# Jessica Lin

Computer Science George Mason University 4400 University Drive, MS 4A5 Fairfax, VA 22030 Office: (703) 993-4693 Fax: (703) 993-1710 Email: jessica@cs.gmu.edu

Website: http://www.cs.gmu.edu/~jessica

# **Education**

2005 PhD in Computer Science

University of California at Riverside

Thesis: Discovering Unusual and Non-trivial Patterns in Time Series Databases

2002 M.S. in Computer Science

University of California at Riverside

Project: Dimensionality Reduction by Random Projection and Latent Semantic Indexing

1999 B.S. in Computer Science

University of California at Riverside

# **Work Experience**

August 2012 – Present Associate Professor

Department of Computer Science, George Mason University

August 2008 – 2012 Assistant Professor

Department of Computer Science (department merged with the ISE department on January 1, 2008), George Mason University

August 2005 – 2007 Assistant Professor

Department of Information and Software Engineering, George Mason University

# **Research Funding**

1. III: Small: Collaborative Research: Finding and Exploiting Hierarchical Structure in Time Series Using Statistical Language Processing Methods.

Funding: \$500,000

Sponsor: National Science Foundation (NSF).

Role: Principle Investigator Duration: 09/01/2012-08/31/2015.

2. Discovering Latent Relationships and Ontological Structures in Massive Spatiotemporal Datasets

Funding: \$232,484

Sponsor: US Department of the Army

Role: Principle Investigator Duration: 09/30/2012-09/29/2015

3. Contextual Anomaly Detection in Medical Applications

Funding: \$36,824

Sponsor: Naval Research Lab Role: Principle Investigator Duration: 07/21/14 – 01/31/15

4. Proactive Data Analysis and Knowledge Sharing

Funding: \$240,000

Sponsor: Semiconductor Research Corporation & Intel Corporation

Role: Principle Investigator Duration: 07/01/2011-06/30/2014

5. The Business Case for Disability Care Coordination

Funding: \$50,000

Sponsor: Agency for Health Care Policy and Research Role: Co-Principle Investigator (PI: Susan Palsbo)

Duration: 09/29/06 - 09/28/07

# **Publications**

#### **Edited Volumes As Editor**

- 1. Guido Cervone, **Jessica Lin**, and Nigel Waters (Eds.). 2013. *Spatio-Temporal Data Mining for Geoinformatics: Methods and Applications*. Springer-Verlag.
- 2. **Jessica Lin,** Guido Cervone, and Nigel Waters (Eds.). 2010. *Proceedings of the 1<sup>st</sup> ACM SIGSPATIAL International Workshop on Data Mining for Geoinformatics*. ACM, New York, NY, USA.

#### **Refereed Journal Articles**

- 3. Chun-Kit Ngan, Alexander Brodsky, and **Jessica Lin**. 2013. Multi-event decision making over multivariate time series. *International Journal of Information and Decision Sciences*. 5(3).
- 4. **Jessica Lin**, Rohan Khade, and Yuan Li. 2012. Rotation-invariant similarity in time series using Bag-of-Patterns representation. *Journal of Intelligent Information Systems*. 39(2): 287-315.
- 5. **Jessica Lin**, Eamonn Keogh, Li Wei, and Stefano Lonardi. 2007. Experiencing SAX: a novel symbolic representation of time series. *Data Mining and Knowledge Discovery Journal (DAMI)*, 15(2): 107-144.
- 6. Stefano Lonardi, **Jessica Lin**, Eamonn Keogh, and Bill Chiu. 2007. Efficient discovery of unusual patterns in time series. *New Generation Computing*, 25(1): 61-93.
- 7. Eamonn Keogh, **Jessica Lin**, Sang-Hee Lee, and Helga Van Herle. 2006. Finding the most unusual time series subsequence: algorithms and applications. *Knowledge and Information Systems Journal (KAIS)*, 11(1): 1-27.
- 8. Eamonn Keogh, **Jessica Lin**, Ada Fu & Helga Van Herie. 2006. Finding unusual medical time series subsequences: algorithms and applications. *IEEE Transactions on Information Technology in Biomedicine*, 10(3): 429-439.

- 9. **Jessica Lin**, Eamonn Keogh, and Stefano Lonardi. 2005. Visualizing and discovering non-trivial patterns in large time series databases. *Information Visualization*, 4(2): 61-82.
- 10. Eamonn Keogh and **Jessica Lin**. 2005. Clustering of time series subsequences is meaningless: implications for previous and future research. *Knowledge and Information Systems Journal (KAIS)*, 8(2): 154-177.
- 11. **Jessica Lin**, Eamonn Keogh, 2004, Finding or not finding rules in time series. *Applications of Artificial Intelligence in Finance and Economics (Advances in Econometrics, Volume 19)*, Pages 175-201.

