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## Selected Scholarly Contributions [Data Provided by **Scopus** ]

Mukherjee, D., Wu, Q.M.J., Nguyen, T.M.

[Multiresolution based gaussian mixture model for background suppression](#)

(2013) IEEE Transactions on Image Processing, 22 (12), art. no. 6595560, pp. 5022-5035.

Murala, S., Wu, Q.M.J.

[Peak valley edge patterns: A new descriptor for biomedical image indexing and retrieval](#)

(2013) IEEE Computer Society Conference on Computer Vision and Pattern Recognition Workshops, art. no. 6595912, pp. 444-449.

Nguyen, T.M., Wu, Q.M.J.

[A dynamic bayesian framework for motion segmentation](#)

(2013) Proceedings - 2013 International Conference on Computer and Robot Vision, CRV 2013, art. no. 6569221, pp. 332-339.

Bhatnagar, G., Wu, Q.M.J.

[A new robust and efficient multiple watermarking scheme](#)

(2013) Multimedia Tools and Applications, pp. 1-24. Article in Press.

Wang, G., Zelek, J.S., Wu, Q.M.J.

[Robust structure from motion of nonrigid objects in the presence of outlying and missing data](#)

(2013) Proceedings - 2013 International Conference on Computer and Robot Vision, CRV 2013, art. no. 6569198, pp. 159-166.

Nguyen, T.M., Wu, Q.M.J.

[A fuzzy logic model based Markov random field for medical image segmentation](#)

(2013) Evolving Systems, 4 (3), pp. 171-181.

Bhatnagar, G., Wu, Q.M.J., Raman, B.

[A new aspect in robust digital watermarking](#)

(2013) Multimedia Tools and Applications, 66 (2), pp. 179-200.

Zhang, H., Wu, Q.M.J., Nguyen, T.M.

[Variational bayes and localized feature selection for student's t-mixture models](#)

(2013) International Journal of Pattern Recognition and Artificial Intelligence, 27 (6), art. no. 1350016, .

Baradarani, A., Wu, Q.M.J.

[Illumination invariant human face recognition: Frequency or resonance?](#)

(2013) 2013 10th IEEE International Conference and Workshops on Automatic Face and Gesture Recognition, FG 2013, art. no. 6553721, .

Bhatnagar, G., Wu, Q.M.J., Liu, Z.

[Directive contrast based multimodal medical image fusion in NSCT domain](#)

(2013) IEEE Transactions on Multimedia, 15 (5), art. no. 6428700, pp. 1014-1024.

Sarwer, M.G., Wu, Q.M.J., Zhang, X.-P.

[Enhanced SATD-based cost function for mode selection of H.264/AVC intra coding](#)

(2013) Signal, Image and Video Processing, 7 (4), pp. 777-786.

Bhatnagar, G., Wu, Q.M.J.

[Enhancing the transmission security of biometric images using chaotic encryption](#)

(2013) Multimedia Systems, pp. 1-12. Article in Press.

Nguyen, T.M., Wu, Q.M.J.

[Fast and robust spatially constrained gaussian mixture model for image segmentation](#)

(2013) IEEE Transactions on Circuits and Systems for Video Technology, 23 (4), art. no. 6257456, pp. 621-635.

Zhu, L., Meng, F., Zhang, F., Fu, J., Wu, Q., Ding, X., Li, L.

[An ultra-low loss split ring resonator by suppressing the electric dipole moment approach](#)

(2013) Progress in Electromagnetics Research, 137, pp. 239-254.

Bhatnagar, G., Wu, Q.M.J., Raman, B.

[Discrete fractional wavelet transform and its application to multiple encryption](#)

(2013) Information Sciences, 223, pp. 297-316.

Zhang, H., Wu, Q.M.J., Nguyen, T.M.

[A robust fuzzy algorithm based on student's t-distribution and mean template for image segmentation application](#)

(2013) IEEE Signal Processing Letters, 20 (2), art. no. 6365236, pp. 117-120.

