

References

- [1] W. J. Wiscombe, “Improved Mie scattering algorithms,” *Applied Optics*, vol. 19, no. 9, pp. 1505–1509, 1980.
- [2] A. T. Young, “Rayleigh scattering,” *Applied Optics*, vol. 20, no. 4, pp. 533–535, 1981.
- [3] S. K. Yadav and K. Sarawadekar, “A new robust scale-aware weighting-based effective edge-preserving gradient domain guided image filter for single image dehazing,” *Journal of Signal Processing Systems*, vol. 95, no. 4, pp. 475–493, 2023.
- [4] S. G. Narasimhan and S. K. Nayar, “Vision and the atmosphere,” *International Journal of Computer Vision*, vol. 48, no. 3, p. 233, 2002.
- [5] R. Tan, “Visibility in bad weather from a single image,” in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*. IEEE, 2008, pp. 1–8.
- [6] Z. Yu and C. Bajaj, “A fast and adaptive method for image contrast enhancement,” in *2004 International Conference on Image Processing, 2004. ICIP’04.*, vol. 2. IEEE, 2004, pp. 1001–1004.

-
- [7] G. Thomas, D. Flores-Tapia, and S. Pistorius, "Histogram specification: A fast and flexible method to process digital images," *IEEE Transactions on Instrumentation and Measurement*, vol. 60, no. 5, pp. 1565–1578, 2011.
- [8] F. Russo, "An image enhancement technique combining sharpening and noise reduction," *IEEE Transactions on Instrumentation and Measurement*, vol. 51, no. 4, pp. 824–828, 2002.
- [9] Z. Rong and W. L. Jun, "Improved wavelet transform algorithm for single image dehazing," *Optik*, vol. 125, no. 13, pp. 3064–3066, 2014.
- [10] Q. Liu, M. Chen, and D. Zhou, "Single image haze removal via depth-based contrast stretching transform," *Science China Information Sciences*, vol. 58, pp. 1–17, 2015.
- [11] Z. Rahman, D. J. Jobson, and G. A. Woodell, "Retinex processing for automatic image enhancement," *Journal of Electronic Imaging*, vol. 13, no. 1, pp. 100–110, 2004.
- [12] A. Galdran, A. Alvarez-Gila, A. Bria, J. Vazquez-Corral, and M. Bertalmío, "On the duality between retinex and image dehazing," in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, 2018, pp. 8212–8221.
- [13] S. Zhang, G.-j. Tang, X.-h. Liu, S.-h. Luo, and D.-d. Wang, "Retinex based low-light image enhancement using guided filtering and variational framework," *Optoelectronics Letters*, vol. 14, no. 2, pp. 156–160, 2018.
- [14] Z. Liang, Y. Wang, X. Ding, Z. Mi, and X. Fu, "Single underwater image enhancement by attenuation map guided color correction and detail preserved dehazing," *Neurocomputing*, vol. 425, pp. 160–172, 2021.

-
- [15] K. He, J. Sun, and X. Tang, “Single image haze removal using dark channel prior,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 33, no. 12, pp. 2341–2353, 2010, <https://doi.org/10.1109/TPAMI.2010.168>.
- [16] R. Fattal, “Dehazing using color-lines,” *ACM Transactions on Graphics*, vol. 34, no. 1, pp. 1–14, 2014.
- [17] Q. Zhu, J. Mai, and L. Shao, “A fast single image haze removal algorithm using color attenuation prior,” *IEEE Transactions on Image Processing*, vol. 24, no. 11, pp. 3522–3533, 2015, <https://doi.org/10.1109/TIP.2015.2446191>.
- [18] L. He, J. Zhao, N. Zheng, and D. Bi, “Haze removal using the difference-structure-preservation prior,” *IEEE Transactions on Image Processing*, vol. 26, no. 3, pp. 1063–1075, 2016, <https://doi.org/10.1109/TIP.2016.2644267>.
- [19] T. M. Bui and W. Kim, “Single image dehazing using color ellipsoid prior,” *IEEE Transactions on Image Processing*, vol. 27, no. 2, pp. 999–1009, 2017, <https://doi.org/10.1109/TIP.2017.2771158>.
- [20] M. Ju, C. Ding, D. Zhang, and Y. J. Guo, “BDPK: Bayesian dehazing using prior knowledge,” *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 29, no. 8, pp. 2349–2362, 2018, <https://doi.org/10.1109/TCSVT.2018.2869594>.
- [21] M. Ju, C. Ding, Y. J. Guo, and D. Zhang, “IDGCP: Image dehazing based on Gamma correction prior,” *IEEE Transactions on Image Processing*, vol. 29, pp. 3104–3118, 2019, <https://doi.org/10.1109/TIP.2019.2957852>.

