

Publications (In Peer Reviewed Journals)

- J1. D. Ray, **N. V. George**, P. K. Meher, "Area and energy efficient approximate inner-product architectures based on distributed arithmetic ", IEEE Transactions on Circuits and Systems I: Regular Papers, DOI: 10.1109/TCSI.2019.2948791, In Press.
- J2. P. Kajla, **N. V. George**, "Speech quality enhancement using a two-channel sparse adaptive filtering approach", Applied Acoustics, 158, (2020), 107035. [\[Link\]](#)
- J3. K. Kumar, **N. V. George**, "A generalized maximum correntropy criterion based robust sparse adaptive room equalization", Applied Acoustics, 158, (2020), 107036. [\[Link\]](#)
- J4. S. Majhi, A. Mukherjee, **N. V. George**, B. Uy, "Corrosion detection in steel bar: A time frequency approach", NDT&E International, 107, (2019), 102150. [\[Link\]](#)
- J5. P. Pandey, V. Patel, **N. V. George**, S. Mallajosyula, "KELM-CPPpred: Kernel extreme learning machine based prediction model for cell-penetrating peptides", Journal of Proteome Research, 17(9), (2018), 3214–3222. [\[Link\]](#)
- J6. D. Ray, **N. V. George**, P. K. Meher, "Efficient shift-add implementation of FIR filters using variable partition hybrid form structures", IEEE Transactions on Circuits and Systems I: Regular Papers, 65(12), (2018), 4247 - 4257. [\[Link\]](#)
- J7. K. S. Kumar, **N. V. George**, "Polynomial sparse adaptive estimation in distributed networks", IEEE Transactions on Circuits and Systems II: Express Briefs, 65(3), (2018), 401-405. [\[Link\]](#)
- J8. S. Pradhan, **N. V. George**, F. Albu, S. Nordholm, "Two microphone acoustic feedback cancellation in digital hearing aids: a step size controlled frequency domain approach", Applied Acoustics, 132, (2018), 142-151. [\[Link\]](#)
- J9. V. Patel, J. Cheer, **N. V. George**, "Modified phase-scheduled-command FxLMS algorithm for active sound profiling", IEEE/ACM Transactions on Audio, Speech and Language Processing, 25(9), (2017), 1799-1808. [\[Link\]](#)
- J10. S. Pradhan, V. Patel, D. Somani[#], **N. V. George**, "An improved proportionate delayless multiband-structured subband adaptive feedback canceller for digital hearing aids", IEEE/ACM Transactions on Audio, Speech and Language Processing, 25(8), (2017), 1633-1643. [\[Link\]](#)
- J11. M. Rathod, V. Patel, **N. V. George**, "Generalized spline non-linear filters", Expert Systems with Applications, 83, (2017), 122-130. [\[Link\]](#)
- J12. R. Jariwala[#], I. Upadhyaya[#], **N. V. George**, "Robust equalizer design for adaptive room impulse response compensation", Applied Acoustics, 125, (2017), 01-06. [\[Link\]](#)
- J13. S. Pradhan, V. Patel, K. Patel[#], J. Maheshwari, **N. V. George**, "Acoustic feedback cancellation in digital hearing aids: A sparse adaptive filtering approach", Applied Acoustics, 122, (2017), 138-145. [\[Link\]](#)
- J14. A. Gotmare[#], S. S. Bhattacharjee, R. Patidar[#], **N. V. George**, "Swarm and evolutionary computing

