar, N. K. Dhar, and **Nishchal K. Verma**, "Event-triggered adaptive neural network controller in a cyber-physical frameworks," *IEEE Transactions on Industrial Informatics*, vol. 15, no. 4, pp. 2101-2111, Apr. 2019, DOI: 10.1109/TII.2018.2861904
- [43] R. Dev and **Nishchal K. Verma**, "Robust noisiness measure based improved generalized fuzzy peer group for removal of mixed noise from color image", *IEEE Signals Processing Letters*, vol. 26, no. 2, pp. 267-271, Feb. 2019. DOI: 10.1109/LSP.2018.288943
- [44] V. Singh, R. Dev, N. K. Dhar, P. Agrawal, and **Nishchal K. Verma**, "Adaptive Type-2 fuzzy approach for filtering salt and pepper noise in grayscale images," *IEEE Transactions on Fuzzy Systems*, vol. 26, no. 5, pp. 3170-3176, Oct. 2018. DOI: 10.1109/TFUZZ.2018.2805289
- [45] R. Dev and **Nishchal K. Verma**, "Generalized fuzzy peer group for removal of mixed noise from color image," *IEEE Signal Processing Letters*, vol. 25, no. 9, pp. 1330-1334, Sept. 2018. DOI: 10.1109/LSP.2018.2852140
- [46] N. K. Dhar, **Nishchal K. Verma**, L. Behera, and M M Jamshidi, "On an integrated approach to networked climate control of a smart home," *IEEE Systems Journal*, vol. 12, no. 2, pp. 1317-1328, June 2018. DOI: 10.1109/JSYST.2016.2619366
- [47] D. J. Singh, P. Agrawal, **Nishchal K. Verma**, A. K. Ghosh, and A. Malagaudanavar, "Interval Type-2 TS fuzzy model for angle of attack sensor of the aircraft," *Journal of Intelligent and Fuzzy Systems*, vol. 34, no. 6, pp. 3891-3901, June 2018. DOI: 10.3233/JIFS-169560
- [48] N. K. Dhar, **Nishchal K. Verma**, and L. Behera, "Adaptive critic based event-triggered control for HVAC system," *IEEE Transactions on Industrial Informatics*, vol. 14, no. 1, pp. 178-188, Jan. 2018. DOI: 10.1109/TII.2017.2725899
- [49] **Nishchal K. Verma**, R. K. Sevakula, and R. Thirukovalluru, "Pattern analysis framework with graphical indices for condition based monitoring," *IEEE Transactions on Reliability*, vol. 66, no. 4, pp. 1085-1100, Dec. 2017. DOI: 10.1109/TR.2017.2729465
- [50] R. K. Sevakula and **Nishchal K. Verma**, "Assessing generalization ability of majority vote point classifiers," *IEEE Transactions on Neural Networks and Learning Systems*, vol. 28, no. 12, pp. 2985-2997, Dec. 2017. DOI: 10.1109/TNNLS.2016.2609466
- [51] R. K. Sevakula and **Nishchal K. Verma**, "Compounding general purpose membership functions for fuzzy support vector machine in noisy environment," *IEEE Transactions on Fuzzy Systems*, vol. 25, no.6, pp. 1446-1459, June 2017. DOI: 10.1109/TFUZZ.2017.2722421
- [52] R. Agnihotri, A. P. Dimri, H. M. Joshi, **Nishchal K. Verma**, C. Sharma, J. Singh, and Y. P. Sundriyal, "Assessing operative natural and anthropogenic forcing factors from long-term climate time series of Uttarakhand (India) in the backdrop of recurring extreme rainfall events over northwest Himalaya," *Elsevier, Journal of Geomorphology*, vol. 284, pp. 31-40, May 2017. DOI: <https://doi.org/10.1016/j.geomorph.2016.10.024>
- [53] B. P. Padhy, S. C. Srivastava, and **Nishchal K. Verma**, "A wide-area damping controller considering network input & output delays and packet drop," *IEEE Transactions on Power Systems*, vol. 32, no. 1, pp. 166-176, Jan. 2017. DOI: 10.1109/TPWRS.2016.2547967
- [54] S. K. Rajurkar, V. Singh, **Nishchal K. Verma**, and Y. Cui, "Deep stacked auto-encoder with deep fuzzy network for transcriptome-based tumor type classification," *BMC Bioinformatics*, vol. 18, p. 388, 2017.

- [55] **Nishchal K. Verma**, E. Dutta, and Y. Cui, "Assessing the quality of biclusters using fuzzy biclustering index," *International Journal of Data Mining and Bioinformatics*, vol. 15, no. 4, pp. 291-311, Aug. 2016. DOI: 10.1504/IJDMB.2016.078145
- [56] **Nishchal K. Verma**, R. K. Sevakula, S. Dixit, and A. Salour, "Intelligent condition based monitoring using acoustic signals for air compressors," *IEEE Transactions on Reliability*, vol. 65, no. 1, pp. 291-309, March 2016. DOI: 10.1109/TR.2015.2459684
- [57] R. K. Sevakula, R. Thirukovalluru and **Nishchal K. Verma**, and Y. Cui, "Deep neural networks for transcriptome-based cancer classification," *BMC Bioinformatics*, 2016. DOI: 10.1186/s12859-016-1154-y
- [58] **Nishchal K. Verma**, R. K. Sevakula, S. Dixit, and A. Salour, "Data driven approach for drill bit monitoring," *IEEE Reliability Magazine*, pp. 19-26, Feb. 2015.
- [59] **Nishchal K. Verma** and A. Roy, "Self-optimal clustering technique using optimized threshold function," *IEEE Systems Journal*, vol. 8, no. 4, pp. 1213-1226, Dec. 2014. DOI: 10.1109/JSYST.2013.2261231
- [60] B. P. Padhy, S. C. Srivastava, and **Nishchal K. Verma**, "A coherency based approach for signal selection for wide area stabilizing control in power system," *IEEE Systems Journal*, vol. 7, no. 4, pp. 807-816, Dec. 2013.
- [61] R. K. Shakya, Y. N. Singh, and **Nishchal K. Verma**, "Generic correlation model for wireless sensor network applications," *IET Wireless Sensor Systems*, vol. 3, no. 4, pp. 266-276, Dec. 2013. DOI: 10.1049/iet-wss.2012.0094
- [62] **Nishchal K. Verma**, R. K. Sevakula, S. Dixit, and A. Salour, "Ranking of sensitive positions using statistical and correlational analysis," *International Journal on Smart Sensing and Intelligent Systems*, vol. 6, no. 4, pp.1745-1762, Sept. 2013. DOI: <https://doi.org/10.21307/ijssis-2017-613>
- [63] **Nishchal K. Verma**, R. K. Sevakula, J. K. Gupta, S. Singh, S. Dixit, and A. Salour, "Smart-phone application for fault recognition," *International Journal on Smart Sensing and Intelligent Systems*, vol. 6, no. 4, pp. 1763-1782, Sept. 2013. DOI: <https://doi.org/10.21307/ijssis-2017-614>
- [64] **Nishchal K. Verma** and S. Singh, "Image sequence prediction using ANN and RBFNN with selected features," *International Journal of Image and Graphics*, vol. 13, no. 2, p. 1340006, July 2013. DOI: <https://doi.org/10.1142/S0219467813400068>
- [65] R. K. Tripathi, Y. N. Singh, and **Nishchal K. Verma**, "Clustering algorithm for non-uniformly distributed nodes in a wireless sensor network," *IET Electronics Letters*, vol. 49, no. 4, pp. 299-300, Feb. 14, 2013. DOI: 10.1049/el.2012.3512
- [66] R. K. Tripathi, Y. N. Singh, and **Nishchal K. Verma**, "Two-tiered wireless sensor networks - base station optimal positioning case study," *IET Wireless Sensor Systems Journal*, vol. 2, no. 4, pp. 351-360, Dec. 2012. DOI: 10.1049/iet-wss.2011.0152
- [67] B. P. Padhy, S. C. Srivastava, and **Nishchal K. Verma**, "Robust wide-area fuzzy output feedback controller for enhancement of stability in multi-machine power system," *IEEE Systems Journal*, vol. 6, no. 3, pp. 426-435, Sept. 2012. DOI: 10.1109/JSYST.2011.2165639
- [68] **Nishchal K. Verma**, "Estimation of fuzzy measures using covariance matrices in Gaussian mixtures," *Applied Computational Intelligence and Soft Computing Journal*, Article ID 402420, pp. 1-16, June 2012. DOI: <https://doi.org/10.1155/2012/402420>

