

normal submultigroup and the inverse image of a normal submultigroup under the isomorphism is a normal submultigroup. Finally, we defined operations on soft normal multigroups such as intersection, union, AND, OR operations and discovered that such operations are closed under soft normal multigroups.

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REFERENCES

- [1] D.E. Knuth, *The Art of computer programming*, vol. 2: Semi numerical algorithms. Adison Wesley, 1981.
- [2] N. G. De Bruijn, "Denumerations of Rooted trees and Multisets," *Discrete Appl. Math.*, vol. 6, pp. 25-33, 1983.
- [3] D. Singh, A. M. Ibrahim, T. Yohana and J. N. Sing, "An overview of the applications of multisets," *Novi Sad J. Math.*, vol. 37, no. 2, pp. 73-92, 2007.
- [4] R. R. Yager, "On the theory of bags," *Int. J. Gen. Sys.*, vol. 13, pp. 23-37, 1986.
- [5] W. D. Blizard, "Multiset theory," *Notre Dame J. Form. Log.*, vol. 30, pp. 36-66, 1989.
- [6] K. Girish and S. J. John, "Relations and Functions in Multiset Context," *Inform. Sci.*, vol. 176(6), pp. 758-768, 2009.
- [7] K. P. Girish and S. J. John, "General Relations between Partially Ordered Multisets and their Chains and Antichains," *Maths Communication*, vol. 14(2), pp. 193-206, 2009.
- [8] D. Molodtsov, "Soft Set Theory-First Result," *Comput. Math. Appl.*, vol. 37, pp. 19-31, 1999.
- [9] P. K. Maji, R. Biswas and A. Roy, "An application of soft sets in decision making problem," *Comput. Math. Appl.*, vol. 44, pp. 1077-1083, 2002.
- [10] P. K. Maji, R. Biswas and A. Roy, "Soft Set Theory," *Comput. Math. Appl.*, vol. 45, pp. 555-562, 2003.
- [11] M. D. Mustafa and T. Herawan, "On Multi-Soft Sets Construction in Information System," in *ICIC 2009 LNAI*, Springer, Heidelberg 5755, pp.101-110, 2009.
- [12] S. Alkhadeh, A. R. Salleh and N. Hassan, "Soft Multiset Theory," *Appl. Math. Sci.*, vol. 5, pp. 3561-3573, 2011.
- [13] P. Mujumdar and S. K. Samanta, "On Soft Multiset," *Journal of Mathematics and Computational Sciences*, vol. 2, no. 6, pp. 1700-1711, 2012.
- [14] A. Klausner and N. Goodman, "On Multirelations-Semantics and Languagees," in *Proceedings of the 11th Conferences on Very Large Data Base VLDB 85*, 1985.
- [15] I. S. Mumick, H. Pirahesh and Ramakrishnan, "The magic of duplicates and aggregate," in *Proceedings of the 6th Conference on Very Large Data Base VLDB 90*, 1990.
- [16] G. Paun and M. J. Perez-Jimenez, "Membrane Computing: brief introduction, resent results and applications," *Bio Systems*, vol. 85, pp. 271-285, 2006.
- [17] T. Yohannah and S. Daniel, "Symmetric Groups under Multisets context," *IOSR Journal of Mathematics* 7(5), pp. 47-52, 2013.
- [18] Y. Tella and S. Daniel, "Study of Group Theory in the Context of Multiset Theory," *International Journal of Science and Technology* 2(8), pp. 609-615, 2013.
- [19] S. K. Nazmul, P. Majumdar and S. Samanta, "Multisets and multigroups," *Ann. Fuzzy Math. Inform.*, vol. 6, no. 3, pp. 643-656, 2013.
- [20] S. K. Nazmul and S. K. Samanta, "On soft multigroups," *Annals of Fuzzy Mathematics and Informatics*, Volume 10 No. 2, pp. 271-285, 2015.
- [21] A. Kharal and B. Ahmad, "Mappings on Soft Classes," *New Math. Nat. Comput.*, vol.7, pp. 471-481, 2011.
- [22] D. Tokat and I. Osmanogulu, "On Connectedness on Soft Multi Topological Spaces," *Journal of New Result in Sciences*, vol. 2, pp. 8-18, 2013.
- [23] B. Li, W. Peizhang and L. Xihui, "Fuzzy bags with set-valued statistics," *Comput. Math. Appl.*, vol. 15, pp. 3-39, 1988.
- [24] T. K. Shinoj and S. J. John, "Intuitionistic Fuzzy Multigroups," *Annals of Pure and Applied Mathematics*, Vol. 9, No. 1, pp. 131-143, 2015.
- [25] T. K. Shinoj, A. Baby and S. J. John, "on some algebraic structures of fuzzy multisets," *Ann. Fuzzy Math. Inform.* Vol. 9. No.1, pp. 77-90, 2015.
- [26] S. K. Nazmul and S. K. Samanta, "Fuzzy soft group," *J. Fuzzy Math.*, vol. 19, no.1, pp. 101-114, 2011.
- [27] H. Aktas and N. Cagman, "Soft sets and soft groups," *Inform. Sci.*, vol. 177, pp. 2726-2735, 2007.
- [28] YU Feng, "Intuitionistic L-fuzzy groups," *School of Power Engineering, Nanjing University of Sciences and Technology*, Nanjing 210094, P. R. China.
- [29] A. Rosenfeld, "Fuzzy Groups," *J. Math. Appl.*, vol. 35, pp. 512-517, 1971.
- [30] L. A. Zadeh, "Fuzzy sets," *Inform. Control*, vol. 8, pp. 338-353, 1965.