# **Articles in Refereed Conference Proceedings**

- 12. Pavel Senin, **Jessica Lin**, Xing Wang, Tim Oates, Sunil Gandhi, Arnold P. Boedihardjo, Crystal Chen, and Susan Frankenstein. 2015. Time Series Anomaly Discovery with Grammar-Based Compressions. In *Proceedings of the 18th International Conference on Extending Database Technology (EDBT)*. Brussels, Belgium. March 23-27. *To Appear*.
- 13. Pavel Senin, **Jessica Lin**, Xing Wang, Tim Oates, Sunil Gandhi, Arnold P. Boedihardjo, Crystal Chen, Susan Frankenstein, and Manfred Lerner. 2014. GrammarViz 2.0: a Tool for Grammar-Based Pattern Discovery in Time Series. In *Proceedings of the European Conference on Machine Learning and Knowledge Discovery in Databases (ECML PKDD)*. Nancy, France. Sep 15-19.
- 14. Uday Kamath, **Jessica Lin**, and Kenneth De Jong. 2014. SAX-EFG:An Evolutionary Feature Generation Framework for Time Series Classification. In *Proceedings of Genetic and Evolutionary Computation Conference (GECCO '14)*. Vancouver, Canada. July 12-16, 2014.
- 15. Rasaq Otunba and **Jessica Lin**. 2014. APT: Approximate Period Detection in Time Series. In *Proceedings of the 26th International Conference on Software Engineering and Knowledge Engineering (SEKE*). Vancouver, Canada, July 1-3.
- 16. Tim Oates, Arnold Boedihardjo, **Jessica Lin**, Crystal Chen, Susan Frankenstein, and Sunil Gandhi. 2013. Motif discovery in spatial trajectories using grammar inference. In *Proceedings of ACM International Conference on Information and Knowledge Management (CIKM)*. San Francisco, CA. Oct 27-Nov 1. To Appear.
- 17. Yuan Li, **Jessica Lin**, and Tim Oates. 2012. Visualizing variable-length time series motifs. In *Proceedings of the 2012 SIAM International Conference on Data Mining*. Pages 895-906. ◆ Acceptance Rate: 27%.
- 18. Chun-Kit Ngan, Alexander Brodsky, and **Jessica Lin**. 2012. R-Checkpoint algorithm for multi-event decision making over multivariate time series. The 16th IFIP WG8.3 International Conference on Decision Support Systems. Anávissos, Greece.
- 19. Chun-Kit Ngan, Alexander Brodsky, and **Jessica Lin**. 2011. A service framework for learning, querying, and monitoring multivariate time series. In *Proceedings of the 13th International Conference on Enterprise Information Systems*. Pages 92-101. ◆ **Best Student Paper Award** ◆ Full paper Acceptance Rate: 14%
- 20. **Jessica Lin** and Yuan Li. 2010. Finding approximate frequent patterns in streaming medical data. In *Proceedings of the 23<sup>rd</sup> IEEE International Symposium on Computer-Based Medical Systems*. IEEE Computer Society, Washington DC, USA.
- 21. Chun-Kit Ngan, Alexander Brodsky, and **Jessica Lin**. 2010. Decisions on multivariate time series: combining domain knowledge with utility maximization. In *Supplemental Proceedings of the 15<sup>th</sup> International Conference on Decision Support Systems*. July 7-10. Lisbon, Portugal.
- 22. **Jessica Lin** and Yuan Li. 2009. Finding structural similarity in time series data using Bag-of-Patterns representation. In *Proceedings of the 21st International Conference on Scientific and Statistical Database*

