REFERENCES

Abbott, J. G., & Thurstone, F. L. (1979). Acoustic speckle: theory and experimental analysis. *Ultrasonic Imaging*, *1*(4), 303–324.

Agrawal, N., & Venugopalan, K. (2011). Speckle reduction in remote sensing images. In *Proceedings of the International Conference on Emerging Trends in Networks and Computer Communications (ETNCC)* (pp. 195–199). https://doi.org/10.1109/ETNCC.2011.5958515

Albertz, J. (2007). *Introduction to remote sensing: principles of interpretation of aerial and satellite images* (3rd ed.). Darmstadt: Wiss Buchgesellschaft.

Amini, J., & Sumantyo, J. T. S. (2009). Employing a method on SAR and optical images for forest biomass estimation. *IEEE Transactions on Geoscience and Remote Sensing*, *47*(12), 4020–4026. https://doi.org/10.5772/973

Bamler, R. (2000). Principles of synthetic aperture radar. *Surveys in Geophysics*, *21*(2–3), 147–157. https://doi.org/10.1023/A:1006790026612

Bansal, E. K., & Akwinder, E. (2014). A review on speckle noise reduction techniques. *IOSR Journal of Computer Engineering (IOSR-JCE)*, *16*(3), 74–77. Retrieved from www.iosrjournals.org

Biradar, N., Dewal, M. L., & Rohit, M. (2014). Speckle noise reduction using hybrid TMAV based fuzzy filter. *International Journal of Research in Engineering and Technology*, *3*(3), 113–118. Retrieved from http://ijret.org/Volumes/V03/I15/IJRET_110315020.pdf

Bose, I., Mishra, D., Pradhan, B., & De, U. C. (2014). Fuzzy approach to detect and reduce impulse noise in RGB color image. *International Journal of Scientific and Research Publications*, *4*(2), 1–6.

Chandra, A. M., & Ghosh, S. K. (2006). *Remote sensing and geographical information system*. Oxford: Alpha Science International Ltd.

Curlander, J. C., & McDonough, R. N. (1991). *Synthetic aperture radar: systems and signal processing*. New York: Wiley-Interscience.

Dellepiane, S. G., & Angiati, E. (2014). Quality assessment of despeckled SAR images. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, *7*(2), 691–707. https://doi.org/10.1109/JSTARS.2013.2279501

Dong, Y., Milne, a. K., & Forster, B. C. (2001). Toward edge sharpening: a SAR speckle filtering algorithm. *IEEE Transactions on Geoscience and Remote Sensing*, *39*(4), 851–863. https://doi.org/10.1109/36.917910

ESA. (2007). *ASAR product handbook*. Darmstadt : European Space Agency.

Eskicioglu, A. M., & Fisher, P. S. (1995). Image quality measures and their performance. *IEEE Transactions on Communications*, *43*(12), 2959–2965. https://doi.org/10.1109/26.477498

Farbiz, F., Menhaj, M. B., Motamedi, S. A., & Hagan, M. T. (2000). A new fuzzy logic filter for image enhancement. *IEEE Transactions on Systems, Man, and Cybernetics. Part B, Cybernetics : A Publication of the IEEE Systems, Man, and Cybernetics Society*, *30*(1), 110–9. https://doi.org/10.1109/3477.826951

Forouzanfar, M., & Abrishami-Moghaddam, H. (2010). Ultrasound speckle reduction in the complex wavelet domain. *Principles of Waveform Diversity and Design* (pp. 558–77). SciTech Publishing.

Foucher, S., & Lopez-Martinez, C. (2014). Analysis, evaluation, and comparison of polarimetric SAR speckle filtering techniques. *IEEE Transactions on Image Processing : A Publication of the IEEE Signal Processing Society*, *23*(4), 1751–1764. https://doi.org/10.1109/TIP.2014.2307437

Franceschetti, G., & Lanari, R. (1999). *Synthetic aperture radar processing (1st ed.)*. Florida: CRC Press.

Frost, V. S., Stiles, J. a, Shanmugan, K. S., & Holtzman, J. C. (1982). A model for radar images and its application to adaptive digital filtering of multiplicative noise. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, *4*(2), 157–166. https://doi.org/10.1109/TPAMI.1982.4767223

Gagnon, L., & Jouan, A. (1997). Speckle filtering of SAR images - a comparative study between complex-wavelet-based and standard filters. In *Proceedings of SPIE* (Vol. 3169, pp. 80–91). International Society for Optics and Photonics. https://doi.org/10.1117/12.279681

Gonzalez, R. C., & Woods, R. E. (2007). *Digital image processing (3rd ed.)*. New Jersey: Prentice Hall.

