



Short version

**CURRICULUM VITA**  
**Dr. Shahram Rahimi**  
**Associate Professor, Undergraduate Program Director**  
**Southern Illinois University Carbondale**

**I. EDUCATION**

Ph.D., Scientific Computing (Computational Sciences)  
Center for Computational Sciences, Stennis Space Center (NASA)/ University of Southern Mississippi, GPA 4.00, May 2002  
*Dissertation: API-Calculus for Intelligent-Agent Formal Modeling and Its Application in Distributed Geospatial Data Conflation.*

M.S., Computer Science  
University of Southern Mississippi, GPA 4.00, December 1999  
*Thesis: A Reconfigurable Coprocessor Architecture for Algorithm Performance Optimization.*

M.S., Computer Engineering Technology  
University of Southern Mississippi, GPA 4.00, August 1998  
*Thesis: An Evaluation of Performance Improvement of a Modified Carry-Lookahead Adder.*

B.S., Computer Engineering  
National University of Iran (Shahid Beheshti), GPA 3.8, May 1992  
*Undergraduate Thesis: 4x64 voice and data Digital Switch Exchange.*

**II. RESEARCH AND CREATIVE ACTIVITY**

**A. Interests and Specialties:**

Software Agents, Computational Intelligence, Distributed Systems, and High Performance Computing

**B. Grants Received:**

- Phase I: Multi-Agent System for Data Discovery and Integration, (12 month), G. I. Tech. Inc, spring 2010, \$37800.
- Intelligent Medical Record System, Under Graduate Research Program, SIUC, fall 2009 (for 9 month), \$8000.

- Under Graduate Research Program, Clinical Decision Support System, SIUC, Fall 2008 (for 9 month), \$8000.
- Under Graduate Research Program, Clinical Decision Support System, SIUC, fall 2007 (for 9 month), \$8000.
- Clinical Decision Support System for Early Prediction of Obesity in Children (Phase I) , for applying computational intelligence to predict possible obesity in children from K1 to K4, PI, Herrin Clinic, fall 2006 (for 1 year), \$33,618.
- Under Graduate Research Program, Clinical Decision Support System, Southern Illinois University Carbondale, fall 2006 (for 9 month), \$8000.
- Faculty Research/Creative Grants Program, Intelligent Mobile Agents for Geospatial Data Integration and Conflation (one year), PI, Office of Research, Development and Administration-SIUC, Spring 2003 (for 12 month), \$13,200.
- The Juvenile Accountability Incentive Block Grant (JAIBG), an intergraded web access juvenile delinquency database (two years), Co-PI, U.S. Department of Justice, spring 2001, (for 1 year), \$122,000.
- Intelligent Database Agents for Geospatial Knowledge Integration and Management, for distributed geospatial data collection and conflation, Co-Director, National Imagery and Mapping Agency grant (DoD), fall 1999 (for 3 years), \$783,995.

### III. PUBLICATIONS AND CREATIVE WORKS

#### A. Articles in Professional Journals:

1. E. S. Khorasani, N. Carver, S. Rahimi, "Performance Evaluation of DPS Coordination Strategies Modeled in Pi-Calculus," *International Journal of Intelligent Information and Database Systems*, Vol.3, No.4, pp. 419-439, 2009.
2. S. Rahimi, R. Tatikunta, R. Ahmad, B. Gupta, "A Multi-Agent Framework for Stock Trading," *International Journal of Intelligent Information and Database Systems*, Vol. 3, No. 2, pp. 203-227(25), May 2009.
3. R. Ahmad, S. Rahimi, "Motivation for a new formal framework for agent-oriented software engineering," *International Journal of Agent Oriented Software Engineering*, Vol. 3, Nos. 2/3, pp. 252-276, 2009.
4. H. Hexmoor, S. Rahimi, J. T. Little, "Coordinated UAV Manoeuvring Flight Formation," *Informatica*, Vol. 33, pp. 375-383, 2009
5. B. Gupta, S. Rahimi, "A Novel Low-Overhead recovery Approach for Distributed Systems," *Journal of Computer Systems, networks, and Communications*, Vol. 2009, Article ID 409873, pp. 1-8, 2009.