- Management (SSDBM 2009), Marianne Winslett (Ed.). Springer-Verlag, Berlin, Heidelberg, Pages 461-477. ◆ Full Paper Acceptance rate: 38%
- 23. **Jessica Lin** and Yuan Li. 2009. Finding structurally different medical data. In *Proceedings of the 22<sup>nd</sup> IEEE International Symposium on Computer-Based Medical Systems*. IEEE Computer Society, Washington DC, USA. Pages 1-8.
- 24. **Jessica Lin** and David Etter. 2008. Exact and approximate reverse nearest neighbor search in multimedia data. In *Proceedings of the SIAM International Conference on Data Mining*. Pages 656-667. ◆ Short Paper. Overall Acceptance Rate 27%: 14% Full + 13% Short
- 25. Ada Fu, Oscar Leung, Eamonn Keogh, and **Jessica Lin**. 2006. Finding time series discords based on Haar transform. In *Proceedings of the 2<sup>nd</sup> International Conference on Advanced Data Mining and Applications*. Xi'an, China. Aug 14-18. Pages 31-41.
- 26. **Jessica Lin** and Eamonn Keogh. 2006. Group SAX: Extending the notion of contrast sets to time series and multimedia data. In *Proceedings of the 10th European Conference on Principles and Practice of Knowledge Discovery in Databases*. Berlin, Germany. Sept 18-22. Pages 284-296. Lecture Notes in Computer Science, Springer. ◆ Full Paper Acceptance Rate: 14.5%
- 27. Eamonn Keogh, **Jessica Lin**, and Ada Fu. 2005. HOT SAX: Efficiently finding the most unusual time series subsequence. In *Proceedings of the 5<sup>th</sup> IEEE International Conference on Data Mining (ICDM)*. Nov 27-30. Houston, TX. Pages 226-233. IEEE Computer Society. ◆ Full Paper Acceptance Rate: 10.9%
- 28. **Jessica Lin**, Eamonn Keogh, Ada Fu, and Helga Van Herie. 2005. Approximations to magic: finding unusual medical time series. In *Proceedings of the 18<sup>th</sup> International Symposium on Computer-Based Medical Systems*. IEEE Computer Society, Washington DC, USA. Pages 329-334. ◆ Full Paper Acceptance Rate: 36.4%
- 29. **Jessica Lin**, Michail Vlachos, Eamonn Keogh, Dimitrios Gunopulos, Jianwei Liu, Shoujian Yu, and Jiajin Le. 2005. A MPAA-based iterative clustering algorithm augmented by nearest neighbors search for time-series data streams. In *Proceedings of the 9<sup>th</sup> Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD-05)*. Lecture Notes in Computer Science, Springer. Pages 333-342. ◆ Full Paper Acceptance Rate: 29.8%
- 30. **Jessica Lin**, Eamonn Keogh, Stefano Lonardi, Jeffrey P. Lankford, and Donna M. Nystrom. 2004. Visually mining and monitoring massive time series. In *Proceedings of the tenth ACM SIGKDD International Conference on Knowledge Discovery and Data Mining* (KDD '04). ACM, New York, NY, USA, 460-469. ◆ Full Paper Acceptance Rate: 30%
- 31. **Jessica Lin**, Eamonn Keogh, Stefano Lonardi, Jeffrey P. Lankford, and Daonna M. Nystrom. 2004. VizTree: a tool for visually mining and monitoring massive time series databases. In *Proceedings of the 30th International Conference on Very large Data Bases Volume 30 (VLDB '04)*. VLDB Endowment. Pages 1269-1272.
- 32. **Jessica Lin**, Michail Vlachos, Eamonn Keogh, and Dimitrios Gunopulos. 2004. Iterative incremental clustering of time series. In *Proceedings of the IX Conference on Extending Database Technology* (EDBT). Lecture Notes in Computer Science, Springer. Pages 106-122. ◆ Full Paper Acceptance: 14.3%
- 33. Eamonn Keogh, **Jessica Lin**, and Wagner Truppel. 2003. Clustering of time series subsequences is meaningless: implications for past and future research. In *Proceedings of the 3<sup>rd</sup> IEEE International Conference on Data Mining (ICDM)*. IEEE Computer Society. Pages 115-122. ◆ Full Paper Acceptance Rate 11.6%
- 34. **Jessica Lin**, Eamonn Keogh, and Wagner Truppel. 2003. (Not) Finding rules in time series: a surprising result with implications for previous and future research. In *Proceedings of the 2003 International Conference on Artificial Intelligence*. Las Vegas, NV. June 23-26. Pages 55-61.
- 35. Pranav Patel, Eamonn Keogh, Jessica Lin, and Stefano Lonardi. 2002. Mining motifs in massive time

series databases. In *Proceedings of the 2002 IEEE International Conference on Data Mining* (ICDM '02). IEEE Computer Society, Washington, DC, USA, 370-377. ◆ Full Paper Acceptance Rate: 19.5%