-
- [22] Z. Lu, B. Long, and S. Yang, "Saturation based iterative approach for single image dehazing," *IEEE Signal Processing Letters*, vol. 27, pp. 665–669, 2020, <https://doi.org/10.1109/LSP.2020.2985570>.
- [23] M. Ju, C. Ding, W. Ren, and Y. Yang, "IDBP: Image dehazing using blended priors including non-local, local, and global priors," *IEEE Transactions on Circuits and Systems for Video Technology*, 2021, <https://doi.org/10.1109/TCSVT.2021.3101503>.
- [24] M. Ju, C. Ding, C. A. Guo, W. Ren, and D. Tao, "Idrlp: Image dehazing using region line prior," *IEEE Transactions on Image Processing*, vol. 30, pp. 9043–9057, 2021.
- [25] X. Zhao, "Single image dehazing using bounded channel difference prior," in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, 2021, pp. 727–735.
- [26] S. K. Yadav and K. Sarawadekar, "Single image dehazing using adaptive Gamma correction method," in *TENCON 2019 IEEE Region 10 Conference (TENCON)*. IEEE, 2019, pp. 1752–1757, <https://doi.org/10.1109/TENCON.2019.8929383>.
- [27] D. B. Chenault and J. L. Pezzaniti, "Polarization imaging through scattering media," in *Polarization Analysis, Measurement, and Remote Sensing III*, vol. 4133. SPIE, 2000, pp. 124–133.
- [28] L. Schaul, C. Fredembach, and S. Süssstrunk, "Color image dehazing using the near-infrared," in *2009 16th IEEE International Conference on Image Processing (ICIP)*. IEEE, 2009, pp. 1629–1632.

-
- [29] C. O. Ancuti and C. Ancuti, "Single image dehazing by multi-scale fusion," *IEEE Transactions on Image Processing*, vol. 22, no. 8, pp. 3271–3282, 2013.
- [30] C. Ancuti, C. O. Ancuti, C. De Vleeschouwer, and A. C. Bovik, "Night-time dehazing by fusion," in *2016 IEEE International Conference on Image Processing (ICIP)*. IEEE, 2016, pp. 2256–2260, <https://doi.org/10.1109/ICIP.2016.7532760>.
- [31] Y. Li, Q. Miao, R. Liu, J. Song, Y. Quan, and Y. Huang, "A multi-scale fusion scheme based on haze-relevant features for single image dehazing," *Neurocomputing*, vol. 283, pp. 73–86, 2018.
- [32] A. Galdran, "Image dehazing by artificial multiple-exposure image fusion," *Signal Processing*, vol. 149, pp. 135–147, 2018.
- [33] M. Zheng, G. Qi, Z. Zhu, Y. Li, H. Wei, and Y. Liu, "Image dehazing by an artificial image fusion method based on adaptive structure decomposition," *IEEE Sensors Journal*, vol. 20, no. 14, pp. 8062–8072, 2020.
- [34] F. Huo, X. Zhu, H. Zeng, Q. Liu, and J. Qiu, "Fast fusion-based dehazing with histogram modification and improved atmospheric illumination prior," *IEEE Sensors Journal*, vol. 21, no. 4, pp. 5259–5270, 2020.
- [35] Z. Zhu, H. Wei, G. Hu, Y. Li, G. Qi, and N. Mazur, "A novel fast single image dehazing algorithm based on artificial multiexposure image fusion," *IEEE Transactions on Instrumentation and Measurement*, vol. 70, pp. 1–23, 2020.
- [36] X. Liu, H. Li, and C. Zhu, "Joint contrast enhancement and exposure fusion for real-world image dehazing," *IEEE Transactions on Multimedia*, 2021.