Mukherjee, D., Saha, A., Wu, Q.M.J.

[Multiresolution based sigma-delta for motion segmentation](#)

(2012) IEEE Conference on Intelligent Transportation Systems, Proceedings, ITSC, art. no. 6338783, pp. 313-318.

Wang, G., Zelek, J.S., Wu, Q.M.J.

[Structure and motion recovery based on spatial-and-temporal-weighted factorization](#)

(2012) IEEE Transactions on Circuits and Systems for Video Technology, 22 (11), pp. 1590-1603.

Baradarani, A., Wu, Q.M.J., Ahmadi, M.

[Illumination suppression for illumination invariant face recognition](#)

(2012) Proceedings - International Conference on Pattern Recognition, art. no. 6460449, pp. 1590-1593.

Nguyen, T.M., Wu, Q.M.J.

[A robust non-symmetric mixture models for image segmentation](#)

(2012) Proceedings - International Conference on Image Processing, ICIP, art. no. 6466848, pp. 273-276.

Mukherjee, D., Wu, Q.M.J., Nguyen, T.M.

[Bilateral filter based mixture model for image segmentation](#)

(2012) Proceedings - International Conference on Image Processing, ICIP, art. no. 6466850, pp. 281-284.

Zhang, L., Yang, G., Wu, Q.

[Design of active frequency selective surface for electronically steerable antenna](#)

(2012) IEEE Antennas and Propagation Society, AP-S International Symposium (Digest), art. no. 6393737, pp. 886-889.

Hua, J., Chen, M.L., Zhu, L., Meng, F.Y., Wu, Q.

[Metamaterial analogue of electromagnetically induced transparency](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314089, pp. 422-426.

Hua, J., Huang, S., Yang, C., Wu, Q.

[High gain patch antenna with broadband metamaterial lens](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314010, pp. 79-82.

Liu, S., Wu, Q., Hua, J., Chen, M.

[A broadband fractal AMC ground plane for low-profile antennas](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314009, pp. 70-73.

Mei, J., Zhang, K., Wu, Q., Wu, J.

[Design of transparent device with complementary medium](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314048, pp. 253-257.

Zhang, F., Wu, Q., Lee, J.-C.

[Miniaturized microstrip-based metamaterials quasi-standard transmission lines unit](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6313981, pp. 629-632.

Wang, Y., Mei, J.S., Chen, M.H., Wu, Q., Zhang, K.

[Electromagnetic radiation from carbon nanotube at terahertz frequency](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314399, pp. 554-558.

Song, C., Wu, Q.

[A wide-band phased array antennas with unequal space](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314082, pp. 393-396.

Wu, Q., Ding, X., Feng, C.

[A multilayer printed dipoles for UHF near-field RFID reader](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314408, pp. 591-594.

Zhang, S., Wu, Q.

[Influence of mixed finite conductivity on lightning electromagnetic fields under the ground](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314406, pp. 583-586.

Wang, W., Ding, X., Yang, G., Zhang, K., Wang, Y., Wu, Q.

[Scattering characteristics of metallic single wall carbon nanotubes embedded in dielectric medium](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314397, pp. 545-548.

Zhou, C., Fu, J., Guo, Y., Wu, Q.

[Time and frequency domain transformation to the far field with FDTD](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314003, pp. 43-46.

Li, W., Yang, G., Zhang, T., Wu, Q., Hua, J., Chen, M., Gu, X.

[A novel miniaturized band-pass frequency selective surface](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314046, pp. 245-248.

Tang, H., Ding, X., Wu, Q.

[Transmission-line modeling characterization for multi-wall carbon nanotube antenna radiation](#)

(2012) Proceedings of 2012 5th Global Symposium on Millimeter-Waves, GSMM 2012, art. no. 6314398, pp. 549-553.

Zhu, L., Meng, F.-Y., Fu, J.-H., Wu, Q.

