Junbo Zhang

Publications

Journal Papers

1. **Junbo Zhang**, Yun Zhu, Yi Pan, Tianrui Li.
   Efficient Parallel Boolean Matrix Based Algorithms for Computing Composite Rough Set Approximations.
   Information Sciences, accept, 2015.

2. **Junbo Zhang**, Jian-Syuan Wong, Yi Pan, Tianrui Li.
   A Parallel Matrix-based Method for Computing Approximations in Incomplete Information Systems.
   IEEE Transactions on Knowledge and Data Engineering (**TKDE**), 2015.

3. **Junbo Zhang**, Tianrui Li, Yi Pan, Chuan Luo, Fei Teng.
   A Parallel and Incremental Algorithm for Updating Knowledge Based on Rough Sets in Cloud Computing Platform.
   Accepted for publication in **Journal of Software**. (in Chinese)

4. **Junbo Zhang**, Jian-Syuan Wong, Tianrui Li, Yi Pan.
   A Comparison of Parallel Large-scale Knowledge Acquisition Using Rough Set Theory on Different MapReduce Runtime Systems.
   International Journal of Approximate Reasoning, vol. 55, no. 3, pp. 896-907, 2014.

5. **Junbo Zhang**, Tianrui Li, Hongmei Chen.
   Composite Rough Sets for Dynamic Data Mining.
   Information Sciences, vol. 257, pp. 81-100, 2014.

6. **Junbo Zhang**, Dong Xiang, Tianrui Li, Yi Pan.
   M2M: A Simple Matlab-to-MapReduce Translator for Cloud Computing.
   Tsinghua Science and Technology, vol 18, no. 1, pp. 1-9, 2013.

7. **Junbo Zhang**, Tianrui Li, Da Ruan, Zizhe Gao, Chengbing Zhao.
   A Parallel Method for Computing Rough Set Approximations.
   Information Sciences, vol. 194, pp. 209-223, 2012.

8. **Junbo Zhang**, Tianrui Li, Da Ruan, Dun Liu.
   Rough Sets Based Matrix Approaches with Dynamic Attribute Variation in Set-valued Information Systems.
   International Journal of Approximate Reasoning, vol. 53, no. 4, pp. 620-635, 2012.

9. **Junbo Zhang**, Tianrui Li, Da Ruan, Dun Liu.
   Neighborhood Rough Sets for Dynamic Data Mining.
   International Journal of Intelligent Systems, vol. 27, no. 4, pp. 317-342, 2012.

Conference Papers

1. **Junbo Zhang**, Guangjian Tian, Yadong Mu, Wei Fan.
   Supervised Deep Learning with Auxiliary Networks.
   Proceedings of the 20th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD 2014**), New York, USA, 2014, pp. 353-361.
   (AR: 151/1036 = 14.6%)

2. **Junbo Zhang**, Tianrui Li, Yi Pan.
   PLAR: Parallel Large-scale Attribute Reduction on Cloud Systems.
   The 14th International Conference on Parallel and Distributed Computing, Applications and Technologies (**PDCAT 2013**), Taipei, 2013, pp. 184-191.

3. **Junbo Zhang**, Tianrui Li, Yi Pan.
   Parallel Rough Set Based Knowledge Acquisition Using MapReduce from Big Data.
   ACM SIGKDD 2012 Workshop on Big Data Mining (**BigMine 2012**), Beijing, China, pp. 20-27,2012.

4. **Junbo Zhang**, Tianrui Li, Yi Pan.
   PLAR: Parallel Large-scale Attribute Reduction on Cloud Systems.
   The 14th International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT), Taipei, 2013.

5. **Junbo Zhang**, Yun Zhu, Yi Pan, Tianrui Li.
   A Parallel Implementation of Computing Composite Rough Set Approximations on GPUs.
   The Eighth International Conference on Rough Sets and Knowledge Technology (RSKT), Halifax, Canada, pp. 240-250, 2013.

6. **Junbo Zhang**, Jian-Syuan Wong, Tianrui Li, Yi Pan.
   H2T: A Simple Hadoop-to-Twister Translator for Cloud Computing.
   2013 International Symposium on Biometrics and Security Technologies (ISBAST), Chengdu, China, pp. 180-186, 2013.

7. **Junbo Zhang**, Tianrui Li, Hongmei Chen.
   Composite Rough Sets.
   Proceedings of the 4th International Conference on Artificial Intelligence and Computational Intelligence (AICI), Chengdu, China, pp. 150-159, 2012.

8. **Junbo Zhang**, Tianrui Li, Yan Yang, Wei Wang.
   Neighborhood Rough Sets Based Matrix Approach for Calculation of the Approximations.
   Proceedings of the 6th International Conference on Rough Sets and Knowledge Technology (RSKT), Banff, Canada, pp. 166-171, 2011.

9. **Junbo Zhang**,Tianrui Li, Lei Wang.
   A New Method for Calculation of the Approximations Under the Probabilistic Rough Sets.
   Proceedings of 2010 IEEE International Conference on Intelligent Systems and Knowledge Engineering (ISKE), Hangzhou, China, pp. 73-76, 2010.

10. **Junbo Zhang**, Tianrui Li, Dun Liu.
    An Approach for Incremental Updating Approximations in Variable Precision Rough Sets While Attribute Generalized.
    Proceedings of 2010 IEEE International Conference on Intelligent Systems and Knowledge Engineering (ISKE), Hangzhou, China, pp. 77-81, 2010.

11. **Junbo Zhang**, Tianrui Li, Muhammad Zia ur Rehman, Shaoyong Li.
    An Approach for Selection of the Proper Lever of Granularity in Granular Computing. Proceedings of the 9th International FLINS Conference on Foundations and Applications of Computational Intelligence (FLINS), Chengdu, China, pp. 764-769, 2010.

Book Chapter

1. **Junbo Zhang**, Tianrui Li, Da Ruan.
   Rough Sets Based Incremental Rule Acquisition in Set-Valued Information Systems.
   Autonomous Systems: Developments and Trends, pp. 135-146, 2012.

Awards & Honors

- National Scholarship, China, 2013.
- National Scholarship, China, 2012.
- "Si Shi Yang Hua" Medal in Southwest Jiaotong University, 2012. (Top 1/1000, the students' top honor of Southwest Jiaotong University).
- 2009-2014 Special Grade Scholarship for PhD Students, Southwest Jiaotong University.
- First Prize in the 9th "Huawei Cup" National Postgraduate Mathematical Contest in Modeling, China, 2012.
- Second Prize in the 8th National Postgraduate Mathematical contest in Modeling, China, 2011.
- Second Prize in the 2nd "Huawei Cup" Innovation Programming Contest, China, 2010.
- Second Prize in the 6th National Postgraduate Mathematical contest in Modeling, China, 2009.
- Second Prize in the 2nd Sichuan Provincial Programming Contest, China, 2008.
- Honorable Mention in the 33th ACM Asia Programming Contest, 2008.
- Second Prize in the 1st Sichuan Provincial Programming Contest, China, 2007.
- Second Prize (the 12th Place in person) in the TopCoder Sichuan Provincial Contest, China, 2007.
- Third Prize in National Electrical Engineering Association Mathematical Contest in Modeling, China, 2007.
- The President Scholarship of School of Information Science and Technology, Southwest Jiaotong University, 2006, 2007.
- 2005-2009 Undergraduate Scholarship of Southwest Jiaotong University, China.