-
- [37] B. Cai, X. Xu, K. Jia, C. Qing, and D. Tao, “DehazeNet: An end-to-end system for single image haze removal,” *IEEE Transactions on Image Processing*, vol. 25, no. 11, pp. 5187–5198, 2016, <https://doi.org/10.1109/TIP.2016.2598681>.
- [38] B. Li, X. Peng, Z. Wang, J. Xu, and D. Feng, “AOD-Net: All-in-one dehazing network,” in *2017 IEEE International Conference on Computer Vision (ICCV)*, 2017, pp. 4780–4788, <https://doi.org/10.1109/ICCV.2017.511>.
- [39] A. Dudhane and S. Murala, “RYF-Net: Deep fusion network for single image haze removal,” *IEEE Transactions on Image Processing*, vol. 29, pp. 628–640, 2020, <https://doi.org/10.1109/TIP.2019.2934360>.
- [40] S. Yin, Y. Wang, and Y.-H. Yang, “A novel image-dehazing network with a parallel attention block,” *Pattern Recognition*, vol. 102, p. 107255, 2020.
- [41] W.-T. Chen, H.-Y. Fang, J.-J. Ding, and S.-Y. Kuo, “PMHLD: Patch map-based hybrid learning DehazeNet for single image haze removal,” *IEEE Transactions on Image Processing*, vol. 29, pp. 6773–6788, 2020.
- [42] S. Zhao, L. Zhang, Y. Shen, and Y. Zhou, “RefinedNet: A weakly supervised refinement framework for single image dehazing,” *IEEE Transactions on Image Processing*, vol. 30, pp. 3391–3404, 2021.
- [43] P. Wang, H. Zhu, H. Huang, H. Zhang, and N. Wang, “TMS-GAN: A twofold multi-scale generative adversarial network for single image dehazing,” *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 32, no. 5, pp. 2760–2772, 2021.

-
- [44] Y. Liu, H. Yin, J. Wan, Z. Liu, and A. Chong, “EANet: Edge aware network for image dehazing,” *IEEE Signal Processing Letters*, vol. 29, pp. 174–178, 2021.
- [45] C. Lin, X. Rong, and X. Yu, “MSAFF-Net: Multiscale attention feature fusion networks for single image dehazing and beyond,” *IEEE Transactions on Multimedia*, 2022.
- [46] C. Tomasi and R. Manduchi, “Bilateral filtering for gray and color images,” in *Sixth International Conference on Computer Vision*. IEEE, 1998, pp. 839–846, <https://doi.org/10.1109/ICCV.1998.710815>.
- [47] F. Durand and J. Dorsey, “Fast bilateral filtering for the display of high-dynamic-range images,” *ACM Transactions on Graphics*, vol. 21, no. 3, pp. 257–266, 2002.
- [48] B. Zhang and J. P. Allebach, “Adaptive bilateral filter for sharpness enhancement and noise removal,” *IEEE Transactions on Image Processing*, vol. 17, no. 5, pp. 664–678, 2008, <https://doi.org/10.1109/TIP.2008.919949>.
- [49] K. He, J. Sun, and X. Tang, “Guided image filtering,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 35, no. 6, pp. 1397–1409, 2012, <https://doi.org/10.1109/TPAMI.2012.213>.
- [50] Z. Li, J. Zheng, Z. Zhu, W. Yao, and S. Wu, “Weighted guided image filtering,” *IEEE Transactions on Image processing*, vol. 24, no. 1, pp. 120–129, 2014, <https://doi.org/10.1109/TIP.2014.2371234>.
- [51] F. Kou, W. Chen, C. Wen, and Z. Li, “Gradient domain guided image filtering,” *IEEE Transactions on Image Processing*, vol. 24, no. 11, pp. 4528–4539, 2015, <https://doi.org/10.1109/TIP.2015.2468183>.