[An electromagnetically induced transparency metamaterial with polarization insensitivity based on multi-quasi-dark modes](#)

(2012) Journal of Physics D: Applied Physics, 45 (44), art. no. 445105, .

Zhu, L., Meng, F.-Y., Fu, J.-H., Wu, Q., Hua, J.

[An approach to configure low-loss and full transmission metamaterial based on electromagnetically induced transparency](#)

(2012) IEEE Transactions on Magnetics, 48 (11), art. no. 6332998, pp. 4285-4288.

Ding, X., Wu, Q., Zhang, K., Feng, C.

[A magnetic coupling dipole for UHF near-field RFID reader](#)

(2012) IEEE Transactions on Magnetics, 48 (11), art. no. 6332997, pp. 4305-4308.

Zhang, L., Yang, G., Wu, Q., Hua, J.

[A novel active frequency selective surface with wideband tuning range for EMC purpose](#)

(2012) IEEE Transactions on Magnetics, 48 (11), art. no. 6333040, pp. 4534-4537.

Meng, F.-Y., Zhang, K., Fu, J.-H., Wu, Q., Hua, J.

[Analogue of electromagnetically induced transparency in a magnetic metamaterial](#)

(2012) IEEE Transactions on Magnetics, 48 (11), art. no. 6332851, pp. 4390-4393.

Zhang, K., Wu, Q., Fu, J.-H., Meng, F.-Y., Li, L.-W.

[Metamaterials with tunable negative permeability based on mie resonance](#)

(2012) IEEE Transactions on Magnetics, 48 (11), art. no. 6333037, pp. 4289-4292.

Fu, J., Li, X., Wu, Q., Feng, C.

[Metamaterial based electronically-scanned circularly-polarized LWA](#)

(2012) IEEE Transactions on Magnetics, 48 (11), art. no. 6332594, pp. 4301-4304.

Meng, F.-Y., Lv, Y.-L., Zhang, K., Wu, Q., Li, L.-W.

[A detached zero index metamaterial lens for antenna gain enhancement](#)

(2012) Progress in Electromagnetics Research, 132, pp. 463-478.

Mukherjee, D., Wu, Q.M.J.

[Motion segmentation based on 3D histogram and temporal mode selection](#)

(2012) Proceedings of the 2012 IEEE International Conference on Multimedia and Expo Workshops, ICMEW 2012, art. no. 6266431, pp. 483-488.

Saha, A., Bhatnagar, G., Wu, Q.M.J.

[SVD filter based multiscale approach for image quality assessment](#)

(2012) Proceedings of the 2012 IEEE International Conference on Multimedia and Expo Workshops, ICMEW 2012, art. no. 6266229, pp. 43-48.

Zhang, K., Wu, Q., Meng, F., Fu, J.

[External cloak with axial constitutive parameter as constant](#)

(2012) IEEE MTT-S International Microwave Symposium Digest, art. no. 6259442, .

Mei, J.-S., Wu, Q., Zhang, K.

[Multifunctional complementary cloak with homogeneous anisotropic material parameters](#)

(2012) Journal of the Optical Society of America A: Optics and Image Science, and Vision, 29 (10), pp. 2067-2073.

Nguyen, T.M., Wu, Q.M.J.

[A Nonsymmetric Mixture Model for Unsupervised Image Segmentation](#)

(2012) IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics, . Article in Press.

Wang, Y., Wang, X., Wu, Q., He, X.-j., Gui, T.-l., Tong, Y.-J.

[Surface Plasmon Resonant THz Wave Transmission on Carbon Nanotube Film](#)

(2012) Plasmonics, 7 (3), pp. 411-415.

Mei, J.S., Wu, Q., Zhang, K.

[Complementary cloak based on conventional cloak with axial symmetrical cloaked region](#)

(2012) Applied Physics A: Materials Science and Processing, 108 (4), pp. 1001-1005.