- [69] **Nishchal K. Verma**, P. Singla, and A. Roy, "Energy harvesting by foot-propelled battery charger using shoe model", *Advanced Materials Research Journal*, vol. 488-489, pp. 1268-1273, March 2012. DOI: <https://doi.org/10.4028/www.scientific.net/AMR.488-489.1268>
- [70] N. Kohli and **Nishchal K. Verma**, "Arrhythmia classification using SVM with selected features," *International Journal of Engineering, Science and Technology*, vol. 3, no. 8, pp. 122-131, 2012. eISSN: 2141-2839, print ISSN: 2141-2820
- [71] **Nishchal K. Verma**, A. Roy, and Y. Cui, "Improved mountain clustering algorithm for gene expression data analysis", *Journal of Data Mining and Knowledge Discovery*, vol. 2, no. 1, pp. 30-35, Aug. 2011. ISSN: 2229-6662 & ISSN: 2229-6670
- [72] B. Mehta, **Nishchal K. Verma**, and P. Sircar, "Performance analysis of alpha divergence in nonnegative matrix factorization of monaural musical sounds," *International Journal of Engineering, Science and Technology*, vol. 3, no. 6, pp. 273-282, 2011. eISSN: 2141-2839, print ISSN: 2141-2820
- [73] N. Kohli and **Nishchal K. Verma**, "Performance analysis of online health care system," *International Journal of Engineering, Science and Technology*, vol. 3, no. 1, pp. 191-205, 2011. eISSN: 2141-2839, print ISSN: 2141-2820
- [74] N. Kohli and **Nishchal K. Verma**, "Performance issues of health care system using SQL server", *International Journal of Computer Science and Information Security*, vol. 8, no. 2, pp. 279-284, May 2010. ISSN 1947-5500
- [75] **Nishchal K. Verma** and M. Hanmandlu "Adaptive non-additive generalized fuzzy systems", *Applied Soft Computing, Elsevier Journal*, vol. 10, no. 3, pp. 820-831, June 2010. DOI: <https://doi.org/10.1016/j.asoc.2009.09.012>
- [76] **Nishchal K. Verma** and M. Hanmandlu, "Additive and non-additive fuzzy hidden Markov models," *IEEE Transactions on Fuzzy Systems*, vol. 18, no. 1, pp. 40-56, Feb. 2010. DOI: 10.1109/TFUZZ.2009.2034532
- [77] J. Arora, **Nishchal K. Verma**, and M. M. Srivastava, "Mathematical modeling on osmotic transport across cell membranes in human corneal epithelial cells in non-dilute solution", *National Academy of Sciences*, vol. 33, no. 1, pp. 33-40, Jan. 2010.
- [78] N. Kohli and **Nishchal K. Verma**, "MySQL based selection of appropriate indexing technique in hospital system using SVM", *International Journal of Engineering, Science and Technology*, vol. 2, no. 6, pp. 119-130, 2010. eISSN: 2141-2839, print ISSN: 2141-2820
- [79] **Nishchal K. Verma**, P. Agrawal, and Y. Cui, "Fuzzy rule based unsupervised approach for gene saliency", *BMC Bioinformatics*, vol. 10, no. 7, pp. A2, June 2009. DOI: 10.1186/1471-2105-10-S7-A2
- [80] **Nishchal K. Verma** and M. Hanmandlu, "Data driven model using adaptive fuzzy system", *International Journal of Automation and Control*, vol. 2, no. 4, pp. 447-458, Feb. 2009. DOI: 10.1504/IJAAC.2008.022896
- [81] **Nishchal K. Verma** and M. Hanmandlu, "ANAFS computation of H-component of Earth's magnetic field", *International Journal of Computational Intelligence and Applications*, vol. 7, no. 1, pp. 43-56, March 2008. DOI: <https://doi.org/10.1142/S1469026808002132>
- [82] **Nishchal K. Verma**, "Doctoral thesis on Gaussian mixture model based non-additive fuzzy systems," *IEEE Computational Intelligence Soc. Electronic Letters*, no. 37, Nov. 2007.
- [83] **Nishchal K. Verma** and M. Hanmandlu, "From Gaussian mixture model to non-additive fuzzy systems," *IEEE Transactions on Fuzzy Systems*, vol. 15, no. 5, pp. 809-827, Oct. 2007. DOI: 10.1109/TFUZZ.2006.889821

- [84] **Nishchal K. Verma** and M. Hanmandlu, “Color segmentation via. improved mountain clustering technique,” *International Journal of Image and Graphics*, vol. 7, no. 2, pp. 407-426, April 2007. DOI: <https://doi.org/10.1142/S0219467807002702>
- [85] **Nishchal K. Verma** and B. K. Panigrahi, “Data based adaptive computation technique”, *International Journal of Information and Communication Technology*, vol. 1, no. 1, pp. 98-111, April 2007. DOI: 10.1504/IJICT.2007.013280
- [86] **Nishchal K. Verma** and M. Hanmandlu, “Non-additive generalized fuzzy system under the framework of cluster weighted model”, *International Journal on Artificial Intelligence and Machine Learning*, vol. 6, Issue 2, pp. 27-33, June 2006.
- [87] **Nishchal K. Verma** and M. Hanmandlu, “Adaptability in additive fuzzy systems via EM algorithm”, *International Journal of Artificial Intelligence and Machine Learning*, vol. 6, no. 2, pp. 34-41, June 2006.

Conferences

- [1] A. Gupta, J. Kaur, T. Doshi, T. Sharma, **Nishchal K. Verma**, and S. Vasikarla, “Stacked Ensemble of Fine-Tuned CNNs for Knee Osteoarthritis Severity Grading,” *15th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON)*, IBM T.J. Watson Research Center, New York, USA, Oct. 17-19, 2024. (Accepted)
- [2] A. Agrawal, T. Sharma, **Nishchal K. Verma**, and S. Vasikarla, “Modified Transmission Map Function With Hyperparameter Tuning for Single Image Dehazing,” *15th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON)*, IBM T.J. Watson Research Center, New York, USA, Oct. 17-19, 2024. (Accepted)
- [3] D. Singh, M. Aquib, **Nishchal K. Verma**, and T. Sharma, “Robustness of General Type-2 TSK Fuzzy Systems,” *IEEE World Congress on Computational Intelligence (IEEE WCCI 2024)*, Pacifico Yokohama, Yokohama, Japan, Jun. 30 - Jul. 05, 2024. (Accepted)
- [4] A. Agrawal, T. Sharma, **Nishchal K. Verma**, and S. Vasikarla, “Image Based and Point Cloud Based Methods for 3D View Reconstruction in Real-Time Environment,” *2024 IEEE 14th Annual Computing and Communication Workshop and Conference (CCWC)*, University of Nevada, Las Vegas, USA, Jan. 8-10, 2024, pp. 1-7.
- [5] M. Kant, L. Behera and **Nishchal K. Verma**, “Fixed-Time Sliding Mode Control for a Class of Second-Order Perturbed Systems with Applications to Quadrotor and Robot Manipulator,” *2023 Ninth Indian Control Conference (ICC)*, Visakhapatnam, India, 2023, pp. 407-412.
- [6] T. Sharma, B. T. Nalla, **Nishchal K. Verma**, and S. Vasikarla, “FR-HDNet: Faster RCNN based haze detection network for image dehazing,” *2022 IEEE Applied Imagery Pattern Recognition Workshop (AIPR)*, Washington, DC, USA, Oct. 11-13, 2022, pp. 1-8.
- [7] H. L. Maurya, P. Singh, S. Yogi, L. Behera, and **Nishchal K. Verma**, “An Intelligent Game Theory Approach for Collision Avoidance of Multi-UAVs,” *Proceedings of International Conference on Computational Intelligence (ICCI 2021)*, Springer, Oct. 2022, pp. 27-39.
- [8] D. J. Singh and **Nishchal K. Verma**, “Design of Fuzzy Control System for Generic Aircraft/UAVs,” *2022 Second International Conference on Power, Control and Computing Technologies (ICPC2T)*, Raipur, India, Mar. 1-3, 2022, pp. 1-6.
- [9] H. L. Maurya, P. Singh, S. C. Yogi, L. Behera and **Nishchal K. Verma**, “Quaternion Based Twisting and Backstepping Control Design of Quadrotor,” *2022 IEEE 17th International Conference on Control & Automation (ICCA)*, Naples, Italy, 2022, pp. 516-521.