-
- [52] Z. Lu, B. Long, K. Li, and F. Lu, “Effective guided image filtering for contrast enhancement,” *IEEE Signal Processing Letters*, vol. 25, no. 10, pp. 1585–1589, 2018.
- [53] C. N. Ochotorena and Y. Yamashita, “Anisotropic guided filtering,” *IEEE Transactions on Image Processing*, vol. 29, pp. 1397–1412, 2019.
- [54] Z. Sun, B. Han, J. Li, J. Zhang, and X. Gao, “Weighted guided image filtering with steering kernel,” *IEEE Transactions on Image Processing*, vol. 29, pp. 500–508, 2019.
- [55] H. Yin, Y. Gong, and G. Qiu, “Side window guided filtering,” *Signal Processing*, vol. 165, pp. 315–330, 2019.
- [56] X. Zhang and C. He, “Robust double-weighted guided image filtering,” *Signal Processing*, vol. 199, p. 108609, 2022.
- [57] L. I. Rudin, S. Osher, and E. Fatemi, “Nonlinear total variation based noise removal algorithms,” *Physica D: nonlinear phenomena*, vol. 60, no. 1-4, pp. 259–268, 1992.
- [58] Z. Farbman, R. Fattal, D. Lischinski, and R. Szeliski, “Edge-preserving decompositions for multi-scale tone and detail manipulation,” *ACM Transactions on Graphics (TOG)*, vol. 27, no. 3, pp. 1–10, 2008.
- [59] D. Min, S. Choi, J. Lu, B. Ham, K. Sohn, and M. N. Do, “Fast global image smoothing based on weighted least squares,” *IEEE Transactions on Image Processing*, vol. 23, no. 12, pp. 5638–5653, 2014.
- [60] L. Xu, C. Lu, Y. Xu, and J. Jia, “Image smoothing via l0 gradient minimization,” in *Proceedings of the 2011 SIGGRAPH Asia conference*, 2011, pp. 1–12.

-
- [61] Z. Li and J. Zheng, “Edge-preserving decomposition-based single image haze removal,” *IEEE Transactions on Image Processing*, vol. 24, no. 12, pp. 5432–5441, 2015.
- [62] S. K. Yadav and K. Sarawadekar, “Steering kernel-based guided image filter for single image dehazing,” in *2020 IEEE Region 10 Conference (TENCON)*. IEEE, 2020, pp. 444–449, <https://doi.org/10.1109/TENCON50793.2020.9293825>.
- [63] N. R. Draper and H. Smith, *Applied regression analysis*. John Wiley & Sons, 1998, vol. 326.
- [64] T. Hastie, R. Tibshirani, J. H. Friedman, and J. H. Friedman, *The elements of statistical learning: Data mining, inference, and prediction*. Springer, 2009, vol. 2.
- [65] C. Ancuti, C. O. Ancuti, and C. De Vleeschouwer, “D-HAZY: A dataset to evaluate quantitatively dehazing algorithms,” in *2016 IEEE International Conference on Image Processing (ICIP)*. IEEE, 2016, pp. 2226–2230, <https://doi.org/10.1109/ICIP.2016.7532754>.
- [66] N. Silberman, D. Hoiem, P. Kohli, and R. Fergus, “Indoor segmentation and support inference from rgb-d images,” in *European Conference on Computer Vision*. Springer, 2012, pp. 746–760, https://doi.org/10.1007/978-3-642-33715-4_54.
- [67] J.-P. Tarel, N. Hautiere, L. Caraffa, A. Cord, H. Halmaoui, and D. Gruyer, “Vision enhancement in homogeneous and heterogeneous fog,” *IEEE Intelligent Transportation Systems Magazine*, vol. 4, no. 2, pp. 6–20, 2012.