Henderson, F. M., & Anthony, J. L. (1998). *Manual of remote sensing : principles and applications of imaging radar (3rd ed.)*. Somerset, New Jersey: John Wiley and Sons, Inc.

Hiremath, P. S., Akkasaligar, P. T., & Badiger, S. (2013). Speckle noise reduction in medical ultrasound images. In *Advancements and Breakthroughs in Ultrasound Imaging* (pp. 201–241). Croatia: InTech.

Hua, C., & Jinwen, T. (2009). Speckle reduction of synthetic aperture radar images based on fuzzy logic. In *Proceedings of the 1st International Workshop on Education Technology and Computer Science* (Vol. 1, pp. 933–937). https://doi.org/10.1109/ETCS.2009.212

JAXA. (2008). *ALOS data users handbook*. Tokyo : Japan Aerospace Exploration Agency.

Jensen, J. R. (2007). *Remote sensing of the environment: an earth resource perspective*. New Jersey: Pearson Prentice Hall.

Kanevsky, M. (2009). *Radar imaging of the ocean waves* (1st ed.). Oxford: Elsevier B.V.

Kennedy, M. D., Dangermond, J., & Goodchild, M. F. (2013). *Introducing Geographic Information Systems with ArcGIS: A workbook approach to learning GIS*. New Jersey: John Wiley & Sons, Inc.

Kuan, D., Sawchuk, A., Strand, T., & Chavel, P. (1987). Adaptive restoration of images with speckle. *IEEE Transactions on Acoustics, Speech, and Signal Processing*, *35*(3), 373–383. https://doi.org/10.1109/TASSP.1987.1165131

Kuttikkad, S., & Chellappa, R. (2000). Statistical modeling and analysis of high-resolution synthetic aperture radar images. *Statistics and Computing*, *10*(2), 133–145. https://doi.org/10.1023/A:1008994309819

Kwan, H. K. (2003). Fuzzy filters for noise reduction in images. *Fuzzy Filter for Image Processing* (Vol. 122, pp. 25–53). Berlin: Springer Berlin Heidelberg.

Kwan, H. K., & Cai, Y. (2002). Fuzzy filters for image filtering. In *Proceedings of the 45th Midwest Symposium on Circuits and Systems (MWSCAS)* (Vol. 3, p. III-672-675). https://doi.org/10.1109/MWSCAS.2002.1187129

Lee, J.-S. (1980). Digital image enhancement and noise filtering by use of local statistics. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, *2*(2), 165–168. https://doi.org/10.1109/TPAMI.1980.4766994

Lee, J.-S., Wen, J.-H., Ainsworth, T. L., Chen, K.-S., & Chen, A. J. (2009). Improved sigma filter for speckle filtering of SAR imagery. *IEEE Transactions on Geoscience and Remote Sensing*, *47*(1), 202–213. https://doi.org/10.1109/TGRS.2008.2002881

Lillesand, T. M., Kiefer, R. W., & Chipman, J. (2014). *Remote sensing and image interpretation* (7th ed.). New York: John Wiley & Sons, Inc.

Lopes, A., Touzi, R., & Nezry, E. (1990). Adaptive speckle filters and scene heterogeneity. *IEEE Transactions on Geoscience and Remote Sensing*, *28*(6), 992–1000. https://doi.org/10.1109/36.62623

Maity, A., Pattanaik, A., Sagnika, S., & Pani, S. (2015). A comparative study on approaches to speckle noise reduction in images. In *2015 International Conference on Computational Intelligence and Networks* (pp. 148–155). IEEE. https://doi.org/10.1109/CINE.2015.36

Martin, F. J., & Turner, R. W. (1993). SAR speckle reduction by weighted filtering. *Journal of Remote Sensing*, *14*, 1759–1774.