6. S. Rahimi, P. Rana, R. Ahmad, B. Gupta, "Ontology Mediation for Multi Agent Systems," *International Journal of Electronic Government Research (IJEGR)*, Vol. 4, No.1, pp. 68-88, 2008.
7. B. Gupta, Z. Liu, S. Rahimi, "Design of High Performance Distributed Snapshot/Recovery Algorithms for Ring Networks," *Journal of Computing and Information Technology (CIT)*, Vol. 16, No.1, pp. 23-33, 2008.
8. S. Rahimi, R. Ahmad, "ACVisualizer: A Visualization Tool for API-Calculus," *Multi-Agent and Grid Systems, an International Journal*, Vol. 4, No. 3, pp. 271-291, 2008.
9. H. Hexmoor, S. Rahimi, R. Chandran, "Delegations Guided by Trust and Autonomy," *Web Intelligence and Agent Systems, An International Journal*, Vol. 6, No.1, pp. 137-156, 2008.
10. S. Rahimi, M. Wainer, D. Lewis, "A Performance and Programming Analysis of Java Communication Mechanisms in a Distributed Environment," *Scalable Computing: Practice and Experience*, Vol. 8, No. 2, pp. 209-226, 2007.
11. B. Gupta, S. Rahimi, and Y. Yang, "A Novel Roll-back Mechanism for Performance Enhancement of Asynchronous Checkpointing and Recovery," *Informatica journal*, Vol. 31, No. 1, pp.1-13, 2007.
12. B. Gupta, S. Rahimi, and Z. Liu, "A Novel Low-Overhead Roll-Forward Recovery Scheme for Distributed Systems," *IET Computers and Digital Techniques (former IEE journal)*, 2007 Vol. 1, No. 4, pp. 397-403, 2007.
13. S. Rahimi, G. Nagaraja, B. Gupta, and L. Gandy, "An Expert System for Analysis of Consistency Criteria in Checkpointing Algorithms," *Scalable Computing: Practice and Experience*, Vol. 8, No. 2, pp.197-208, 2007.
14. S. Rahimi, N. Mogharreban, L. Gandy, C. J. Roberts, "A Web Based High Performance Multi-Criteria Decision Support System for Medical Diagnosis," *International Journal of Intelligent Systems*, WILEY, Vol. 22, No. 10, pp.1083-1099, 2007.
15. B. Gupta, S. Rahimi, R. Jandhyala, and V. Doraiswamy, "A Low-Overhead DVR Based Multicast Routing Protocol for Clustered MANET," a Special Issue of *Journal of Computational Methods in Science and Engineering (JCMSE)*, Vol. 6, No. 5 & 6, pp. 135-146, 2006.
16. B. Gupta, S. Rahimi, and R. Ahmad, "A New Roll-Forward Checkpointing/Recovery Mechanism for Cluster Federation," *Intl. Journal of Computer Science & Network Security*, Vol. 6, No. 11, pp. 292-299, 2006.
17. S. Rahimi, B. Gupta, K. Adya, "A Novel Page Ranking Algorithm for Search Engines Using Implicit Feedback," *Web Engineering, special issue of Engineering Letters Journal*, Vol.13, No.3, pp. 397-407, 2006.