- [68] D. Scharstein and R. Szeliski, “High-accuracy stereo depth maps using structured light,” in *2003 IEEE Computer Society Conference on Computer Vision and Pattern Recognition, 2003. Proceedings.*, vol. 1. IEEE, 2003, pp. I–I.
- [69] Y. Zhang, L. Ding, and G. Sharma, “HazeRD: An outdoor scene dataset and benchmark for single image dehazing,” in *2017 IEEE International Conference on Image Processing (ICIP)*. IEEE, 2017, pp. 3205–3209, <https://doi.org/10.1109/ICIP.2017.8296874>.
- [70] C. Ancuti, C. O. Ancuti, R. Timofte, and C. D. Vleeschouwer, “I-HAZE: A dehazing benchmark with real hazy and haze-free indoor images,” in *International Conference on Advanced Concepts for Intelligent Vision Systems*. Springer, 2018, pp. 620–631.
- [71] C. O. Ancuti, C. Ancuti, R. Timofte, and C. De Vleeschouwer, “O-HAZE: A dehazing benchmark with real hazy and haze-free outdoor images,” in *2018 IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW)*, 2018, pp. 867–8678, <https://doi.org/10.1109/CVPRW.2018.00119>.
- [72] C. O. Ancuti, C. Ancuti, and R. Timofte, “NH-HAZE: An image dehazing benchmark with non-homogeneous hazy and haze-free images,” in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops*, 2020, pp. 444–445.
- [73] B. Li, W. Ren, D. Fu, D. Tao, D. Feng, W. Zeng, and Z. Wang, “Benchmarking single-image dehazing and beyond,” *IEEE Transactions on Image Processing*, vol. 28, no. 1, pp. 492–505, 2018.
- [74] C. O. Ancuti, C. Ancuti, M. Sbert, and R. Timofte, “Dense-Haze: A benchmark for image dehazing with dense-haze and haze-free images,” in *2019 IEEE*

- International Conference on Image Processing (ICIP)*. IEEE, 2019, pp. 1014–1018.
- [75] Y. Kim, B. Ham, M. N. Do, and K. Sohn, “Structure-texture image decomposition using deep variational priors,” *IEEE Transactions on Image Processing*, vol. 28, no. 6, pp. 2692–2704, 2019.
- [76] J. Xie, G. Hou, G. Wang, and Z. Pan, “A variational framework for underwater image dehazing and deblurring,” *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 32, no. 6, pp. 3514–3526, 2022.
- [77] J. Deng, W. Dong, R. Socher, L.-J. Li, K. Li, and L. Fei-Fei, “ImageNet: A large-scale hierarchical image database,” in *2009 IEEE Conference on Computer Vision and Pattern Recognition*. IEEE, 2009, pp. 248–255.
- [78] J. Zhang, Y. Cao, S. Fang, Y. Kang, and C. Wen Chen, “Fast haze removal for nighttime image using maximum reflectance prior,” in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, 2017, pp. 7418–7426.
- [79] N. Hautiere, J.-P. Tarel, D. Aubert, and E. Dumont, “Blind contrast enhancement assessment by gradient ratioing at visible edges,” *Image Analysis & Stereology*, vol. 27, no. 2, pp. 87–95, 2008.
- [80] Z.-u. Rahman, G. A. Woodell, and D. J. Jobson, “A comparison of the multi-scale retinex with other image enhancement techniques,” 1997.
- [81] L. K. Choi, J. You, and A. C. Bovik, “Referenceless prediction of perceptual fog density and perceptual image defogging,” *IEEE Transactions on Image Processing*, vol. 24, no. 11, pp. 3888–3901, 2015.