# **Refereed Workshop Papers**

- 36. Rasaq Otunba, **Jessica Lin**, and Pavel Senin. 2014. MBPD: Motif-Based Period Detection. In *Proceedings of the 1st International Workshop on Pattern Mining and Application of Big Data, in conjunction with PAKDD 2014*. Tainan, Taiwan. May 13, 2014.
- 37. Chun-Kit Ngan, Alexander Brodsky, and **Jessica Lin**. 2011. Multi-event decision making over multivariate time series. In *Proceedings of EWG-DSS London 2011 Workshop on Decision Systems*. Birbeck, UK. June 23-34.
- 38. **Jessica Lin**, Guido Cervone, and Pasquale Franzese. 2010. Assessment in error in air quality models using dynamic time warping. In *Proceedings of the 1<sup>st</sup> International Workshop on Data Mining for Geoinformatics, in conjunction with SIGSPATIAL GIS 2010*. San Jose, CA. Nov 2, 2010. Pages 38-44.
- 39. Yuan Li and **Jessica Lin**. 2010. Approximate variable-length time series motif discovery using grammar inference. In *Proceedings of the 10<sup>th</sup> International Workshop on Multimedia Data Mining, in conjunction with SIGKDD 2010*. ACM, New York, NY, USA. Pages 1-9.
- 40. Eiman Al-Shammari and **Jessica Lin**. 2008. A new Arabic stemming algorithm. In *Proceedings of the 2008 ISCA Workshop on Experimental Linguistics*. Athens, Greece. Aug 25-27.
- 41. Eiman Al-Shammari, **Jessica Lin**. 2008. A novel Arabic lemmatization algorithm. In *Proceedings of the 2<sup>nd</sup> SIGIR Workshop on Analytics for Noisy Unstructured Text Data*. Singapore, July 24-27, 2008. p. 113-118.
- 42. Eiman Al-Shammari and **Jessica Lin**. 2008. Towards an error-free Arabic stemming. In *Proceeding of the 2nd ACM workshop on Improving non English web searching (INEWS), at the 17th ACM Conference on Information and Knowledge Management*. ACM, New York, NY, USA. Pages 9-16. ◆ Full Paper Acceptance Rate: 37%
- 43. David DeBarr and **Jessica Lin**. 2007. Time series classification challenge experiments. In *Proceedings of the Workshop and Challenge on Time Series Classification, at the 13th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*. San Jose, CA. Aug 12-15.
- 44. **Jessica Lin**, Vlachos, M, Keogh, E., & Gunopulos, D. 2003. Multi-resolution k-means clustering of time series and application to images. In *Proceedings of the 4<sup>th</sup> SIGKDD Workshop on Multimedia Data Mining, in conjunction with SIGKDD 2003*. 10 pages.
- 45. **Jessica Lin**, Eamonn Keogh, Stefano Lonardi, and Bill Chiu. 2003. A symbolic representation of time series, with implication for streaming algorithms. In *Proceedings of the 8th ACM SIGMOD Workshop on Research Issues in Data Mining and Knowledge Discovery* (DMKD '03). ACM, New York, NY, USA. Pages 2-11. ◆ Full Paper Acceptance Rate: 28.5%
- 46. **Jessica Lin**, Eamonn Keogh, and Wagner Truppel. 2003. Clustering of streaming time series is meaningless. In *Proceedings of the 8th ACM SIGMOD Workshop on Research Issues in Data Mining and Knowledge Discovery* (DMKD '03). ACM, New York, NY, USA. Pages 2-11. ◆ Full Paper Acceptance Rate: 28.5%
- 47. Michail Vlachos, **Jessica Lin**, Eamonn Keogh, and Dimitrios Gunopulos. 2003. A wavelet-based anytime algorithm for k-means clustering of time series. In *Proceedings of the Workshop on Clustering High Dimensional Data and Its Applications, at the 3<sup>rd</sup> SIAM International Conference on Data Mining.* San Francisco, CA. May 3, 2003. 12 pages.
- 48. **Jessica Lin** and Gunopulos, D. 2003. Dimensionality reduction by random projection and latent semantic indexing. In *Proceedings of the Text Mining Workshop, at the 3<sup>rd</sup> SIAM International Conference on Data Mining*. San Francisco, CA. May 3, 2003. 10 pages.

49. **Jessica Lin**, Eamonn Keogh, Pranav Patel, and Stefano Lonardi. 2002. Finding motifs in time series. In *Proceedings of the 2<sup>nd</sup> Workshop on Temporal Data Mining*, at the 8<sup>th</sup> ACM SIGKDD International Conference on Knowledge Discovery and Data Mining. Edmonton, Alberta, Canada. July 23-26, 2002. 11 pages.