- algorithms for system identification and filter design: A comprehensive review", *Swarm and Evolutionary Computing*, 32, (2017), 68-84. [\[Link\]](#)
- J15. N. C. Kurian, K. Patel[#], **N. V. George**, "Robust active noise control: An information theoretic learning approach" *Applied Acoustics*, 117A, (2017), 180-184. [\[Link\]](#)
- J16. N. Kawaria[#], R. Patidar[#], **N. V. George**, "Parameter estimation of MIMO bilinear systems using a Levy shuffled frog leaping algorithm", *Soft Computing*, 21(14), (2017), 3849-3858. [\[Link\]](#)
- J17. V. Patel, V. Gandhi[#], S. Heda[#], **N. V. George**, "Design of adaptive exponential functional link network based non-linear filters", *IEEE Transactions on Circuits and Systems I: Regular Papers*, 63 (9), (2016), 1434-1442. [\[Link\]](#)
- J18. J. Maheshwari, **N. V. George**, "Polynomial sparse adaptive algorithm", *Electronics Letters*, 52 (25), (2016), 2063-2065. [\[Link\]](#)
- J19. V. Patel, **N. V. George**, "Compensating acoustic feedback in feed-forward active noise control systems using spline adaptive filters", *Signal Processing*, 120, (2016), 448-455. [\[Link\]](#)
- J20. J. Maheshwari, **N. V. George**, "Robust modeling of acoustic paths using a sparse adaptive algorithm", *Applied Acoustics*, 101, (2016), 122-126. [\[Link\]](#)
- J21. S. Agrawal, **N. V. George**, A. Prashant, "GPR data analysis of weak signals using modified S-transform", *Geotechnical and Geological Engineering*, 33(5), (2015), 1167-1182. [\[Link\]](#)
- J22. V. Patel, **N. V. George**, "Nonlinear active noise control using spline adaptive filters", *Applied Acoustics*, 93, (2015), 38-43. [\[Link\]](#)
- J23. A. Gotmare[#], R. Patidar[#], **N. V. George**, "Nonlinear system identification using a cuckoo search optimized adaptive Hammerstein model", *Expert Systems with Applications*, 42(5), (2015), 2538-2546. [\[Link\]](#)
- J24. **N. V. George**, G. Panda, "Development of a novel robust identification scheme for nonlinear dynamic systems", *International Journal of Adaptive Control and Signal Processing*, 29, (2015), 385-406. [\[Link\]](#)
- J25. A. P. Patwardhan[#], R. Patidar[#], **N. V. George**, "On a cuckoo search optimization approach towards feedback system identification", *Digital Signal Processing*, 32, (2014), 156-163. [\[Link\]](#)
- J26. **N. V. George**, A. Gonzalez, "Convex combination of nonlinear adaptive filters for active noise control", *Applied Acoustics*, 76, (2014), 157-161. [\[Link\]](#)
- J27. **N. V. George**, G. Panda, "Advances in active noise control: A survey, with emphasis on recent nonlinear techniques", *Signal Processing*, 93(2), (2013), 363-377. [\[Link\]](#)
- J28. **N. V. George**, G. Panda, "Active control of nonlinear noise processes using cascaded adaptive nonlinear filter", *Applied Acoustics*, 74(1), (2013), 217-222. [\[Link\]](#)
- J29. **N. V. George**, G. Panda, "A particle swarm optimization based decentralized nonlinear active noise control system", *IEEE Transactions on Instrumentation and Measurement*, 61(12), (2012), 3378-3386. [\[Link\]](#)

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- J30. **N. V. George**, G. Panda, "A robust filtered-s LMS algorithm for nonlinear active noise control", *Applied Acoustics*, 73(8), (2012), 836-841. [[Link](#)]
- J31. **N. V. George**, K. F. Tiampo, S. S. Sahu, S. Mazzotti, L. Mansinha, G. Panda, "Identification of glacial isostatic adjustment in eastern Canada using S transform filtering of GPS observations", *Pure and Applied Geophysics*, 169(8), (2012), 1507-1517. [[Link](#)]
- J32. **N. V. George**, G. Panda, "A robust evolutionary feedforward active noise control system using Wilcoxon norm and particle swarm optimization algorithm", *Expert Systems with Applications*, 39(8), (2012), 7574-7580. [[Link](#)]
- J33. **N. V. George**, G. Panda, "On the development of adaptive hybrid active noise control system for effective mitigation of nonlinear noise", *Signal Processing*, 92(2), (2012), 509-516. [[Link](#)]