- [10] P. Singh, L. Behera, **Nishchal K. Verma** and H. Lal Maurya, "Path Tracking of Quadrotor Using Backstepping Controller in Presence of Uncertainties and Packet Dropouts," *2022 IEEE 17th International Conference on Control & Automation (ICCA)*, Naples, Italy, 2022, pp. 529-534.
- [11] H. L. Maurya, P. Singh, L. Behera and **Nishchal K. Verma**, "Control Design for Unmanned Aerial Vehicle Using Fractional order Backstepping Control and Extended Homogenous Control," *2021 International Symposium of Asian Control Association on Intelligent Robotics and Industrial Automation (IRIA)*, Goa, India, Sep. 20-22, 2021, pp. 63-69.
- [12] I. Agrawal, T. Sharma, and **Nishchal K. Verma**, "Low-Light Image Restoration Using Dehazing-Based Inverted Illumination Map Enhancement," *Applied Mathematics and Computational Intelligence, ICAMCI-2020, Springer Proceedings in Mathematics & Statistics*, Tripura, India, Dec. 23-24, 2020, pp. 135-145.
- [13] H. L. Maurya, **Nishchal K. Verma**, L. Behera, P. Singh, and S. Yogi, "Fractional order tracking control of unmanned aerial vehicle in presence of model uncertainties and disturbances," *International Conference on Informatics in Control, Automation and Robotics (ICINCO)*, Lieusaint - Paris, France, July 6-8, 2021. (Accepted)
- [14] P. Singh, S. Gupta, L. Behera, and **Nishchal K. Verma**, "Sum of square based event-triggered control of nano-quadrotor in presence of packet dropouts," *2021 International Conference on Unmanned Aircraft Systems (ICUAS)*, Athens, Greece, June 15-18, 2021. (Accepted)
- [15] P. Singh, S. C. Yogi, L. Behera, and **Nishchal K. Verma**, "Path tracking of non-holonomic mobile robot using event-triggered control in presence of time and state-dependent uncertainties," *SICE International Symposium on Control Systems 2021*, March 2-4, 2021. (Accepted)
- [16] B. P. Singh, A. Dubey, **Nishchal K. Verma**, and S. Chakrabarti, "Modeling and Simulation of Fuzzy Expert System for Mitigation of Power Fluctuation in AC-DC Hybrid Microgrid Connected to a Distribution Network," *21st National Power Systems Conference (NPSC 2020)*, IIT Gandhinagar, India, Dec. 17-19, 2020. (Accepted)
- [17] T. Sharma, Tejashwani Shah, and **Nishchal K. Verma**, "A Review on Image Dehazing Algorithms for Vision based Applications in Outdoor Environment," *49th Annual IEEE AIPR 2020: Trusted Computing, Privacy, and Securing Multimedia*, Washington, D.C., U.S.A., Oct. 13-15, 2020. (Accepted)
- [18] S. K. Jha, S. Maurya, and **Nishchal K. Verma**, "Generating Feature Sets for Day-Ahead Load Demand Forecasting Using Deep Neural Network," *20th International Conference on Intelligent Systems Applications to Power Systems*, IIT Delhi, New Delhi, India, Dec. 10-14, 2019. (Accepted)
- [19] S. K. Jha, C. L. Dewangan, and **Nishchal K. Verma**, "Multi-Step Load Demand Forecasting Using Neural Network," *20th International Conference on Intelligent Systems Applications to Power Systems*, IIT Delhi, New Delhi, India, Dec. 10-14, 2019. (Accepted)
- [20] T. Sharma, I. Agrawal, and **Nishchal K. Verma**, "Transmission Map Estimation Function to Prevent Over-Saturation in Single Image Dehazing," *International Conference on Deep Learning, Artificial Intelligence and Robotics, (ICDLAIR) 2019*, Malaviya National Institute of Technology (MNIT), Jaipur, India, Dec. 07-08, 2019. (Accepted)
- [21] T. Sharma, P. Agrawal, **Nishchal K. Verma**, and J. Gupta, "Binning line segments in polar space for robust descriptor encoding in disparate image matching," *International Conference on Artificial Intelligence & Applications (ICAIA-2019)*, College of Engineering, Roorkee, Uttarakhand, India, Nov. 20-21, 2019. (Accepted and Presented)

- [22] T. Sharma, A. Jain, **Nishchal K. Verma**, and S. Vasikarla, "Inventory management using KAZE features under different lighting conditions," *48th IEEE Applied Imagery Pattern Recognition Workshop 2019 (AIPR 2019)*, Washington, D.C., USA, October 15-17, 2019. (Accepted)
- [23] A. Kumar, T. Sharma, **Nishchal K. Verma**, and S. Vasikarla, "Detection and removal of salt and pepper noise by Gaussian membership function and Guided filter," *48th IEEE Applied Imagery Pattern Recognition Workshop 2019 (AIPR 2019)*, Washington, D.C., USA, October 15-17, 2019. (Accepted)
- [24] V. Singh, H. Vardhan, **Nishchal K. Verma** and Y. Cui, "Optimal Feature Selection using Fuzzy Combination of Feature Subset for Transcriptome Data", *International Conference on Fuzzy Systems (FUZZ IEEE 2019)*, JW Marriot New Orleans, June 23-26, 2019. (Accepted)
- [25] T. Sharma, **Nishchal K. Verma** and S. Sudhakaran, "Fuzzy based Pooling in Convolutional Neural Network for Image Classification", *International Conference on Fuzzy Systems (FUZZ IEEE 2019)*, JW Marriot New Orleans, June 23-26, 2019. (Accepted)
- [26] T. Sharma, P. Agrawal, P. Sahoo, **Nishchal K. Verma** and S. Vasikarla, "Line Segments based Rotation Invariant Descriptor for Disparate Images" *In 2018 IEEE Applied Imagery Pattern Recognition Workshop*, Washington, DC, Oct. 9-11, 2018. (Accepted and Presented)
- [27] A. K. Sharma, D. J. Singh and **Nishchal K. Verma**, "Data Driven Aerodynamic Modeling Using Mamdani Fuzzy Inference Systems", *2018 International Conference on Sensing, Diagnostics, Prognostics, and Control*, Xi'an, China, August 15-17, 2018. (Accepted and Presented)
- [28] **Nishchal K. Verma**, S. Dixit, R. K. Sevakula and A. Salour, "Computational Framework for Machine Fault Diagnosis with Autoencoder Variants", *2018 International Conference on Sensing, Diagnostics, Prognostics, and Control*, Xi'an, China, August 15-17, 2018. (Accepted and Presented)
- [29] A. K. Sharma, V. Singh, **Nishchal K. Verma** and J. Liu, "Condition Based Monitoring of Machine using Mamdani Fuzzy Network," *2018 Prognostics and System Health Management Conference, PHM-Chongqing*, Chongqing, China, Oct. 2018. DOI: 10.1109/PHM-Chongqing.2018.00204
- [30] Bhanu T., T. Sharma, **Nishchal K. Verma** and S. R. Sahoo, "Image Dehazing for Object Recognition using Faster RCNN," *2018 IEEE World Congress on Computational Intelligence (WCCI 2018)*, July 8-13, 2018. DOI: 10.1109/IJCNN.2018.8489280
- [31] V. Singh, Harshvardhan, **Nishchal K. Verma** and Y. Cui, "Optimal Feature Selection using Fuzzy Combination of Feature Subset for Transcriptome Data," *2018 IEEE World Congress on Computational Intelligence (WCCI 2018)*. (Accepted)
- [32] S. Maurya, V. Singh, S. Dixit, **Nishchal K. Verma**, A. Salour and J. Liu, "Fusion of Low-level Features with Stacked Autoencoder for Condition based Monitoring of Machines," *2018 IEEE International Conference on Prognostics and Health Management*, Seattle, WA, USA, June 11-13, 2018.
- [33] G. Saraswat, V. Singh, **Nishchal K. Verma**, A. Salour and J. Liu, "Prognosis of Diesel Engine (MBT) using Feature Extraction Techniques: A Comparative Study," *2018 IEEE International Conference on Prognostics and Health Management*, Seattle, WA, USA, June 11-13, 2018.
- [34] P. Singh, L. Behera and **Nishchal K. Verma**, "Design of Passivity Based Cyber Physical System With Markovian Losses and Delay," *IFAC World Congress*, Toulouse, France, vol. 50, no. 1, pp. 1971-1976, July 9-14, 2017.