Medeiros, F. N. S., Mascarenhas, N. D. a., & Costa, L. F. (2003). Evaluation of speckle noise MAP filtering algorithms applied to SAR images. *International Journal of Remote Sensing*, *24*(24), 5197–5218. https://doi.org/10.1080/0143116031000115148

Moya, D. M., Amores, P. J., Ferreras, J. M. M., Presa Ángel, J. M. N., & Vázquez, P. (2011). Speckle filtering for SAR imagery learning through heuristic method. In *Proceedings of the 2nd International Conference on Space Technology (ICST)* (pp. 1–4). https://doi.org/10.1109/ICSpT.2011.6064674

Natural Resources Canada, (NRC). (2016). Fundamentals of remote sensing. Retrieved April 28, 2016, from http://www.nrcan.gc.ca/earth-sciences/geomatics/satellite-imagery-air-photos/satellite-imagery-products/educational-resources/9309

Oliver, C., & Quegan, S. (2004). *Understanding synthetic aperture radar images*. *SciTech Publ.* (Vol. 42). SciTech Publ.

Petrou, M., & Petrou, C. (2010). *Image processing : the fundamentals* (2nd ed.). New York: Wiley.

Porcello, L. J., Massey, N. G., Innes, R. B., & Marks, J. M. (1976). Speckle reduction in synthetic radars. *Journal of the Optical Society of America*, *66*, 1305–1311.

Ragesh, N. K., Anil, A. R., & Rajesh, R. (2011). Digital image denoising in medical ultrasound images : A Survey. In *Proceeding of the International conference on Artificial Intelligence and Machine Learning (AIML-11)* (pp. 12–14).

Rao, D. S., Seetha, M., & Prasad, M. H. M. K. (2015). Quality assessment parameters for iterative image fusion using fuzzy and neuro fuzzy logic and applications. *Procedia Technology*, *19*, 888–894. https://doi.org/http://dx.doi.org/10.1016/j.protcy.2015.02.127

Rosenqvist, A., Shimada, M., & Watanabe, M. (2004). ALOS PALSAR: technical outline and mission concepts. In *Proceedings of the International Symposium on Retrieval of Bio- and Geophysical Parameters from SAR Data for Land Applications* (Vol. 1, pp. 1–7).

Russo, F. (1999). Evolutionary neural fuzzy systems for noise cancellation in image data. *IEEE Transactions on Instrumentation and Measurement*, *48*(5), 915–920. https://doi.org/10.1109/19.799647

Satellite Imaging Corporation, (SIC). (2012). Pleiades-1A satellite image of mount fuji. Retrieved from http://www.satimagingcorp.com/gallery/pleiades-1/pleiades-1a-mount-fuji/

Shanthi, N., & Elayaraja, C. (2014). Cross - calibration and normalization for speckle noise reduction in SAR images. *International Journal of Advanced Research in Electronics, Communication & Instrumentation Engineering and Development (IJARECIED)*, *1*(2), 71–77. Retrieved from http://www.isrjournals.org/journal_archives_abstract/Cross - Calibration and Normalization for Speckle Noise Reduction in SAR Images

Sumantyo, J. T. S., & Amini, J. (2008). A model for removal of speckle noise in SAR images (ALOS PALSAR). *Canadian Journal of Remote Sensing*, *34*(6), 503–516. https://doi.org/10.5589/m08-069

Tso, B., & Mather, P. (2009). *Classification methods for remotely sensed data*. (B. Raton, Ed.) (2nd ed.). USA: CRC Press.

Ulaby, F., Kouyate, F., Brisco, B., & Williams, T. H. (1986). Textural infornation in SAR images. *IEEE Transactions on Geoscience and Remote Sensing*, *GE-24*(2), 235–245. https://doi.org/10.1109/TGRS.1986.289643

Wang, Z., & Bovik, A. C. (2002). A universal image quality index. *IEEE Signal Processing Letters*, *9*(3), 81–84. https://doi.org/10.1109/97.995823

Wu, S., Zhu, Q., & Xie, Y. (2013). Evaluation of various speckle reduction filters on medical ultrasound images. In *Proceedings of the 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS)* (pp. 1148–1151). https://doi.org/10.1109/EMBC.2013.6609709

Zhu, J., Wen, J., & Zhang, Y. (2013). A new algorithm for SAR image despeckling using an enhanced lee filter and median filter. In *Proceedings of the 6th International Congress on Image and Signal Processing (CISP)* (Vol. 1, pp. 224–228). https://doi.org/10.1109/CISP.2013.6743991