Publications (In International Conference Proceedings)

- C1. A. Cherkkil, V. Narayanan, **N. V. George**, "Integrated simulation of active noise control using a computational fluid dynamic approach", in the 23rd International Congress on Acoustics (ICA 2019), Aachen, Germany, Sep. 09-13, 2019.
- C2. T. Deb, D. Ray, **N. V. George**, "On the design of dynamic adaptive exponential linear-in-the-parameters nonlinear filters for active noise control", in the 26th International Congress on Sound and Vibration (ICSV26), Montreal, Canada, Jul 07-11, 2019.
- C3. D. Ray, **N. V. George**, P. K. Meher, "Analysis and design of approximate inner-product architectures based on distributed arithmetic", in the 2019 IEEE International Symposium on Circuits and Systems (ISCAS 2019), Sapporo, Japan, May 26-29, 2019.
- C4. J. Maheshwari, R. Jariwala[#], S. Pradhan, **N. V. George**, "Sparsity aware hybrid adaptive algorithms for modeling acoustic paths", in the 2018 IEEE International Workshop on Signal Processing Systems (SIPS 2018), Cape Town, South Africa, Oct. 21-24, 2018.
- C5. J. Maheshwari, R. Jariwala[#], S. Pradhan, **N. V. George**, "Online least angle regression algorithm for sparse system identification", in the 17th IEEE Symposium on Signal Processing and Information Technology (ISSPIT 2017), Bilbao, Spain, Dec. 18-20, 2017.
- C6. N. Shah[#], A. Pingale[#], V. Patel, **N. V. George**, "An adaptive background subtraction scheme for video surveillance systems", in the 17th IEEE Symposium on Signal Processing and Information Technology (ISSPIT 2017), Bilbao, Spain, Dec. 18-20, 2017.
- C7. S. Majhi, A. Mukherjee, **N. V. George**, B. Uy, "Infrastructure monitoring through ultrasonics: A time-frequency approach", in One Curtin International Postgraduate Conference (OCPC 2017), Sarawak, Malaysia, Dec. 10-12, 2017.
- C8. V. Patel, S. Pradhan, **N. V. George**, "Collaborative adaptive exponential linear-in-the-parameters nonlinear filters", in the 25th European Signal Processing Conference (EUSIPCO 2017), Kos Island, Greece, Aug. 28 – Sep. 02, 2017.
- C9. S. Pradhan, S. S. Bhattacharjee, V. Patel, **N. V. George**, "Speech quality enhancement in digital