18. B. Gupta, S Rahimi, A. Kumar, "A Novel Fault Tolerant Protocol for Information Propagation in Sensor Networks," *International Journal of Computer Science and Network Security*, Vol. 6, No. 7B, pp 11-18, July 2006.
19. S. Rahimi, "Toward a Performance Evaluation Methodology for Pi-Calculus Family of Formal Modeling Languages," *Scalable Computing: Practice and Experience*, Editorial, Vol. 7, No. 1, pp. i-vi, 2006.
20. B. Gupta, S. Rahimi, Z. Liu, "A New High Performance Checkpointing Approach for Mobile Computing Systems," *International Journal of Computer Science and Network Security*, Vol. 6, No. 5B, pp. 95-104, May 2006.
21. S. Rahimi, J. Bjursell, M. Paprzycki, M. Cobb, D. Ali, "Performance Evaluation of SDIAGENT, a Multi-Agent System for Geospatial Data Conflation," *Elsevier's Information Sciences*, 176, pp. 1175-1189, 2006.
22. N. Ren, M. Zargham, and S. Rahimi, "A Decision Tree Based Classification Approach to Rule Extraction for Security Analysis," *International Journal of Information Technology and Decision Making*, Vol. 5, Issue 1, pp. 227-240, March 2006.
23. H. Zhou, S. Rahimi, R. Ahmad, M. Paprzycki, and M. Cobb, "ORVPPF – the Model and its DNC Implementation," *Institute of Mathematics and Informatics Journal*, Informatica, Vilnius, Vol. 16, No 4, pp. 603-616, 2005.
24. B. Gupta, S. Rahimi, "A Novel Non-Block Synchronous Checkpointing Scheme for Distributed Systems," *WSEAS Transactions on Systems*, Issue 6, Vol. 4, pp. 895-902, June 2005.
25. B. Gupta, S. Rahimi, "A Fast Recovery Algorithm for Distributed Systems," *GESTS Transactions on Computer Science*, Vol. 24, No. 1, pp. 185-197, Dec 2005.
26. S. Rahimi, N. Mogharreban, M. Zargham, "A Type-2 Fuzzy Query Strategy for Spatial Objects with Indeterminate Boundaries," *WSEAS Transactions on Computers*, Issue 4, Vol. 4, pp. 391-399, April 2005.
27. J. Bjursell, S. Rahimi, C.F. Wang, "Modeling the Stock Exchange Market Using Mobile Agent Technology and its Security Issues," *International Journal of Education and Information Technology*, Vol. 1, No. 1, pp. 28-38, September 2004.
28. S. Rahimi and S. Ramakrishna, "System Administration Using Software Agents," *Agent Based Computing, Informatica Journal*, Vol. 28, No. 1, pp. 41-49, 2004.

29. H. Zhou, S. Rahimi, Y. Wang, M. Cobb, "A Task-Oriented Compositional Mobile Agent Architecture for Knowledge Exchange between Agencies and Agents," *Agent-Based Computing, Informatica Jurnal*, Vol. 28, No.1, pp. 23-30, 2004.
30. S. Rahimi, "Using Api-Calculus for Formal Modeling of SDIAgent, a Multi-Agent Distributed Geospatial Data Integration System," *Journal of Geographic Information and Decision Analysis*, ISSN 1480-8943, Vol. 7, No. 2, pp. 132-149, 2003.
31. S. Rahimi, M. Cobb, D. Ali, M. Paprzycki, and F. Petry, "A Knowledge-Based Multi-Agent System for Geospatial Data Conflation," *Journal of Geographic Information and Decision Analysis*, ISSN 1480-8943, Vol. 6, No. 2, pp. 67-81, 2002.
32. S. Rahimi, M. Paprzycki, "Cross-Correlation for Speaker-Independent Small Vocabulary Voice Recognition," *Journal of Mathematical Modeling and Scientific Computing*, ISSN 1067-0688, Vol. 10, pp. 107-112, 2000.
33. S. Rahimi, D. Ali, "ASAL Architecture: Combination of a Processor with a Reconfigurable Co-Processor," *Journal of Mathematical Modeling and Scientific Computing*, ISSN 1067-0688, Vol 10, pp. 101-106, 2000.