# **Refereed Chapters in Books**

- 50. **Jessica Lin**, Sheri Williamson, Kirk Borne, and David DeBarr. 2012. Pattern recognition in time series. *Advances in Machine Learning and Data Mining for Astronomy*. Eds. Kamal, A., Srivastava, A., Way, M., and Scargle, J. Chapman & Hall.
- 51. Chun-Kit Ngan, Alexander Brodsky, and **Jessica Lin**. 2012. R-Checkpoint algorithm for multi-event decision making over multivariate time series. Fusing Decision Support Systems into the Fabric of the Context, Volume 238, Pages 209 220. IOS Press.
- 52. Chun-Kit Ngan, Alexander Brodsky, and **Jessica Lin**. 2011. An event-based service framework for learning, querying, and monitoring multivariate time series. Lecture Notes in Business Information Processing. Springer-Verlag. *To Appear*.
- 53. Chotirat Ann Ratanamahatana, **Jessica Lin**, Dimitrios Gunopulos, Eamonn Keogh, Michail Vlachos, and Gautam Das. 2010. Mining time series data. *Data Mining and Knowledge Discovery Handbook 2010*, 2<sup>nd</sup> Edition. Eds. Oded Maimon, Lior Rokach. Springer. Pages 1049-1077
- 54. **Jessica Lin**, Michail Vlachos, Eamonn Keogh, and Dimitrios Gunopulos. 2007. Multi-resolution time series clustering and application to images. *Multimedia Data Mining and Knowledge Discovery*, Eds. Valery Al Petrushin and Latifur Khan. Springer. Pages 58-79.
- 55. Chotirat Ann Ratanamahatana, **Jessica Lin**, Dimitrios Gunopulos, Eamonn Keogh, Michail Vlachos, and Gautam Das. 2005. Mining time series data. *Data Mining and Knowledge Discovery Handbook 2005*. Eds. Oded Maimon, Lior Rokach. Springer. Pages 1069-1103.

#### **Other Publications**

- 56. Guido Cervone, **Jessica Lin**, Pasquale Franzese. 2011. Addressing wind direction uncertainty in source estimation through dynamic time warping, In *Proceedings of the 91st American Meteorological Society Annual Meeting*, Computational Intelligence Methods and Their Applications to Environmental Science, Seattle, WA, January 2011.
- 57. **Jessica Lin**, Guido Cervone, and Nigel Waters. 2011. DMGI 2010 workshop report: The First ACM SIGSPATIAL international Workshop on Data Mining for Geoinformatics. SIGSPATIAL Special 3(1): 6-7.
- 58. Eiman Al-Shammari and **Jessica Lin**. 2008. Automated Corpora Creation Using a Novel Arabic Stemming Algorithm. In *proceedings of the 2008 International Symposium on Using Corpora in Contrastive and Translation Studies (UCCTS)*. Hanzhou, China. Sept 25-27.
- 59. Eamonn Keogh, **Jessica Lin**, Stefano Lonardi, and Bill Chiu. 2004. We have seen the future, and it is symbolic. In *Proceedings of the Second Workshop on Australasian Information Security, Data Mining and Web Intelligence, and Software Internationalisation Volume 32* (ACSW Frontiers '04), J. Hogan, P. Montague, M. Purvis, and C. Steketee (Eds.), Vol. 32. Australian Computer Society, Inc., Darlinghurst, Australia, Page 83.

#### **Dissertation**

• **Jessica Lin**. 2005. *Discovering Unusual and Non-Trivial Patterns in Massive Time Series Databases*. PhD thesis. Department of Computer Science, University of California at Riverside.

### Software

- GrammarViz: http://grammarviz2.github.io/grammarviz2 site/
- VizTree (demo can be found at: http://www.cs.gmu.edu/~jessica/viztree.htm)
- SAX (Symbolic Aggregate approXimation): http://www.cs.gmu.edu/~jessica/sax.htm
- Danger of Dimensionality Reduction: http://www.cs.gmu.edu/~jessica/DimReducDanger.htm