- hearing aids: An active noise control approach", in the 24th International Congress on Sound and Vibration (ICSV 24), London, UK, Jul. 23-27, 2017.
- C10. K. Patel[#], N. C. Kurian, **N. V. George**, "Time frequency analysis: A sparse S transform approach", in the 2016 International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS 2016), Phuket, Thailand, Oct. 24-27, 2016.
- C11. V. Patel, **N. V. George**, "Design of dynamic linear-in-the-parameters nonlinear filters for active noise control", in the 24th European Signal Processing Conference (EUSIPCO 2016), Budapest, Hungary, Aug. 29 – Sep. 02, 2016.
- C12. V. Patel, D. Comminiello, M. Scarpiniti, **N. V. George**, A. Uncini, "Design of hybrid nonlinear spline adaptive filters for active noise control", in the 2016 International Joint Conference on Neural Networks (IJCNN), Vancouver, Canada, Jul. 25-29, 2016.
- C13. V. Patel, **N. V. George**, "Design of fractional order nonlinear active noise control systems", in the 23rd International Congress on Sound and Vibration (ICSV 23), Athens, Greece, Jul. 10-14, 2016.
- C14. R. Jariwala[#], J. Maheshwari, **N. V. George**, "On the design of a sparse adaptive room equalizer" in the 2015 International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS 2015), Bali, Indonesia, Nov. 09-12, 2015.
- C15. V. Patel, **N. V. George**, "Partial update even mirror Fourier non-linear filters for active noise control ", in the 23rd European Signal Processing Conference (EUSIPCO 2015), Nice, France, Aug. 31-Sep. 04, 2015.
- C16. R. Shah[#], S. Reddy[#], V. Patel, **N. V. George**, "Improving convergence in finite word length nonlinear active noise control systems", in the 20th IEEE International Conference on Digital Signal Processing (DSP 2015), Singapore, Jul. 21-24, 2015.
- C17. R. Jariwala[#], R. Patidar[#], **N. V. George**, "A Levy interior search algorithm for chaotic system identification", in the 21st International Conference on Soft Computing - MENDEL 2015, Brno University of Technology, Brno, Czech Republic, Jun. 23-25, 2015.
- C18. S. Pandey^{*}, R. Patidar[#], **N. V. George**, "Design of a krill herd algorithm based adaptive channel equalizer", in Proc. of 22nd IEEE International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS 2014), Sarawak, Malaysia, December 01-04, 2014. [[Link](#)]
- C19. S. Tyagi[#], V. Katre[#], **N. V. George**, "Online estimation of secondary path in active noise control systems using generalized Levinson Durbin algorithm", in Proc. of the 19th IEEE International Conference on Digital Signal Processing (DSP 2014), Hong Kong, August 20-23, 2014. [[Link](#)]
- C20. K. Sirisha[#], **N. V. George**, "Improving convergence of nonlinear active noise control systems", in Proc. of 2014 IEEE Students' Technology Symposium (TechSym 2014), IIT Kharagpur, India, February 28 - March 02, 2014. [[Link](#)]
- C21. P. Gupta^{*}, **N. V. George**, "An improved face recognition scheme using transform domain features", in Proc. of IEEE International Conference on Signal Processing & Integrated Networks (SPIN 2014), Noida, India, February 20-21, 2014. [[Link](#)]

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- C22. S. Tyagi[#], V. Katre[#], **N. V. George**, "A local variance approach to time frequency localization", in Proc. of 4th IEEE International Advance Computing Conference (IACC 2014), Gurgaon, India, February 21-22, 2014. [[Link](#)]
- C23. **N. V. George**, G. Panda, V. Kumar*, "On the development of a partial update multichannel nonlinear active noise control system", in Proc. of 7th International Conference on Signal Processing and Communication Systems (ICSPCS 2013), Gold Coast, Australia, December 16-18, 2013. [[Link](#)]
- C24. **N. V. George**, G. Panda, "A reduced complexity adaptive Legendre neural network for nonlinear active noise control", in Proc. of 19th International Conference on Systems, Signals and Image Processing (IWSSIP 2012), Vienna, Austria, April 11-13, 2012. [[Link](#)]
- C25. **N. V. George**, G. Panda, "Development of low complexity evolutionary computing based nonlinear active noise control systems", in Proc. of International Conference on Energy, Automation and Signal (ICEAS 2011), Bhubaneswar, India, December 28-30, 2011. [[Link](#)]
- C26. **N. V. George**, S. S. Sahu, L. Mansinha, K. F. Tiampo, G. Panda, "Time localised band filtering using modified S-transform", in Proc. of International Conference on Signal Processing Systems (ICSPS 2009), Singapore, May 15-17, 2009. [[Link](#)]
- C27. S. S. Sahu, G. Panda, **N. V. George**, "An improved S-transform for time-frequency analysis", in Proc. of IEEE International Advance Computing Conference (IACC 2009), Patiala, India, March 06-07, 2009. [[Link](#)]

Publications (As Book Chapters)

- B1. A. P. Patwardhan[#], R. Patidar[#], **N. V. George**, "Dynamic Nonlinear Active Noise Control: A Multi-Objective Evolutionary Computing Approach", book chapter in Metaheuristic Optimization Methods: Algorithms and Engineering Applications, Springer, In Press.

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