-
- [82] K.-Q. Huang, Q. Wang, and Z.-Y. Wu, “Natural color image enhancement and evaluation algorithm based on human visual system,” *Computer Vision and Image Understanding*, vol. 103, no. 1, pp. 52–63, 2006.
- [83] A. K. Moorthy and A. C. Bovik, “A two-step framework for constructing blind image quality indices,” *IEEE Signal Processing Letters*, vol. 17, no. 5, pp. 513–516, 2010.
- [84] A. Mittal, R. Soundararajan, and A. C. Bovik, “Making a “Completely blind” image quality analyzer,” *IEEE Signal Processing Letters*, vol. 20, no. 3, pp. 209–212, 2012.
- [85] T. L. Economopoulos, P. A. Asvestas, and G. K. Matsopoulos, “Contrast enhancement of images using partitioned iterated function systems,” *Image and Vision Computing*, vol. 28, no. 1, pp. 45–54, 2010.
- [86] Z. Wang, A. C. Bovik, H. R. Sheikh, and E. P. Simoncelli, “Image quality assessment: From error visibility to structural similarity,” *IEEE Transactions on Image Processing*, vol. 13, no. 4, pp. 600–612, 2004.
- [87] Q. Huynh-Thu and M. Ghanbari, “Scope of validity of PSNR in image/video quality assessment,” *Electronics letters*, vol. 44, no. 13, pp. 800–801, 2008.
- [88] R. Biswas, K. Sarawadekar, S. Varna, and S. Banerjee, “An FPGA-based architecture of DSC–SRI units specially for motion blind ultrasound systems,” *Journal of Real-Time Image Processing*, vol. 10, no. 3, pp. 573–595, 2015.
- [89] G. Sharma, W. Wu, and E. N. Dalal, “The CIEDE2000 color-difference formula: Implementation notes, supplementary test data, and mathematical observations,” *Color Research and Application*, vol. 30, no. 1, pp. 21–30, 2005.

-
- [90] Z. Wang and A. C. Bovik, “A universal image quality index,” *IEEE signal processing letters*, vol. 9, no. 3, pp. 81–84, 2002.
- [91] E. J. McCartney, “Optics of the atmosphere: Scattering by molecules and particles,” *New York, John Wiley and Sons, Inc., 1976. 421 p.*, 1976.
- [92] S. Lin, C. Wong, G. Jiang, M. Rahman, T. Ren, N. Kwok, H. Shi, Y.-H. Yu, and T. Wu, “Intensity and edge based adaptive unsharp masking filter for color image enhancement,” *Optik*, vol. 127, no. 1, pp. 407–414, 2016, <https://doi.org/10.1016/j.ijleo.2015.08.046>.
- [93] H. Talebi and P. Milanfar, “Fast multilayer Laplacian enhancement,” *IEEE Transactions on Computational Imaging*, vol. 2, no. 4, pp. 496–509, 2016.
- [94] Y. Cho, J. Jeong, and A. Kim, “Model-assisted multiband fusion for single image enhancement and applications to robot vision,” *IEEE Robotics and Automation Letters*, vol. 3, no. 4, pp. 2822–2829, 2018.
- [95] Z. Li, H. Shu, and C. Zheng, “Multi-scale single image dehazing using Laplacian and Gaussian pyramids,” *IEEE Transactions on Image Processing*, vol. 30, pp. 9270–9279, 2021.
- [96] D. Scharstein, H. Hirschm, Y. Kitajima, G. Krathwohl, N. Ne, X. Wang, and P. Westling, “High-resolution stereo datasets with subpixel-accurate ground truth,” in *German Conference on Pattern Recognition*. Springer, 2014, pp. 31–42.
- [97] J.-M. Guo, J.-y. Syue, V. R. Radzicki, and H. Lee, “An efficient fusion-based defogging,” *IEEE Transactions on Image Processing*, vol. 26, no. 9, pp. 4217–4228, 2017.