# **Invited Talks and Presentations**

- 2013 National Center of Atmospheric Research (NCAR) Mining Massive Time Series Databases
- 2013 Intel Corporation
  Mining Massive Time Series Databases
- 2012 National Institute of Standards and Technology (NIST) Mining Massive Time Series Databases
- 2012 Living Social Finding Non-Trivial Patterns and Structural Similarity in Time Series Databases
- 2009 George Mason University, Guest Speaker in EOS 753 (Observing the Earth and Its Climate), Department of Geography and Geoinformation Science Data Mining in Time Series Databases
- Virginia Tech, Department of Computer Science
   Finding Non-Trivial Patterns and Structural Similarity in Time Series Databases
- 2007 USPS Office of Inspector General Time Series Anomaly Detection
- 2007 Academia Sinica, Taiwan, Institute of Information Science
  Discovering Unusual and Non-trivial Patterns in Massive Time Series
- 2007 National Chengchi University, Taiwan, Department of Computer Science Discovering Unusual and Non-trivial Patterns in Massive Time Series

### **Professional Service**

#### Workshop Chair

• SIGSPATIAL International Workshop on Data Mining for Geoinformatics, in cooperation with SIGSPATIAL GIS 2010.

### **Workshop Program Chair**

- Special Session on Data Mining for Geoinformatics in Cooperation with the 17<sup>th</sup> International Conference on Geoinformatics, 2009.
- International Workshop on Spatial and Spatiotemporal Data Mining (SSTDM 09) in Cooperation with IEEE ICDM 2009
- International Workshop on Spatial and Spatiotemporal Data Mining (SSTDM 08) in Cooperation with IEEE ICDM 2008

## **Program Committee Member**

#### 2013

- International Conference on Data Mining (ICDM)
- European Conference on Machine Learning and Principles and Practices of Knowledge Discovery in Databases (ECML/PKDD)
- ACM Conference of Information and Knowledge Management (CIKM)

#### 2013

- International Conference on Data Mining (ICDM)
- European Conference on Machine Learning and Principles and Practices of Knowledge Discovery in Databases (ECML/PKDD)
- ACM Conference of Information and Knowledge Management (CIKM)

#### 2011

- International Conference on Data Mining (ICDM)
- ACM International Conference on Knowledge Discovery and Data Mining (KDD)
- European Conference on Machine Learning and Principles and Practices of Knowledge Discovery in Databases (ECML/PKDD)
- Data-Driven Decision Guidance and Support Systems Workshop, in conjunction with the 28<sup>th</sup> IEEE International Conference on Data Engineering (ICDE)

#### 2010

- International Conference on Data Mining (ICDM)
- European Conference on Machine Learning and Principles and Practices of Knowledge Discovery in Databases (ECML/PKDD)
- International Conference on Machine Learning and Applications (ICMLA)

# 2009

- International Conference on Data Mining (ICDM)
- European Conference on Machine Learning and Principles and Practices of Knowledge Discovery in Databases (ECML/PKDD)

### 2008

- International Conference on Data Mining (ICDM)
- European Conference on Machine Learning and Principles and Practices of Knowledge Discovery in Databases (ECML/PKDD)

# 2007

- International Conference on Data Mining (ICDM)
- ACM International Conference on Knowledge Discovery and Data Mining (KDD)
- European Conference on Machine Learning and Principles and Practices of Knowledge Discovery in Databases (ECML/PKDD)

### 2006

• ACM International Conference on Knowledge Discovery and Data Mining (KDD)

#### Journal Reviewer

#### 2013

- Transaction on Knowledge and Data Engineering (TKDE)
- Knowledge and Information Systems Journal (KAIS)

# 2011

- Transaction on Knowledge and Data Engineering (TKDE)
- Journal of Intelligent Information Systems (JIIS)
- ACM Computing Survey

### 2010

- Transaction on Knowledge and Data Engineering (TKDE)
- Data Mining and Knowledge Discovery Journal (DAMI)

### 2009

- Transaction on Knowledge and Data Engineering (TKDE)
- Knowledge and Information Systems Journal (KAIS)
- ACM Computing Survey

# 2008

- Transaction on Knowledge and Data Engineering (TKDE)
- Knowledge and Information Systems Journal (KAIS)
- Data Mining and Knowledge Discovery Journal (DAMI)

• Journal of Classification

# 2007

- Transaction on Knowledge and Data Engineering (TKDE)
- Knowledge and Information Systems Journal (KAIS)
- International Journal on Very Large Data Bases (VLDB Journal)

# 2006

- Transaction on Knowledge and Data Engineering (TKDE)
- Knowledge and Information Systems Journal (KAIS)
- Data Mining and Knowledge Discovery Journal (DAMI)
- Journal of Intelligent Information Systems (JIIS)