#### **B. Chapters in Professional Books and Lecture Notes:**

34. "A Reasoning Methodology for CW-Based Question Answering Systems," E. Khorasani, S. Rahimi, and B. Gupta, Springer Verlag Lecture Notes in Computer Science, book title: *Fuzzy Logic and Applications*, Vol. 5571, pp. 328-335, 2009.
35. "A Generic Mobile Agent Framework towards Ambient Intelligence," Y. Lee, E. Khorasani, S. Rahimi, S. Nulu, Springer-Verlag, book title: *Knowledge Processing & Decision Making in Agent-Based Systems*, Edited by: L. C. Jain & N. T. Nguyen, pp. 175-192, 2009.
36. "A Methodology for Ontological Mediation in Multi-Agent Systems," S. Rahimi, B. Gupta, P. Rana, the IGI Global publication, *E-Government Diffusion, Policy, and Impact: Advanced Issues and Practices*, edited by Dr. Khosrow-Pour, pp. 246-267, 2009.
37. "Novel Crash Recovery Approach for Concurrent Failures in Cluster Federation," B. Gupta and S. Rahimi, Springer Verlag Lecture Notes in Computer Science, book title: *Advances in Grid and Pervasive Computing* Vol. 5529/ 2009, pp.434-445, 2009.
38. "Domino-Effect Free Crash Recovery for Concurrent Failures in Cluster Federation," B. Gupta, S. Rahimi, V. Allam, and V. Jupally, Springer Verlag Lecture Notes in Computer Science, book title: *Advances in Grid and Pervasive*

Computing, Vol. 5036, pp. 4-17, 2008

39. "A Novel Recovery approach for Cluster Federations," B. Gupta, S. Rahimi, R. Ahmad, and R. Chirra, *Springer Verlag Lecture Notes in Computer Science*, book title: Advances in Grid and Pervasive Computing, Vol. 4459, pp. 519-530, 2007.
40. "A Low-Overhead Non Block Check Pointing Algorithm for Mobile Computing Environment," B. Gupta, S. Rahimi, R. A. Rias, and G. Bangalore, *Springer Verlag Lecture Notes in Computer Science*, book title: Advances in Grid and Pervasive Computing, Vol. 3947, pp. 597-608, 2006.
41. "A Multi-Agent Architecture for Distributed Domain-Specific Information Integration," S. Rahimi, N. Carver, F. Petry, *Net-Centric Approaches to Intelligence and National Security*, Edited by Roy Ladner, and Fred Petry, Springer, pp. 129-148, 2005.
42. "Fuzzy Spatial Relationships and Mobile Agent Technology in Geospatial Information Systems," F. Petry, M. Cobb, D. Ali, S. Rahimi, M. Paprzycki, R. Angryk, H. Yang, L. Sztandera, *Soft Computing in Defining Spatial Relations*, volume in series: Soft Computing, Edited by Pascal Matsakis, and Les M. Sztandera, Phsica-Verlag, pp. 123-155, 2002.
43. "A Modeling Tool for Intelligent-Agent Based Systems: Api-Calculus," S. Rahimi, M. Cobb, D. Ali, F. Petry, *Soft Computing Agents: A New Perspective for Dynamic Systems*, the International Series "Frontiers in Artificial Intelligence and Application" by IOS Press, pp. 165-186, 2002.

### **C. IEEE and ACM Refereed Proceedings:**

44. C. Langin, H. Zhou, S. Rahimi, M. Zargham and B. Gupta, "A Self-Organizing Map (SOM) and its Modeling for Discovering Malignant Network Traffic," proceedings of IEEE Symposium on Computational Intelligence in Cyber Security, Nashville, Tennessee, pp. 122-129, March 2009.
45. C. Lee, S. Bishop, H. Okhravi, S. Rahimi, B. Gupta, "Information Leakage Detection in Distributed Systems using Software Agent," proceedings of IEEE Symposium on Intelligent Agents, Nashville, Tennessee, pp. 128-135, March 2009.
46. C. Langin, H. Zhou, S. Rahimi, "A Model to Use Denied Internet Traffic to Indirectly Discover Internal Network Security Problems," proceedings of IEEE International Performance, Computing, and Communications Conference, Austin, Texas, pp. 486-490, 2008.
47. C. Tsivopoulos, J. Siddiqi, B. Akhgar, S. Rahimi, M. Bassir, "An Overlay Discovery Algorithm towards a Pure Distributed Communication System,"