Meng, F.-Y., Wu, Q., Erni, D., Wu, K., Lee, J.-C.

[Polarization-independent metamaterial analog of electromagnetically induced transparency for a refractive-index-based sensor](#)

(2012) IEEE Transactions on Microwave Theory and Techniques, 60 (10), art. no. 6269906, pp. 3013-3022.

Li, W., Zhang, T., Yang, G., Wu, Q., Hua, J.

[Novel frequency selective surfaces with compact structure and ultra-wideband response](#)

(2012) cccc2012 Asia-Pacific Symposium on Electromagnetic Compatibility, APEMC 2012 - Proceedings, art. no. 6238018, pp. 557-560.

Wu, Q., Zhang, S., Ding, T.

[Analysis of the electromagnetic fields inside building structure using the subgrid FDTD method](#)

(2012) cccc2012 Asia-Pacific Symposium on Electromagnetic Compatibility, APEMC 2012 - Proceedings, art. no. 6237878, pp. 573-576.

Chen, W., Fu, J., Wu, Q., Hua, J.

[A design of Rotman lens for phase antenna array](#)

(2012) cccc2012 Asia-Pacific Symposium on Electromagnetic Compatibility, APEMC 2012 - Proceedings, art. no. 6238016, pp. 893-896.

Zhang, K., Meng, F., Wu, Q., Fu, J.-H., Li, L.-W.

[Waveguide connector constructed by normal layered dielectric materials based on embedded optical transformation](#)

(2012) EPL, 99 (4), art. no. 47008, .

Nguyen, T.M., Wu, Q.M.J.

[Integrated segmentation of noisy image based on the spatial relationship](#)

(2012) 2012 International Conference on Systems and Informatics, ICSAI 2012, art. no. 6223469, pp. 206-210.

Ray, K., Wu, Q.M.J., Basu, G., Panigrahi, P.K.

[Random matrix route to image denoising](#)

(2012) 2012 International Conference on Systems and Informatics, ICSAI 2012, art. no. 6223437, pp. 1975-1980.

Mei, J., Wu, Q., Zhang, K.

[Novel multifunctional optical device with only axial material parameter spatially variant](#)

(2012) Chinese Optics Letters, 10 (7), art. no. 071605, .

He, X.-J., Wang, Y., Wu, Q., Gui, T.-L.

[The nonlinear dynamic response of microbeam of MEMS capacitive switch under mechanical shock](#)

(2012) Analog Integrated Circuits and Signal Processing, 72 (1), pp. 19-26.

Bhatnagar, G., Raman, B., Wu, Q.M.J.

[Robust watermarking using fractional wavelet packet transform](#)

(2012) IET Image Processing, 6 (4), pp. 386-397.

Bhatnagar, G., Wu, Q.M.J., Raman, B.

[Image and video encryption based on dual space-filling curves](#)

(2012) Computer Journal, 55 (6), pp. 667-685.

Bhatnagar, G., Wu, Q.M.J.

[Chaos-based security solution for fingerprint data during communication and transmission](#)

(2012) IEEE Transactions on Instrumentation and Measurement, 61 (4), art. no. 6122505, pp. 876-887.

Zhang, W., Wu, Q.M.J., Wang, G., You, X.

[Tracking and pairing vehicle headlight in night scenes](#)

(2012) IEEE Transactions on Intelligent Transportation Systems, 13 (1), art. no. 6018308, pp. 140-153.

Wu, D., Xu, S.-N., Xi, X.-M., Lü, Z.-J., Wu, Q.

[The investigation of the gain and terahertz pulse of carbon nanotube dipole antenna](#)

(2012) Harbin Gongye Daxue Xuebao/Journal of Harbin Institute of Technology, 44 (SUPPL.2), pp. 366-369.

Zhu, L., Meng, F.-Y., Fu, J.-H., Wu, Q., Hua, J.

[Multi-band slow light metamaterial](#)

(2012) Optics Express, 20 (4), pp. 4494-4502.