- [35] V. Singh, Z. U. Islam, **Nishchal K. Verma** and Y. Cui, "Feature Learning using Stacked Autoencoder for Shared and Multimodal Fusion of Medical Images", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 1, pp. 53-66, Dec. 6-8, 2017.
- [36] V. Singh, A. Swaminathan, **Nishchal K. Verma**, "Convolutional Neural Network with Stacked Autoencoder for Kernel Initialization", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 2, pp. 53-63, Dec. 6-8, 2017.
- [37] **Nishchal K. Verma**, V. Singh, S. K. Rajurkar and Mohd Aqib, "Fuzzy Inference Network with Mamdani Fuzzy Inference System", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 1, pp. 375-388, Dec. 6-8, 2017.
- [38] H. Bharadhwaj, V. Singh and **Nishchal K. Verma**, "Type - 2 Fuzzy TSK: A Type-2 Fuzzy Systems approach for Clustering based identification of a T-S Regression model", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 1, pp. 359-374, Dec. 6-8, 2017.
- [39] A. Raj, K. Gandhi, B. T. Nalla, and **Nishchal K. Verma**, "Object Detection and Recognition using Small labeled Datasets", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 2, pp. 407-419, Dec. 6-8, 2017.
- [40] A. Kamboj, N. K. Dhar, and **Nishchal K. Verma**, "Event Triggered Control for Trajectory Tracking by Robotic Manipulator", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 1, pp. 161-170, Dec. 6-8, 2017.
- [41] D. J. Singh, **Nishchal K. Verma**, Ajoy Kanti Ghosh, and Jitu Sanwale, "Aerodynamic Parameter Modeling Using TS Fuzzy Systems from Flight Data", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 1, pp. 425-437, Dec. 6-8, 2017.
- [42] T. Sharma, S. K. D. Rajurkar, Nikhil Molangur, **Nishchal K. Verma**, and A. . Salour, "Multi-faced Object Recognition in an Image for Inventory Counting", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 2, pp. 333-346, Dec. 6-8, 2017.
- [43] T. Sharma, P. Agrawal, and **Nishchal K. Verma**, "Detection of Dust Deposition using Convolutional Neural Network for Heritage Images", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 2, pp. 347-359, Dec. 6-8, 2017.
- [44] S. Maurya, V. Singh, N. K. Dhar, and **Nishchal K. Verma**, "Improved EMD Local Energy with SVM for Fault Diagnosis in Air Compressor", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 2, pp. 81-92, Dec. 6-8, 2017.
- [45] P. Mishra, P. Agrawal, N. K. Dhar, and **Nishchal K. Verma**, "On Adaptive control for AGV with vision sensor as an unknown nonlinear system", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 2, pp. 265-277, Dec. 6-8, 2017.
- [46] P. Sahoo, T. Sharma, P. Agrawal, and **Nishchal K. Verma**, "Rotation Invariant Descriptor for Disparate Images using Line Segments", *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 2, pp. 387-405, Dec. 6-8, 2017.

- [47] H. Dua, T. Sharma, P. Agrawal, and **Nishchal K. Verma**, “An efficient algorithm for image haze removal in outdoor environment,” *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 2, pp. 319-331, Dec. 6-8, 2017.
- [48] H. L. Maurya, Laxmidhar Behera, and **Nishchal K. Verma**, “Trajectory tracking of Quad rotor UAV using Fractional Order PID controller”, *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 1, pp. 171-186, Dec. 6-8, 2017.
- [49] G. Saraswat, S. Maurya, and **Nishchal K. Verma**, “Health Monitoring of Main Battle Tank Engine Using Mamdani Type Fuzzy Model”, *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 1, pp. 403-414, Dec. 6-8, 2017.
- [50] A. Kar, N. K. Dhar, **Nishchal K. Verma**, “Event Triggered Sliding Mode Control based Trajectory Tracking in a Cyber-Physical Space”, *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 1, pp. 199-211, Dec. 6-8, 2017.
- [51] **Nishchal K. Verma**, R. Dev, S. Maurya, N. K. Dhar, and P. Agrawal, “People Counting With Overhead Camera Using Fuzzy Based Detector”, *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 1, pp. 589-601, Dec. 6-8, 2017.
- [52] R. K Sevakula and **Nishchal K. Verma**, “Hausdorff distance based Binary Search Tree multiclass decomposition algorithm,” *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 2, pp. 239-249, Dec. 6-8, 2017.
- [53] **Nishchal K. Verma**, A. Mustafa, N. K. Dhar and V. Sarraf “SURF-MSER based 3D Mapping using RGB-D Camera on Automated Vehicle”, *In 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions (ICCI-2017)*, India, Springer, vol. 2, pp. 373-386, Dec. 6-8, 2017.
- [54] D. J. Singh, **Nishchal K. Verma**, A. K. Ghosh, J. Sanwale, and A. Malagaudanavar, “Aerodynamic Parameter Estimation using Two-Stage Radial Basis Function Neural Network,” *In 2017 IEEE International Conference on Sensing, Diagnostics, Prognostics, and Control*, Shanghai, China, August 16-18, 2017.
- [55] D. J. Singh, R. Dev, **Nishchal K. Verma**, A. K. Ghosh, and A. Malagaudanavar, “Estimating Angle of Attack of an ATAS Aircraft Using TS Fuzzy Model,” *In 2017 IEEE International Conference on Sensing, Diagnostics, Prognostics, and Control*, Shanghai, China, August 16-18, 2017.
- [56] S. K. Rajurkar and **Nishchal K. Verma**, “Developing Deep Fuzzy Network with Takagi Sugeno Fuzzy Inference System”, *IEEE International Conference on Fuzzy Systems*, pp. 1-6, July 9-12, 2017 (FUZZ-IEEE 2017).
- [57] **Nishchal K. Verma**, T. Sharma, S. Maurya, D. J. Singh, and A. Salour, “Real-time monitoring of Machines using Open Platform Communication”, *2017 IEEE International Conference on Prognostics and Health Management*, Marriott Courtyard, Dallas, Texas, USA, pp. 124-129, June 19-21, 2017.
- [58] **Nishchal K. Verma**, R. Dev, N. K. Dhar, D. J. Singh and A. Salour, “Real-Time Remote Monitoring of an Air Compressor Using MTConnect Standard Protocol”, *2017 IEEE International Conference on Prognostics and Health Management*, Marriott Courtyard, Dallas, Texas, USA, pp. 109-116, June 19-21, 2017.

- [59] A. Mustafa, N. K. Dhar, P. Agarwal and **Nishchal K. Verma**, “Adaptive Backstepping Sliding Mode Control based on Nonlinear Disturbance Observer for Trajectory Tracking of Robotic Manipulator”, *IEEE International Conference on Control and Robotics Engineering (ICCRE)*, Thailand, pp. 29-34, April 1-3, 2017.
- [60] V. K. Tripathi, L. Behera, and **Nishchal K. Verma**, “Design of sliding mode and back stepping controllers for a quadcopter,” *In Systems Conference (NSC), 2015 39th National*, Dec. 14, pp. 1-6, Dec 14-16, 2015.
- [61] V. K. Tripathi, L. Behera, and **Nishchal K. Verma**, “Disturbance observer based back stepping controller for a quadcopter,” *In Industrial Electronics Society, IECON 2016-42nd Annual Conference of the IEEE*, pp. 108-113, Oct. 23-26, 2016.
- [62] A. Raj, **Nishchal K. Verma** and K. Gandhi, “Object Detection and Recognition using Small Labelled Datasets” *IEEE International Conference on Design and Management (IConDM)*, IIITDM Kancheepuram, Chennai, India, Dec. 16-17, 2016. (Book of Abstracts)
- [63] A. Agarwal and **Nishchal K. Verma**, “Generalization Ability of Majority Vote Point classifiers for Motor Fault Diagnosis” *IEEE International Conference on Industrial and Information Systems (ICIIS)*, IIT Roorkee, India, Dec. 3-4, 2016. (In Proceedings)
- [64] S. D. Rajurkar, A. K. Kar, S. Goswami, and **Nishchal K. Verma**, “Optimal Path Estimation and Tracking for an Automated Vehicle using GA optimized Fuzzy Controller,” *IEEE International Conference on Industrial and Information Systems (ICIIS)*, IIT Roorkee, India, Dec. 3-4, 2016. (In Proceedings)
- [65] A. K. Kar, N. K. Dhar, R. Chandola, S. S. F. Nawaz, and **Nishchal K. Verma**, “Trajectory Tracking by Automated Guided Vehicle using GA optimized Sliding Mode Control,” *IEEE International Conference on Industrial and Information Systems (ICIIS)*, IIT Roorkee, India, pp. 71-76, Dec. 3-4, 2016.
- [66] A. K. Kar, N. K. Dhar, S. S. F. Nawaz, R. Chandola, and **Nishchal K. Verma**, “Automated Guided Vehicle Navigation with Obstacle Avoidance in Normal and Guided Environments,” *IEEE International Conference on Industrial and Information Systems (ICIIS)*, IIT Roorkee, pp. 77-82, India, Dec. 3-4, 2016.
- [67] **Nishchal K. Verma**, N. K. Dhar, A. K. Kar, R. Dev, S. S. F. Nawaz, and A. Salour, “Internet of Things Based Framework for Trajectory Tracking Control,” *IEEE World Forum on Internet of Things*, Reston, VA, USA, pp. 265-270, Dec. 12-14, 2016.
- [68] **Nishchal K. Verma**, A. Mustafa, V. Sarraf and A. Salour, “SURF-MSER based 3D Mapping using RGB-D Camera on Automated Vehicle,” *IEEE International Conference on Design and Management (IConDM)*, IIITDM Kancheepuram, Chennai, India, Dec. 16-17, 2016. (Book of Abstracts)
- [69] **Nishchal K. Verma**, A. Mustafa and A. Salour, “Stereo-Vision based Object Grasping using Robotic Manipulator”, *IEEE International Conference on Industrial and Information Systems (ICIIS)*, IIT Roorkee, India, Dec. 3-4, 2016. (In Proceedings)
- [70] A. Mustafa, C. Tyagi and **Nishchal K. Verma**, “Inverse Kinematics evaluation for Robotic Manipulator using Support Vector Regression and Kohonen Self Organizing Map,” *IEEE International Conference on Industrial and Information Systems (ICIIS)*, IIT Roorkee, India, Dec. 3-4, 2016. (In Proceedings)
- [71] **Nishchal K. Verma**, T. Sharma, R. K. Sevakula and A. Salour, “Vision based object counting using speeded up robust features for inventory control,” *IEEE International conference on Computational Science and Computational Intelligence (CSCI)*, Las Vegas, Nevada, USA, pp. 709-714, Dec. 15-17, 2016.