proceedings of the 5<sup>th</sup> International Conference on Information Technology : New Generation, IEEE Press, Las Vegas, pp. 212-217, 2008.

48. Y. Lee, E. S. Khorasani, S. Rahimi, B. Gupta, "A Generic Mobile Agent Framework for Ambient Intelligence," proceedings of *the 23rd Annual ACM Symposium on Applied Computing (ACM-SAC)*, Fortaleza, Ceará, Brazil, March, 2008.
49. S. Rahimi, H. Hexmoor, B. Gupta, "Radical Agent-Based Approach for Intelligence Analysis," proceedings of *IEEE Conference on Technologies for Homeland Security*, Woburn, MA, pp. 186-191, May 2007.
50. R. Ahmad, Y. Lee, S. Rahimi, B. Gupta, "A Multi-Agent Based Approach for Particle Swarm Optimization," proceedings of *the IEEE International Conference of Integration of Knowledge Intensive Multi-Agent Systems (KIMAS '07)*, Waltham, Massachusetts, pp. 261-271, May 2007.
51. R. Ahmad, S. Rahimi, B. Gupta, "An Intelligence-Aware Process Calculus for Multi-Agent System Modeling," proceedings of *the IEEE International Conference of Integration of Knowledge Intensive Multi-Agent Systems (KIMAS '07)*, Waltham, Massachusetts, pp. 210-215, May 2007.
52. S. Rahimi, R. Ahmad, "A Perception Based Expert System for Question-Answering Support," proceedings of *The IEEE International Conference on Web-Intelligence (IEEE-WI 2006)*, Hong-Kong, China, pp. 893-896, December 2006.
53. R. Tatikunta, S. Rahimi, B. Gupta, and P. Shrestha, "TRAGENT: A Multi-Agent System for Stock Exchange," proceedings of *The IEEE International Conference on Intelligent Agent Technology (IEEE-IAT 2006)*, Hong-Kong, China, pp. 505-509, December 2006.
54. S. Rahimi, L. Gandy, B. Gupta, "Extracting Web User Profiles Using a Modified CARD Algorithm," proceedings of *the IEEE International Conference on Fuzzy Systems, IEEE Press*, Vancouver, Canada, pp. 582-589, 2006.
55. S. Rahimi, N. Carver, "A Multi-Agent Architecture for Distributed Domain-Specific Information Integration," proceedings of *the 38<sup>th</sup> Hawaii International Conference on System Science, IEEE Press*, Big Island, Hawaii, pp. 1-9, Jan. 2005.
56. L. Gandy, S. Rahimi and B. Gupta, "A Modified Competitive Agglomeration for Relational Data Algorithm," proceeding of *NAFIPS 05, IEEE Press*, Ann Arbor, Michigan, pp. 210-215, June 2005.
57. R. Ahmad and S. Rahimi, "A Perception Based, Domain Specific Expert System for Question-Answering Support," proceedings of *NAFIPS 05, IEEE*

*Press*, Ann Arbor, Michigan, pp. 454-459, June 2005.

