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Department of Computer Science
Oklahoma State University

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PROFESSIONAL PREPARATION

Doctor of Philosophy in Computer Science and Engineering, in 2003

University of Texas at Arlington, Arlington, Texas; Area: Artificial Intelligence; GPA: 4.0

Master of Science in Computer Science and Engineering, May 2000

University of Texas at Arlington, Arlington, Texas; GPA: 4.0

Bachelor of Science with High Honors in Computer Science and Engineering, May 1999

University of Texas at Arlington, Arlington, Texas; Honors Thesis; CS GPA: 4.0/4.0

APPOINTMENTS

2003 – present: Assistant Professor, *Oklahoma State University, Department of Computer Science*

2000 – 2003: Software Engineer, *Nortel Networks*

1999 – 2000: Graduate Research Assistant, *Learning and Planning Group, University of Texas at Arlington*

1997 – 1998: Research Assistant, *DeSiDeRaTa Research Group, University of Texas at Arlington*

1997 – 1999: Teaching Assistant – IT Technician, *Computer Science and Engineering Department, UTA*

1995 – 1997: Manager of IT Technology Resources and Operations, *Navarro College, Corsicana, Texas*

GRANTS

Principal Investigator, *Data Mining the National Transit Database*, Federal Transit Administration, with R. Marshment (OU), \$302,983 August 2005 through August 2008.

Principal Investigator, *Analyzing MicroArray Gene Expression Data Using Graph Grammar Induction*, Oklahoma EPSCoR Summer Salary Program, \$24,740 (+\$17,789 OSU contribution). June 2005 through July 2005.

Principal Investigator, *Detecting Collusion and Plagiarism in Programming Assignments in Computer Science and MSIS*, *Dean's incentive Grant* (Internal), \$3000, 2004.

Principal Investigator, *Automated Synthesis of Quantum Dot Cellular Automaton Circuits*, *Dean's incentive Grant* (Internal), \$3000, 2005.

PUBLICATIONS

Book Chapters

I. Jonyer, "Graph Grammar Learning" in *Mining Graph Data*. L.B. Holder & D.J. Cook (editors). Wiley and Sons, 2006.

L.B. Holder, D.J. Cook, J. Gonzalez, and **I. Jonyer**, "Structural Pattern Recognition in Graphs," D. Chen and X. Cheng (Editors) *Pattern Recognition and String Matching*, Kluwer Academic Publishers, 2002.

Journal Articles

Khor I.J., Thomas J., **Jonyer I.** "Sliding Window Protocol for Secure Group Communication in Ad-Hoc Networks". *Journal of Universal Computer Science*, Vol.11, No.1, pp.37-55. 2005.

I. Jonyer and L.B. Holder, and D.J. Cook "MDL-Based Context-Free Graph Grammar Induction and Applications". *International Journal of Artificial Intelligence Tools*, Volume 13, No. 1 pages 65-79, 2004.

D.J. Cook, L.B. Holder, S. Su, R. Maglothin, and **I. Jonyer**, "Structural Mining of Molecular Biology Data," *IEEE Engineering in Medicine and Biology, Special Issue on Advances in Genomics*, Volume 20, Number 4, pages 67-74, 2001.

I. Jonyer, L.B. Holder, and D.J. Cook, "Graph-Based Hierarchical Conceptual Clustering," *Journal of Machine Learning Research*, Volume 2, pages 19-43, 2001.

I. Jonyer, L.B. Holder, and D.J. Cook, "Graph-Based Hierarchical Conceptual Clustering," *International Journal of Artificial Intelligence Tools*, Volume 10, Number 1-2, pages 107-135, 2001.

Conference Articles

M. Cai, **I. Jonyer**, and M. Paprzycki, "Improving Parallelism in Structural Data Mining" Proceedings of the *Sixth International Conference On Parallel Processing And Applied Mathematics*, 2005.

I. Jonyer, P. Apiratikul, and J. Thomas, "Source Code Fingerprinting Using Graph Grammar Induction," *Proceedings of the Eighteenth Annual Florida AI Research Society*, May 2005.