- [72] **Nishchal K. Verma**, T. Sharma, S. D. Rajurkar and A. Salour, "Object identification for inventory management using convolutional neural network," *IEEE Applied Imagery Pattern Recognition Workshop (AIPR)*, Washington DC, USA, pp. 1-6, Oct. 18-20, 2016.
- [73] **Nishchal K. Verma**, T. Sharma, S. D. Rajurkar, R. Ranjan and A. Salour, "Vision based counting of texture-less objects using shape and color features," *IEEE International Conference on Industrial and Information Systems (ICIIS)*, IIT Roorkee, India, Dec. 3-4, 2016. (In Proceedings)
- [74] **Nishchal K. Verma**, T. Sharma, S. D. Rajurkar, N. Molangur and A. Salour, "Multi-faced object recognition in an image for inventory counting," *IEEE International Conference on Design and Management (IConDM)*, IIITDM Kancheepuram, Chennai, India, Dec. 16-17, 2016. (Book of Abstracts)
- [75] V. Singh, A. Shambhav, R. K. Sevakula and **Nishchal K. Verma**, "A New Approach for Splitting Datasets implemented using Map Reduce based Fuzzy C-Means Clustering," *Fourth International conference on Business Analytics and Intelligence (ICBAI)*, IISc Bangalore, India, Dec. 19-21, 2016. (In Proceedings)
- [76] V. Singh, N. Baranwal, R. K. Sevakula, **Nishchal K. Verma** and Y. Cui, "Layer wise feature selection in Stacked Sparse Auto-Encoder for tumor type prediction," *IEEE International conference on Bioinformatics and Biomedicine (BIBM)*, Shenzhen, China, pp. 1542-1548, Dec. 15-18, 2016.
- [77] V. Singh, R. K. Gupta, R. K. Sevakula and **Nishchal K. Verma**, "Comparative Analysis of Gaussian Mixture Model, Logistic Regression and Random Forest for Big Data Classification using Map Reduce," *IEEE International conference on Industrial and Information Systems (ICIIS)*, IIT Roorkee, India, pp. 333-338, Dec. 3-4, 2016.
- [78] N. K. Dhar, **Nishchal K. Verma** and L. Behera, "Intelligent Controller Design Coupled in a Communication Framework for a Networked HVAC System", *IEEE World Congress on Computational Intelligence*, Vancouver, Canada (WCCI 2016), pp. 1-7, July 24-29, 2016.
- [79] N. K. Dhar, **Nishchal K. Verma** and L. Behera, "Evolutionary Algorithm tuned Fuzzy PI Controller for a Networked HVAC System", *World Conference on Soft Computing*, UC Berkeley, USA (WConSC 2016), May 22-25, 2016.
- [80] P. Porwal, S. Chakrabarti and **Nishchal K. Verma**, "A recursive formulation of the prony method for monitoring power system oscillations", *IEEE 6th International Conference on Power Systems (ICPS)*, Delhi, India, pp. 1-6, March 4-6, 2016.
- [81] R. K. Tripathi, V. Singh, Y. N. Singh and **Nishchal K. Verma**, "Trade-off between energy consumption and lifetime in two tiered wireless sensor networks", *IEEE International Conference on Prognostics and Health Management*, Canada, USA, pp. 1-4, June 20-22, 2016,.
- [82] R. Thirukovalluru, R. K. Sevakula, S. Dixit and **Nishchal K. Verma**, "Generating Optimum Feature Sets for Fault Diagnosis using Denoising Stacked Auto-encoder," *IEEE International Conference on Prognostics and Health Management*, Canada USA, pp. 1-7, June 20-22, 2016,.
- [83] Sevakula, R. K., Abhi Shah, and **Nishchal K. Verma**, "Data preprocessing methods for Sparse Auto-encoder based fuzzy rule classifier," *2015 IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions (WCI)*, pp. 1-6, Dec.14-17, 2015.
- [84] **Nishchal K. Verma**, A. Ghosh, S. Dixit, and A. Salour, "Cost-benefit and reliability analysis of prognostic health management systems using fuzzy rules", *2015 IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions (WCI)*, pp. 1-9, Dec. 14-17, 2015.

- [85] R. K. Sevakula and **Nishchal K. Verma**, "Fuzzy Rule Reduction using Sparse Auto-Encoders," *IEEE Int. Conf. on Fuzzy Systems (FUZZ-IEEE'15)*, Istanbul, Turkey, pp. 1-7, Aug. 2-5, 2015.
- [86] **Nishchal K. Verma**, A. Ghosh, S. Dixit and A. Salour, "Cost-Benefit and Reliability Analysis of Prognostic Health Management Systems Using Fuzzy Rules," *In IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions (IEEE WCI 2015)*, India, pp. 1-9, Dec. 14-17, 2015.
- [87] **Nishchal K. Verma**, S. K. Sahu, A. Mustafa, Ocean, N. K. Dhar and A. Salour, "Priority Based Optimal Path Routing for Automated Guided Vehicle," *In IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions (IEEE WCI 2015)*, India, pp. 1-7, Dec. 14-17, 2015.
- [88] **Nishchal K. Verma**, A. Raj, G. Kumar, A. Mustafa, N. K. Dhar, A. Siddhant, P. Nama and A. Salour, "Vision Based Obstacle Avoidance and Recognition System," *In IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions (IEEE WCI 2015)*, India, pp. 1-7, Dec. 14-17, 2015.
- [89] **Nishchal K. Verma**, A. Goyal, A. H. Vardhan, R. K. Sevakula and A. Salour, "Object Matching Using Speeded Up Robust Features," *In 19th INNS Asia Pacific Symposium on Intelligent and Evolutionary Systems (IES'15)*, Bangkok, Thailand, pp. 415-427, 2015.
- [90] **Nishchal K. Verma**, P. Nama, G. Kumar, A. Siddhant, Ocean, A. Raj, N. K. Dhar and A. Salour, "Vision based Object Follower Automated Guided Vehicle using Compressive Tracking and Stereo-vision," *In IEEE Bombay Section Symposium (IBSS)*, pp. 1-6, Sept. 10-11, 2015.
- [91] **Nishchal K. Verma**, R. Singh, S. Dixit and A. Salour, "Thermal Imaging based Condition Based Monitoring on Android Platform," *In IEEE Bombay Section Symposium (IBSS)*, pp. 1-6, Sept. 10-11, 2015.
- [92] A.H. Vardhan, **Nishchal K. Verma**, R. K. Sevakula and A. Salour "Unsupervised approach for Object Matching using Speeded Up Robust Features," *IEEE Applied Imagery Pattern Recognition Workshop (AIPR)*, Washington DC, USA, pp. 1-8, Oct. 13-15, 2015.
- [93] **Nishchal K. Verma**, D. E. Gunesh, G. S. Rao, and A. Mishra, "High Accuracy Optical Flow based future image frame predictor model," *IEEE Applied Imagery Pattern Recognition Workshop (AIPR)*, Washington DC, USA, pp. 1-6, Oct. 13-15, 2015.
- [94] **Nishchal K. Verma** and Sreevidya, "Cost Benefit Analysis for Maintenance of Rotating Machines", *IEEE International Conference on Prognostics and Health Management*, Austin USA, pp. 1-7, June 22-25, 2015.
- [95] R. K. Sevakula, Mohammed Suhail and **Nishchal K. Verma**, "Fast data sampling for large scale Support Vector Machines," *IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions (WCI'15)*, Kanpur, India, pp. 1-6, Dec.14-17, 2015.
- [96] **Nishchal K. Verma**, A. Goyal, A. Chaman and R. K. Sevakula, "Template matching for Inventory Management using Fuzzy Color Histogram and Spatial filters," *IEEE Conference on Industrial Electronics and Applications*, Auckland, New Zealand, pp. 317-322, June 15-17, 2015.
- [97] **Nishchal K. Verma**, Satyam Dwivedi and R. K. Sevakula, "Expectation Maximization algorithm made fast for large scale data," *IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions (WCI'15)*, Kanpur, India, pp. 1-7, Dec. 14-17, 2015.
- [98] **Nishchal K. Verma**, "Vision Based Automated Guided Vehicle and Inventory Management", *BOEING NEM Roadshow 2015*, Seattle, WA, USA, 2015.