-
- [98] C. Ancuti, C. O. Ancuti, C. De Vleeschouwer, and A. C. Bovik, “Day and night-time dehazing by local airlight estimation,” *IEEE Transactions on Image Processing*, vol. 29, pp. 6264–6275, 2020.
- [99] K. Ma, H. Li, H. Yong, Z. Wang, D. Meng, and L. Zhang, “Robust multi-exposure image fusion: A structural patch decomposition approach,” *IEEE Transactions on Image Processing*, vol. 26, no. 5, pp. 2519–2532, 2017.
- [100] H. Li, K. Ma, H. Yong, and L. Zhang, “Fast multi-scale structural patch decomposition for multi-exposure image fusion,” *IEEE Transactions on Image Processing*, vol. 29, pp. 5805–5816, 2020.
- [101] H. Li, T. N. Chan, X. Qi, and W. Xie, “Detail-preserving multi-exposure fusion with edge-preserving structural patch decomposition,” *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 31, no. 11, pp. 4293–4304, 2021.

List of Publications

Refereed Journal Papers

- **Sumit Kr. Yadav** and Kishor Sarawadekar, “An Effective Scale-Aware Edge-Smoothing Weighting Constraint-Based Weighted Guided Image Filter for Single Image Dehazing,” *Circuits, Systems, and Signal Processing*, vol. 42, no.10, pp. 6136-6159, 2023.
- **Sumit Kr. Yadav** and Kishor Sarawadekar, “A New Robust Scale-Aware Weighting-Based Effective Edge-Preserving Gradient Domain Guided Image Filter for Single Image Dehazing,” *Journal of Signal Processing Systems*, vol. 95, pp. 475–493, April 2023.
- **Sumit Kr. Yadav** and Kishor Sarawadekar, “Effective Edge-Aware Weighting Filter-Based Structural Patch Decomposition Multi-Exposure Image Fusion for Single Image Dehazing,” *Multidimensional Systems and Signal Processing Journal*, vol. 34, no.2, pp. 543–574, June 2023.

- **Sumit Kr. Yadav** and Kishor Sarawadekar, “Robust Multi-Scale Weighting-Based Edge-Smoothing Filter For Single Image Dehazing,” *Pattern Recognition*, vol. 149, pp. 110-137, May 2024.
- **Sumit Kr. Yadav** and Kishor Sarawadekar, “Superpixel-Based Effective Scale-Aware Weighting Side Window Filter for Single Image Dehazing,” *Signal Processing*, revised and submitted in December 2023.
- **Sumit Kr. Yadav** and Kishor Sarawadekar, “A Novel Soft Clustering-Based Transmission Map Estimation with Empirical Mode Decomposition for Single Image Dehazing,” *IEEE Geoscience and Remote Sensing Letters*, revised and submitted in January 2024.

Refereed Conference Papers

- **Sumit Kr. Yadav** and Kishor Sarawadekar, “Single Image Dehazing using Adaptive Gamma Correction Method,” in *IEEE Region 10 Conference TENCON 2019, Bolgatty, Kochi, Kerala, India*, October 17 - 20, 2019, pp. 1752-1757.
- **Sumit Kr. Yadav** and Kishor Sarawadekar, “Steering Kernel-Based Guided Image Filter for Single Image Dehazing,” in *IEEE Region 10 Conference TENCON 2020, Osaka, Japan*, November 16 - 19, 2020, pp. 444-449.

- Bharat Bhushan Upadhyay, **Sumit Kr. Yadav** and Kishor Sarawadekar, “VLSI Architecture of Saturation Based Image Dehazing Algorithm and its FPGA Implementation,” in *2022 IEEE 65th International Midwest Symposium on Circuits and Systems (MWSCAS)*, Fukuoka, Japan, 2022, pp. 1-4.