Nguyen, T.M., Wu, Q.M.J.

[Gaussian-mixture-model-based spatial neighborhood relationships for pixel labeling problem](#)

(2012) IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics, 42 (1), art. no. 5983453, pp. 193-202.

Bhatnagar, G., Wu, Q.M.J., Raman, B.

[A new robust adjustable logo watermarking scheme](#)

(2012) Computers and Security, 31 (1), pp. 40-58.

Nguyen, T.M., Wu, Q.M.J.

[Robust student's-t mixture model with spatial constraints and its application in medical image segmentation](#)

(2012) IEEE Transactions on Medical Imaging, 31 (1), art. no. 5989867, pp. 103-116.

Bhatnagar, G., Wu, Q.M.J.

[An image fusion framework based on human visual system in framelet domain](#)

(2012) International Journal of Wavelets, Multiresolution and Information Processing, 10 (1), art. no. 1250002, .

Bhatnagar, G., Wu, Q.M.J., Raman, B.

[A new fractional random wavelet transform for fingerprint security](#)

(2012) IEEE Transactions on Systems, Man, and Cybernetics: Systems, 42 (1), art. no. 5771604, pp. 262-275.

Wang, Y., Wu, Q., Wu, Y.-M., He, X.-J., Li, L.-W.

[Electromagnetic scattering of the carbon nanotubes excited by an electric line source](#)

(2012) Chinese Physics B, 21 (1), art. no. 014212, .

Minhas, R., Mohammed, A.A., Wu, Q.M.J.

[An efficient algorithm for focus measure computation in constant time](#)

(2012) IEEE Transactions on Circuits and Systems for Video Technology, 22 (1), art. no. 5740315, pp. 152-156.

Jia, M., Wu, Q., Gu, X.-M., Liu, X.-F.

[An improved adaptive particle swarm optimization algorithm for multi-user in cognitive radio context](#)

(2011) Journal of Harbin Institute of Technology (New Series), 18 (SUPPL. 1), pp. 412-417.

Hua, J., Ding, X.-M., Wu, Q., Yang, G.-H.

[A broadband monopolar patch antenna with ENG structure](#)

(2011) Journal of Harbin Institute of Technology (New Series), 18 (SUPPL. 1), pp. 215-218.



Fu, J.-H., Chen, P., Wu, Q., Yang, G.-H.

[Compact bandpass filter using thin wire and split ring resonators structure](#)

(2011) Journal of Harbin Institute of Technology (New Series), 18 (SUPPL. 1), pp. 211-214.

Jia, M., Gu, X.-M., Wu, Q.

[An improved channel estimation method for NC-OFDM systems in cognitive radio context](#)

(2011) Proceedings of the 2011 6th International ICST Conference on Communications and Networking in China, CHINACOM 2011, art. no. 6158137, pp. 147-150.

Hua, J., Fu, J.-H., Chen, P., Wu, Q.

[A wideband microstrip antenna miniaturized by loading split ring resonators](#)

(2011) Journal of Harbin Institute of Technology (New Series), 18 (SUPPL. 1), pp. 208-210.

Sarwer, M.G., Wu, Q.M.J., Zhang, X.-P.

[A novel rate-distortion optimization method of H.264/AVC intra coder](#)

(2011) Proceedings - International Conference on Image Processing, ICIP, art. no. 6116459, pp. 3465-3468.

Bhatnagar, G., Wu, Q.M.J., Raman, B.

[Navigation and surveillance using night vision and image fusion](#)

(2011) 2011 IEEE Symposium on Industrial Electronics and Applications, ISIEA 2011, art. no. 6108728, pp. 342-347.

Hua, J., Gou, Y.-X., Wu, Q., Yang, G.-H.

[Design of a high-gain and broadband metamaterial microstrip antenna](#)

(2011) Journal of Harbin Institute of Technology (New Series), 18 (SUPPL. 1), pp. 223-225.