- [99] **Nishchal K. Verma**, N.K. Sunny and A. Mishra, "Generation of Future Image Frame using Autoregressive Model," *IEEE Conference on Industrial Electronics and Applications*, Auckland, New Zealand, pp. 171-176, June 15-17, 2015.
- [100] Tripathi, R. Kr, Sateesh Krishna Dhuli, Y. N. Singh, and **Nishchal K. Verma**, "Analysis of weights for optimal positioning of base station in a Wireless Sensor Network," *IEEE 2014 Twentieth National Conference on Communications (NCC)*, pp. 1-4, Feb. 28- March 2, 2014.
- [101] A. Kaushal and **Nishchal K. Verma**, "Implementation of vehicle to grid concept using ANN and ANFIS controller", *In 9th IEEE Conference on Industrial Electronics and Applications*, pp. 960-965, June 9-11, 2014.
- [102] **Nishchal K. Verma** and Amrita Singh, "Minimizing Intra Class Variations in Multiclass Common Spatial Patterns for Motor Imagery EEG Signals", *IEEE International Conference on Industrial and Information Systems*, India, pp. 1-6, Dec. 15-17, 2014.
- [103] **Nishchal K. Verma**, Vishnu and Suresh K Sharma, "Motor Imagery EEG Signal Classification on DWT and Cross Correlated Signal Features", *IEEE International Conference on Industrial and Information Systems*, India, pp. 1-6, Dec. 15-17, 2014.
- [104] **Nishchal K. Verma**, Jatin V Singh, Mehak Gupta, R. K Sevakula and S. Dixit, "Windows Mobile and Tablet App for Acoustic Signature Machine Health Monitoring", *IEEE International Conference on Industrial and Information Systems*, India, pp. 1-6, Dec. 15-17, 2014.
- [105] **Nishchal K. Verma**, R. K Sevakula and Sakshi Goel, "Study of transforms for their comparison", *International Conference on Industrial and Information Systems*, India, pp. 1-6, 2014.
- [106] **Nishchal K. Verma**, R. Gupta, R.K. Sevakula and A. Salour, "Signal transforms for feature extraction from vibration signal for air compressor monitoring," *In IEEE Region 10 TENCON*, Thailand, pp. 1-6, Oct. 22-25, 2014.
- [107] **Nishchal K. Verma** and Aakansha Mishra, "Large Displacement Optical Flow Based Image Predictor Model", *IEEE Applied Imagery Pattern Recognition Workshop, (AIPR)*, Washington DC, USA, pp. 1-7, Oct. 14-16, 2014.
- [108] Adarsh, J. Ramkumar, **Nishchal K. Verma** and S. Dixit, "Detection and Classification for Faults in Drilling Process using Vibration Analysis", *IEEE PHM 2014*, Washington, USA, pp. 1-6, June 22-25, 2014.
- [109] R. K. Sevakula and **Nishchal K. Verma**, "Clustering based Outlier Detection in Fuzzy SVM", *The 2014 IEEE International Conference on Fuzzy Systems (WCCI 2014)*, Beijing, China, pp. 1172-1177, July 6-11, 2014.
- [110] **Nishchal K. Verma**, Nitin K. Singh and R. K. Sevakula, "Ranking of Sensitive Positions using Empirical Mode Decomposition and Hilbert Transform", *IEEE Conference on Industrial Electronics and Applications*, China, pp. 1926-1931, June 9-11, 2014.
- [111] Ashish Kaushal and **Nishchal K. Verma**, "Vehicle to Grid Concept Using ANN and ANFIS Controller", *IEEE Conference on Industrial Electronics and Applications 2014*, China, pp.960-965, June 9-11, 2014.
- [112] Ramakiran B, Pradip Sircar and **Nishchal K. Verma**, "Soft computing Approaches for Two Dimensional Beamforming", *4th World Conference on Soft Computing*, Berkeley, USA, pp. 25-27, May 2014,.
- [113] Prashant Prakash, **Nishchal K. Verma** and Laxmidhar Behera, "Eigenvalue Assignment via the Smith Predictor based IMC & the Matrix Lambert W function for Control of Time-delayed

- Process Systems”, *3rd International Conference on Advances in Control and Optimization of Dynamical Systems*, IIT Kanpur, India, vol. 3, no. 1, pp 997-1002, March 2014.
- [114] **Nishchal K. Verma**, “Health monitoring of rotating machines and OEE”, *BOEING NEM Roadshow 2014*, Seattle, WA, USA, 2014.
- [115] B. P. Padhy, Suresh. C. Srivastava and **Nishchal K. Verma**, “A network Delay Compensation Technique for Wide-Area SVC Damping Controller in Power System”, *IEEE PES Transmission & Distribution Conference & Exposition 2014*, Chicago, USA, pp. 1-6, April 14-17, 2014.
- [116] R. K. Sevakula and **Nishchal K. Verma**, “Clustering based Outlier Detection in Fuzzy SVM,” *IEEE Int. Conf. on Fuzzy Systems (FUZZ-IEEE’14)*, Beijing, China, pp. 1172-1177, July 6-11, 2014.
- [117] **Nishchal K. Verma**, Ankan Bansal, and Shikha Singh, “Generation of future image frames for an image sequence,” *In Intelligent Interactive Technologies and Multimedia, Springer Berlin Heidelberg*, pp. 154-162, 2013.
- [118] R. K. Shakya, Satyam Agarwal, Yatindra Nath Singh, **Nishchal K. Verma** and Amitabha Roy, “DSAT-MAC: Dynamic Slot Allocation based TDMA MAC protocol for Cognitive Radio Networks,” *arXiv preprint*, pp. 1301-4204, Jan. 2013.
- [119] **Nishchal K. Verma**, Anirudh K. Agrawal, R. K. Sevakula, Divya Prakash, and A. Salour, “Improved signal preprocessing techniques for machine fault diagnosis,” *2013 IEEE 8th International Conference on Industrial and Information Systems*, pp. 403-408, Dec. 17-20, 2013.
- [120] R. K. Sevakula and **Nishchal K. Verma**, “Fuzzy Support Vector Machine using Hausdorff Distance,” *IEEE Int. Conf. on Fuzzy Systems (FUZZ-IEEE’13)*, Hyderabad, India, pp. 1-6, July 7-10, 2013.
- [121] Arsad Jamal and **Nishchal K. Verma**, “Automatic Fault Diagnosis System Using Acoustic Data”, *IEEE Eighth International Conference on Industrial and Information Systems (ICIIS)*, Kandy, Sri Lanka, pp. 421-426, Dec. 17-20, 2013.
- [122] **Nishchal K. Verma** and Shikha Singh, “Generation of Future Image Frames Using Optical Flow,” *2013 IEEE Applied Imagery Pattern Recognition Workshop (AIPR)*, Washington DC, USA, pp. 1-7, Oct 23-25, 2013.
- [123] **Nishchal K. Verma** and Sreevidya, “Study on Multi Unit Models for Machine Maintenance”, *IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions*, IIT Kanpur, India, pp. 181-184, July 2013.
- [124] Jayesh Gupta, Sumanik Singh and **Nishchal K. Verma**, “MTBA: MATLAB Toolbox for Biclustering Analysis”, *IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions*, IIT Kanpur, India, pp. 94-97, July 2013.
- [125] **Nishchal K. Verma**, Sumanik Singh, Jayesh Gupta, R. Sevakula, S. Dixit and Al Salour, “Feature Level Analysis”, *IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions*, IIT Kanpur, India, pp. 181-184, July 2013.
- [126] **Nishchal K. Verma**, “Health monitoring of rotating machines”, *BOEING NEM Roadshow 2013*, Seattle, WA, USA, 2013.
- [127] R. K Sevakula and **Nishchal K. Verma**, “Fuzzy Support Vector Machine Using Hausdorff Distance”, *The 2013 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE-2013)*, Hyderabad, India, pp. 1-6, July 7-10, 2013.

