

Publications

Books Published

1. John Mordeson, Kiran R. Bhutani and Azriel Rosenfeld. Fuzzy Group Theory, Springer Series: Studies in Fuzziness and Soft Computing, Vol. 182, 2005.

Refereed Articles

2. B. Banaschewski and Kiran R. Bhutani, Boolean Algebras in a Localic Topos, Mathematical Proceedings of the Cambridge Philosophical Society, vol. 100, Part I (1986), 43-56.
3. Kiran R. Bhutani, Injectivity and Injective Hulls of Abelian Groups in a Localic Topos, Bulletin of the Australian Mathematical Society, vol. 37, no. 1 (1998), 43 - 59.
4. Kiran R. Bhutani, Characterizing Complete Boolean Algebras in Terms of Pure Essentialness, Bulletin of the Australian Mathematical Society, vol. 38(1989), 23-30.
5. Kiran R. Bhutani, Abelian Groups in a Topos of Sheaves: Torsion and Essential Extensions, International Journal of Mathematics and Mathematical Sciences, vol. 12, No. 1(1989), 89-98.
6. Kiran R. Bhutani, Stability of Abelian Groups in a Topos of Sheaves, Journal of Pure and Applied Algebra, vol 68(1990), 47-54.
7. Kiran R. Bhutani, On Automorphisms of Fuzzy Graphs, Pattern Recognition Letters, vol. 9 (1990), 159-162.
8. Kiran R. Bhutani, Fuzzy Sets, Fuzzy Relations and Fuzzy Groups: Some Inter-relations, Information Sciences 73(1993), 107-115.
9. Kiran R. Bhutani, On Functors Between Categories of Fuzzy Structures, Journal of Fuzzy Mathematics, vol. 3, No.3 (1995), 671-681.
10. Kiran R. Bhutani and Abdella Battou, An Application of Fuzzy Relations to Image Enhancement, Pattern Recognition Letters 16(1995), 901-909.
11. Kiran R. Bhutani, Abdella Battou and Bilal Khan, Two Approaches For Aggregation Of Peer Group Topology in Hierarchical PNNI Networks, Journal of Intelligent Automation and Soft Computing, AutoSoft Press, vol. 6 no. 2 (2000), 125-134.
12. Kiran R. Bhutani and Alexander Levin, Graceful Numbers, International Journal of Mathematics and Mathematical Sciences, vol. 29(2002), no. 8, 495-499.
13. Kiran R. Bhutani and Alexander Levin, The problem of sawing a chain, Journal of Recreational Mathematics, vol. 31, No. 1 (2002-2003), 32 - 35.
14. Kiran R. Bhutani and Bilal Khan, A Metric on the Set of Connected Simple Graphs of a Given Order, Aequationes Mathematicae, 66(3), 232-240, December 2003.
15. Kiran R. Bhutani and Bilal Khan, Optimal Distribution of a Hierarchy of Network Management Agents, Information Sciences 149 (2003), 235-248.

16. Kiran R. Bhutani, B.B. Chaudhuri and Azriel Rosenfeld, Corrigendum to: A Modified Hausdorff Distance Between Fuzzy Sets, *Information Sciences* 148 (2002),no. 1-4, 233- 234.
17. Kiran R. Bhutani and Azriel Rosenfeld, Dissimilarity Measures Between Fuzzy Sets or Fuzzy Structures, *Information Sciences*, vol. 152 (2003), 313-318.
18. Kiran R. Bhutani and Azriel Rosenfeld, Fuzzy End Nodes in Fuzzy Graphs, *Information Sciences*, vol. 152 (2003), 323-326.
19. Kiran R. Bhutani and Azriel Rosenfeld, Strong Arcs in Fuzzy Graphs, *Information Sciences*, vol. 152 (2003), 319-322.
20. Kiran R. Bhutani and Azriel Rosenfeld, Geodesics in Fuzzy Graphs, *Electronic Notes in Discrete Mathematics*, Vol. 15, October 2003, 51 - 54.
21. Kiran R. Bhutani and Bilal Khan, Distance Between Graphs Using Graph Labelings, *Ars Combinatoria*, 77 (2005) 45 - 52.
22. Kiran R. Bhutani and Abdella Battou, On M-strong Fuzzy Graphs, *Information Sciences*, vol. 155 (2003), 103-109.
23. Kiran R. Bhutani, John Mordeson and Azriel Rosenfeld, On Degrees of End Nodes and Cut Nodes in Fuzzy Graphs, *Iranian Journal of Fuzzy Systems*, Vol I, No. 1 (2004) 57-64.
24. Kiran R. Bhutani and John Mordeson, Vague Groups and Ω -Vague Groups, *New Mathematics and Natural Computation*, Vol. 1, No. 2 (2005), 229 - 242.
25. Kiran R. Bhutani, R. L. Crist and John Mordeson; Free $(s, t]$ -Fuzzy Subgroups, *Journal of Fuzzy mathematics*, 13 (2005), no. 4, 983–993.
26. Kiran R. Bhutani and John Mordeson; Similarity Relations, Vague Groups and Fuzzy Subgroups, *New Mathematics and Natural Computation*, Vol. 2, No. 3 (2006), 195- 208.
27. Bilal Khan, Kiran R. Bhutani and Delaram Kahrobaei, A Graphical Generalization of Arithmetic, *INTEGERS: Electronic journal of combinatorial number theory* (March 2007).

Papers in Progress

1. Bilal Khan and Kiran R. Bhutani, Constructing Goldbach Sets.
2. Bilal Khan and Kiran R. Bhutani, Overlay Networks and Graph Compressibility.
3. Kiran R. Bhutani and Bilal Khan, A Metric Representing Dilation Between Connected Simple Graphs of a Given Order.
4. Kiran R. Bhutani and John Mordeson, Border nodes in Fuzzy graphs.
5. Bilal Khan and Kiran R. Bhutani, Graphic Arithmetic II:
 \oplus Irreducibility, Canonical Decompositions and Cancellation Laws.

Recent Conference Proceedings

1. Kiran R. Bhutani and Bilal Khan; Minimizing Computational Load and Communication Cost In Multi-Agent Systems, *Proceedings of the International Conference on Parallel and Distributed Computing and Systems* held at MIT, Cambridge, November 2002.

2. Kiran R. Bhutani, John Mordeson and Azriel Rosenfeld; Properties of Geodesics in Fuzzy Graphs, Proceedings of the 7th Joint Conference on Information Sciences, September 2003, Raleigh NC.
3. Kiran R. Bhutani, John Mordeson and Punam Saha; $(s, t]$ -Fuzzy Graphs, Proceedings of the 8th Joint Conference on Information Sciences, July 2005, Salt Lake City, Utah.