- J. Khor, J. Thomas, **I. Jonyer**, "Sliding Window Protocol for Group Communication in Ad-Hoc Networks," *Proceedings of the Hawaii International Conference on System Sciences*, January, 2005.
- I. Jonyer**, L. B. Holder, and D. J. Cook, "Attribute-Value Selection Based on the Minimum Description Length," *Proceedings of the International Conference on Artificial Intelligence*, 2004.
- A. Gilbert, J. Thomas, and **I. Jonyer**, "Modeling Work Flow in Hierarchically Clustered Distributed Systems", *Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications*, 2004.
- J. Thomas, T. Alam, and **I. Jonyer**, "Reducing Latency in Ad Hoc Networks by Pre-Fetching," *Proceedings of the International Conference on Pervasive Computing and Communications*, 2004.
- I. Jonyer**, L.B. Holder, and D.J. Cook, "MDL-Based Context-Free Graph Grammar Induction," *Proceedings of the Sixteenth Annual Florida AI Research Society*, 2003. **BEST PAPER** Award Runner up.
- I. Jonyer**, L.B. Holder, and D.J. Cook, "Concept Formation Using Graph Grammars," *Proceedings of the KDD Workshop on Multi-Relational Data Mining*, pages 71-79, 2002.
- J. Gonzalez, **I. Jonyer**, L.B. Holder, and D.J. Cook, "Efficient Mining of Graph-Based Data," *AAAI Workshop on Learning Statistical Models from Relational Data*, pages 21-28, 2000.
- I. Jonyer**, L. B. Holder, and D. J. Cook, "Graph-Based Hierarchical Conceptual Clustering in Structural Databases," *Proceedings of the 7th Conference on Artificial Intelligence and of the 12th Conference on Innovative Applications of Artificial Intelligence*, page 1073, 2000.
- I. Jonyer**, L. B. Holder, and D. J. Cook, "Graph-Based Hierarchical Conceptual Clustering," *Proceedings of the Thirteenth Annual Florida AI Research Society*, pages 91-95, 2000.

Theses

- I. Jonyer**, "Context-Free Graph Grammar Induction Based on the Minimum Description Length Principle," *Doctoral Dissertation*, The University of Texas at Arlington, August 2003.
- I. Jonyer**, "Hierarchical Conceptual Clustering Using a Graph-Based Knowledge Discovery System" *Masters Thesis*. The University of Texas at Arlington, May 2000.
- I. Jonyer**, "Design, Implementation and Evaluation of a Dialog-Based Interactive System," *Honors Thesis*, The University of Texas at Arlington, May 1999.

Guest Editor

Neurocomputing Special issue on Hybrid Neurocomputing: Selected Papers from the 2nd International Conference on Hybrid Intelligent Systems. A. Abraham, **I. Jonyer**, E.I. Barakova, R. Jain and L. Jain eds. *Neurocomputing Journal*, Vol 61C, Elsevier Science, Netherlands. March 2004.

Panels

National Science Foundation – two panels, 2005.

Technical Program Committees

Florida Artificial Intelligence Research Society Conference.

Reviewing

National Science Foundation, 2005.
 Machine Learning journal, 2005.
 Genetic and Evolutionary Computation Conference, 2005.
 European Conference on Genetic Programming, 2005.
 Florida Artificial Intelligence Research Society Conference, 2002, 2003, 2004, 2005.
 Americas Conference on Information Systems, 2005.
 International Conference on Information Technology: Coding and Computing, 2004.
 Journal of Information and Knowledge Management, 2004.
 Special Issue of International Journal of Pattern Recognition and Artificial Intelligence, 2003.
 Pattern Recognition and String Matching. Dechang Chen and Xiuzhen Cheng editors. Kluwer Publishing, 2002.

Talks

"Graph-Based Data Mining and Applications" at the Workshop on Data Mining Research in Oklahoma, Tulsa, Oklahoma. Feb. 2004.

Awards

Outstanding Doctoral Dissertation Award – University of Texas at Arlington, 2004
 Best Paper Award, runner up – Florida International Artificial Intelligence Research Society, 2003

UTA's nomination to the CGS/University Microfilms International Dissertation Award in 2004

TEACHING

Graduate: Advanced Algorithms and Data Structures, Advanced Programming Language Design, Formal Language Theory

Undergraduate: Organization of Programming Languages, Networking and Communications, Computer Architecture

PROFESSIONAL SOCIETY MEMBERSHIP

American Association for Artificial Intelligence (AAAI)

Association for Computing Machinery (ACM)