- [128] **Nishchal K. Verma**, V. K. Gupta, M. Sharma, and R. K. Sevakula, "Intelligent condition based monitoring of rotating machines using sparse auto-encoders," *In IEEE Conference on Prognostics and Health Management (PHM)*, pp. 1-7, June 24-27, 2013.
- [129] **Nishchal K. Verma** and Sreevidya, "Cost Benefit Analysis for Condition Based Monitoring", *IEEE International Conference on Prognostics and Health Management*, Maryland, USA, pp. 1-6, June 24-27, 2013.
- [130] **Nishchal K. Verma** and T. Subramanian, "Cost benefit analysis of intelligent condition based maintenance of rotating machinery", *In Proc., 7th IEEE Conf. Industrial Electronics and Applications*, pp. 1390-1394, July 18-20, 2012.
- [131] **Nishchal K. Verma**, P. Kumar, R. K. Sevakula, S. Dixit and A. Salour, "Ranking of Sensitive Positions Based on Statistical Parameters and Cross Correlation Analysis", *6th IEEE International Conference on Sensing Technology*, Kolkata, India, pp. 815-821, Dec. 18-21, 2012.
- [132] **Nishchal K. Verma**, S. Singh, J.K. Gupta, R.K. Sevakula, S. Dixit and A. Salour, "Smart-phone Application for Fault Recognition", *IEEE 6th International Conference on Sensing Technology*, Kolkata, India, pp. 1-6, Dec. 18-21, 2012.
- [133] **Nishchal K. Verma**, S. Sarkar, S. Dixit, R.K. Sevakula and A. Salour, "Android App for Intelligent CBM", *22nd IEEE Symposium on Industrial Electronics (ISIE)*, Taipei, Taiwan, pp. 1-6, May 28-31, 2013.
- [134] Shakya, R. K., Yatindra Nath Singh, and **Nishchal K. Verma**, "Optimizing channel access for event-driven wireless sensor networks: analysis and enhancements," *arXiv preprint*, vol. 1203, no. 5874, 2012.
- [135] R. K. Sevakula and **Nishchal K. Verma**, "Wavelet Transforms for Fault Detection using SVM in Power Systems," *IEEE Int. Conf. on Power Electronics, Drives and Energy Systems (PEDES 2012)*, Bengaluru, India, pp.1-6, Dec.16-19, 2012.
- [136] R. K. Sevakula and **Nishchal K. Verma**, "Support Vector Machine for Large Databases as Classifier," *Int. Conf. on Swarm, Evolutionary, and Memetic Computing (SEMCCO'12)*, Springer Berlin Heidelberg, Bhubaneswar, India, pp. 303-313, Dec. 2012.
- [137] **Nishchal K. Verma** and Shimaila, "Generation of future image frames using adaptive network based fuzzy Inference System (ANFIS) on spatiotemporal framework", *2012 IEEE Applied Imagery Pattern Recognition Workshop (AIPR)*, pp. 1-8, Oct. 9-11, 2012.
- [138] **Nishchal K. Verma**, "Future Image Frame Generation Using Artificial Neural Network with Selected Features", *IEEE Applied Imagery Pattern Recognition Workshop (AIPR)*, pp. 1-8, Oct. 9-11, 2012.
- [139] **Nishchal K. Verma**, "Health monitoring of rotating machines", *BOEING NEM Roadshow 2012*, Seattle, WA, USA, 2012.
- [140] **Nishchal K. Verma**, Ankan Bansal and Shikha Singh, "Generation of Future Image Frames for an Image Sequence", *Intelligent Interactive Technologies and Multimedia*, Springer Berlin Heidelberg, pp. 154-162, 2013.
- [141] R. K. Sevakula and **Nishchal K. Verma**, "Support vector machines for large databases as classifier", *In Swarm, Evolutionary, and Memetic Computing*, Springer Berlin Heidelberg, pp. 303-313, 2012.
- [142] R. K. Shakya, Y. N. Singh and **Nishchal K. Verma**, "A Correlation Model for MAC Protocols in Event-Driven Wireless Sensor Networks", *In proc. IEEE TENCON-2012*, Cebu, Philippines, vol. 4, no. 3, pp. 266-276, Nov. 19-22, 2012.

- [143] R. K. Shakya, Y. N. Singh and **Nishchal K. Verma**, “Modeling Spatial Correlation for MAC protocols in Event-driven Wireless Sensor Networks”, *In proc. IEEE ET2ECN-2012*, SVNIT, Surat, INDIA, pp. 1-6, Dec. 19-21, 2012.
- [144] R. K. Shakya, Y. N. Singh and **Nishchal K. Verma**, “A Novel Spatial Correlation Model for Wireless Sensor Network Applications”, *In proceedings of IEEE WOCN’2012*, Indore, India, pp. 1-6, Sep. 20-22, 2012.
- [145] **Nishchal K. Verma**, Tarun Maini and Al Salour, “Acoustic Signature Based Intelligent Health Monitoring of Air Compressors with Selected Features”, *IEEE Proc. Ninth International Conference on Information Technology: New Generations (ITNG)*, pp. 839-845, 2012.
- [146] N. Kohli and **Nishchal K. Verma**, “Videoconferencing System using Open Source Technologies”, *Proc. International Conference on Recent Advances and Future Trends in Information Technologies*, Punjabi University, Patiala, India, vol. no. 3, pp. 1-3, March 2012.
- [147] R. K. Tripathi, Y. N. Singh and **Nishchal K. Verma**, “N-LEACH, a balanced cost cluster-heads selection algorithm for Wireless Sensor Network”, *IEEE Proc. National Conference on Communications (NCC 2012)*, IIT Kharagpur, India, 3-5 Feb. 2012, pp.1-5.
- [148] **Nishchal K. Verma**, Kadambari Jagannatham, Abhijit Bahirat and Tanu Shukla, “Finding Sensitive Sensor positions under faulty condition of Reciprocating Air Compressors”, *Proc. International Conference on IEEE Recent Advances in Intelligent Computational Systems*, Trivandrum, pp. 242-246, Sep. 22-24, 2011.
- [149] **Nishchal K. Verma**, Kadambari Jagannatham, Abhijit Bahirat, Tanu Shukla and T S S Subramaniam, “Statistical Approach for finding Sensitive Positions for Condition Based Monitoring of Reciprocating Air Compressors”, *Proc. IEEE Control and System Graduate Research Colloquium Incorporating 2011 IEEE International Conference on System Engineering and Technology*, UiTM Shah Alam, Selangor Malaysia, pp. 10-14, June 27-28, 2012.
- [150] **Nishchal K. Verma**, A. Roy and Al Salour, “An Optimized Fault Diagnosis Method for Reciprocating Air Compressors Based on SVM”, *Proc. IEEE Control and System Graduate Research Colloquium Incorporating 2011 IEEE International Conference on System Engineering and Technology*, UiTM Shah Alam, Selangor Malaysia, pp. 65-69, June 27-28, 2011.
- [151] P. Agrawal, **Nishchal K. Verma**, Saurabh Agrawal and S. Vasikarla, “Color Segmentation Using Improved Mountain Clustering Technique Version-2”, *IEEE Information technology: New generation (ITNG), 2011 Eighth International Conference*, Las Vegas, Nevada USA, pp.536-542, April 11-13, 2011.
- [152] **Nishchal K. Verma**, “Health monitoring of rotating machines”, *BOEING NEM Roadshow 2011*, Seattle, WA, USA, 2011.
- [153] Saurabh Agrawal, **Nishchal K. Verma**, P. Tamrakar and Pradip Sircar, “Content Based Color Image Classification using SVM”, *IEEE Information technology: New generation (ITNG), 2011 Eighth International Conference*, Las Vegas, Nevada USA, pp. 1090-1094, April 11-13, 2011.
- [154] Bhuwan Mehta, **Nishchal K. Verma** and Pradip Sircar, “Single Channel Musical Source Separation by Nonnegative Matrix Factorization using Alpha Divergence”, *ICCANS/EESP 2011 Conference*, Maldives, no. 6, pp. 273-282.
- [155] **Nishchal K. Verma**, Shruti Bajpai, Amarjot Singh, Aditya Nagrare, Sheela Meena and Y. Cui, “A Comparison of Biclustering Algorithms”, *In International conference on Systems in Medicine and Biology (ICSMB 2010)*, IIT Kharagpur India, pp. 90-97, Dec. 16-18, 2010.
- [156] Bibhu Prasad Padhy, S. C. Srivastava and **Nishchal K. Verma**, “A Wide-Area Continuous Time model Predictive Control, Scheme for Multi-Machine Power System”, *16th NATIONAL*

POWER SYSTEMS CONFERENCE, Osmania University, Hyderabad, A.P, INDIA, pp. 272-277, Dec.15-17, 2010.

- [157] N. Kohli and **Nishchal K. Verma**, "SVM based methods optimized by feature selection for arrhythmia classification in ECG," *Proceedings of the International Conference on Biomedical Engineering and Assistive Technologies*, Punjab, Dec. 2010.
- [158] Ashutosh Dwivedi, **Nishchal K. Verma**, Prem K. Kalra, "A Novel Scheme for Face Detection Using Entropy Initialized Counter Propagation Network", *Tencon 2010*, Hiroshi INABA, Waseda University, Nov.23, 2010.
- [159] **Nishchal K. Verma** and Nikhil R. Pal, "Prediction of satellite images using fuzzy rule based Gaussian regression", *2010 IEEE Applied Imagery Pattern Recognition International Conference*, Washington DC, USA, pp.1-8, Oct. 13-15, 2010.
- [160] Nagendra K Singh, **Nishchal K. Verma** and Yatindra Nath Singh, "Learning through ICT-A good approach via open Source-Brihaspati", *4th IEEE International Conference on advance Computing and Communication Technologies, ICACCT-2010*, Panipat, India, Oct. 2010.
- [161] N. Kohli, **Nishchal K. Verma** and A. Roy, "SVM based arrhythmia classification in ECG", *2010 IEEE International Conference on Education and Information Technology*, Chongqing, China, pp. 486-490, Sept. 2010.
- [162] N. Kohli, **Nishchal K. Verma** and A. Roy, "SVM based Methods for arrhythmia classification in ECG," *2010 IEEE International Conference on Computer and Communication Technology (ICCCCT-2010)*, MNIT, Allahabad, India, pp.486-490, Sept.17-19, 2010.
- [163] **Nishchal K. Verma**, P. Tamrakar and Saurabh Agrawal, "On generating future satellite-image frame using artificial neural network", *International Conference on Image and Video Processing and Computer vision (IVPCV-2010)*, Orlando, Florida, USA, pp.158-164, July 12-14, 2010,
- [164] **Nishchal K. Verma** and P. K. Kalra, "Condition Based Monitoring of Rotating Machines", *BOEING NEM Roadshow 2010*, Seattle, WA, USA, 2010.
- [165] R. K. Tripathi, R. Shakya, **Nishchal K. Verma** and Y. N. Singh, "Localized Detection of Bottleneck Nodes and Quantification of Criticality in a Wireless Sensor Networks", *2010 IEEE Region 8 International Conference on Computational Technologies in Electrical and Electronics Engineering, SIBIRCON 2010*, Irkutsk Listvyanka, Russia, pp. 326-328, July 11-15, 2010.
- [166] N. Kohli and **Nishchal K. Verma**, "Performance Issues of Health Care System Using MySQL", *3rd IEEE International Conference on Computer Science and Information Technology*, Chengdu, China, pp. 497-5019, July 11, 2010.
- [167] **Nishchal K. Verma**, A. Roy and S. Vasikarla, "Medical Image Segmentation Using Improved Mountain Clustering technique version-2", *2010 7th IEEE Intl. Conference on Information Technology (Data mining) (ITNG 2010)*, Las Vegas, USA, pp. 156-161, Apr. 2010.
- [168] N. Kohli and **Nishchal K. Verma**, "Performance Issues of Health Care System with Audio and Video Facilities", *3rd International Conference on Data management 2010*, IMT, Ghaziabad, India, hospital. 1, no. 2, pp. 3, Mar. 2010.
- [169] **Nishchal K. Verma** and A. Roy, "Color Segmentation Using Improved Mountain Clustering Technique Version-2", *Second IEEE International Conference on Intelligent Human Computer Interaction (IHCI-2010)*, IIIT Allahabad, India, pp. 536-542, Jan. 16-18, 2010.

- [170] N. Kohli and **Nishchal K. Verma**, "Performance Issues of Smart Card based online Health Care Automation System", *International Conference on Signals, Systems and Automation 2009 (ICSSA 09)*, Gujarat, India, Dec. 2009.
- [171] J. K. Arora and **Nishchal K. Verma**, "System of Osmotic Transport Across Cell Membranes in Human Corneal Epithelial Cells in Non Dilute Solution", *Joint International Conference on Applied Systems Research and XXXIII National Systems Conference*, DEI Dayalbagh Agra, India, 33, no. 1-2, pp. 33-40, Nov. 2009.
- [172] **Nishchal K. Verma**, A. Roy, S. Gupta and Y. Cui, "Improved Mountain Clustering Technique for Microarray Data", *Joint International Conference on Applied Systems Research and XXXIII National Systems Conference*, DEI Dayalbagh Agra, India, Nov. 2009.
- [173] **Nishchal K. Verma**, P. Gupta, P. Agrawal and Y. Cui, "MRI Brain Image Segmentation for Spotting Tumors Using Improved Mountain Clustering Approach", *In 2009 IEEE Applied Imagery Pattern Recognition International Conference*, Washington DC, USA, pp. 1-8, Oct., 14-16, 2009.
- [174] **Nishchal K. Verma**, P. Gupta, P. Agrawal and Y. Cui, "Fuzzy Rule Based Unsupervised Approach for Salient Gene Extraction", *In 2009 IEEE Applied Imagery Pattern Recognition International Conference*, Washington DC, USA, pp.1-5, Oct. 14-16, 2009.
- [175] **Nishchal K. Verma**, P. Gupta, P. Agrawal, M. Hanmandlu, S. Vasikarla and Y. Cui, "Medical Image Segmentation Using Improved Mountain Clustering Approach", *In the 6th IEEE International Conference on Information Technology - New Generation, ITNG*, Las Vegas, pp. 1307-1312, April 27-29, 2009.
- [176] **Nishchal K. Verma** and P. K. Kalra, "Health monitoring of rotating machines", *BOEING NEM Roadshow 2009*, Seattle, WA, USA, 2009.
- [177] **Nishchal K. Verma** and Y. Cui, "Fuzzy rule based unsupervised approach for salient gene extraction", *IEEE International conference of innovative technologies (ICIT)*, Bahadurgarh, India, vol. 10, no. S7, 2009.
- [178] **Nishchal K. Verma** and M. Hanmandlu, "Adaptability in Additive Fuzzy Systems via EM Algorithm", *In Proceedings of International Conference on AIML-06*, Sharm Elsheikh, Egypt, no. 6, pp. 35-42, June 13-15, 2006.
- [179] **Nishchal K. Verma** and M. Hanmandlu, "Non-additive Generalized Fuzzy System Under the Framework of Cluster weighted Model", *In Proceedings of International Conference on AIML-06*, Sharm Elsheikh, Egypt, 15, no. 5, pp. 809-827, June 13-15, 2006.
- [180] **Nishchal K. Verma** and M. Hanmandlu, "Fuzzy Modeling of Earth's Magnetic Field", *IEEE International Magnetism Conference, Intermag*, San Diego, USA, pp 339-339, May 8-12, 2006.
- [181] A. Chowdhari, M. Hanmandlu and **Nishchal K. Verma**, R. D. Choudhari, "Mesh Based Clustering Without Stopping Criterion", *In Proceedings of IEEE INDICON 2005 Conference*, Chennai, India, pp.530-534, Dec. 11-13, 2005.
- [182] **Nishchal K. Verma** and M. Hanmandlu, "Interactive Fuzzy System Using CWM", *2005 Annual IEEE India Conference - Indicon*, Chennai, India, pp. 375-378, Dec. 11-13, 2005.
- [183] **Nishchal K. Verma**, M. Hanmandlu and N. Ahmad, "Cluster-Weighted Modeling for an Interactive Fuzzy System", *In Proceedings of CERA 2005, An International Conference*, vol. 2, IIT Roorkee, India, Sept. 29-Oct. 1, 2005.

- [184] M. Hanmandlu, **Nishchal K. Verma**, N. Ahmad and S. Vasikarla, "Cluster Weighted Modeling as a basis for Non-additive GFM", *The 2005 IEEE International Conference on Fuzzy Systems*, Reno, USA, pp. 252-257, May 22-25.

Patents

- [1] **Nishchal K. Verma**, R. K. Sevakula, and R. Thirukovalluru, "Condition monitoring setup for long term reliability in fault recognition," no. 201611029228, dated-March 2nd, 2018.