58. S. Rahimi, N. Mogharreban, A. Krovi, "A Directed FCM Approach for Analysis of Stained Tissues," proceedings of *the North American Fuzzy Information Processing Society, NAFIPS'04, IEEE Press*, pp. 228-234, 2004.
59. S. Rahimi, M. Zargham, A. Thakre, D. Chhillar, "A Parallel Fuzzy C-Mean Algorithm for Image Segmentation," proceedings of *the North American Fuzzy Information Processing Society, NAFIPS'04, IEEE Press*, pp. 234-238, 2004.
60. N. Mogharreban, S. Rahimi, M. Sabharwal, "A Combined Crisp and Fuzzy Approach for Handwriting Analysis," proceedings of *the North American Fuzzy Information Processing Society, NAFIPS'04, IEEE Press*, pp. 351-357, 2004.
61. S. Rahimi, J. Bjursell, D. Ali, M. Cobb, "Preliminary Performance Evaluation of an Agent-Based Geospatial Data Conflation System," proceedings of *The IEEE International Conference on Intelligent Agent Technology (IEEE-IAT 2003)*, Halifax, Canada, pp. 550-553, 2003.
62. S. Rahimi, A. Narayanan, M. Sabharwal, "MPIAB: A Novel Agent Architecture for Parallel Processing," proceedings of *The IEEE International Conference on Intelligent Agent Technology (IEEE-IAT 2003)*, Halifax, Canada, pp. 554-557, 2003.
63. S. Ramakrishna, S. Rahimi, "ABSA: An Agent-Based Tool for SystemAdministration," *The IEEE International Conference on Industrial Informatics, IEEE-INDIN'03*, editors: Unland, R.; Ulieru, M.; Weaver, A.C., August 21-24, Banff, Alberta, Canada, pp. 312-318, 2003.
64. S. Rahimi, M. Cobb, D. Ali, H. Yang, F. Petry, "An Inexact Inferencing Strategy for Spatial Objects with Determined and Indeterminate Boundaries," proceedings of *IEEE International Conference on Fuzzy Systems*, St Louis, pp. 778-783, 2003.
65. H. Yang, M. Cobb, D. Ali, S. Rahimi, F. Petry, "Fuzzy Spatial Querying with Inexact Inference," *proceedings of the North American Fuzzy Information Processing Society, NAFIPS'02, IEEE Press*, pp. 377-382, 2002
66. S. Rahimi, M. Cobb, D. Ali, F. Petry, "Intelligence Representation in Agent Systems: an Extended Pi-Calculus," proceedings of *The IEEE International Conference on Fuzzy Systems*, Honolulu, Hawaii, pp. 185-191, 2002.

#### **D. Other Refereed Proceedings:**

67. K. Patsias, Y. Sheng, S. Rahimi, "A High Performance Gibbs Sampling Algorithm for Item Response Theory," *proceedings of the ISCA 22<sup>nd</sup>*

*International Conference on Parallel and Distributed Computing and Communication Systems*, Louisville, Kentucky, pp. 31-36, 2009.

68. C. Langin, S. Rahimi, "A Human Readable Network Security Hexagonal Self-Organizing Map," proceedings of the *ISCA 22<sup>nd</sup> International Conference on Computer Application and Industry and Engineering (CAINE-2009)*, San Francisco, CA, pp. 1-6, 2009.
69. E. Khorasani, S. Rahimi, B. Gupta, "A Reasoning Methodology for CW-based Question answering Systems," proceedings of the *International Workshop on Fuzzy Logic and Applications (WILF 2009)*, Palermo, Italy, pp. 328-335, 2009.
70. B. Gupta, S. R. Sivada, S. Rahimi, S. T. Adusumalli, "A Novel Bandwidth-Efficient Multicasting Protocol for Wide Area Networks," proceedings of *CATA-2009*, New Orleans, pp. 191-197, April, 2009.
71. B. Gupta, D. Che, S. Rahimi, "A Novel Recovery Approach for Distributed Systems," proceedings of *CATA-2009*, New Orleans, pp. 198-203, April, 2009.
72. B. Gupta, S.T. Adusumalli, S. Rahimi, S. R. Sivada, "An Improved Bandwidth-Efficient Multicasting Protocol for WANs," proceedings of *International Conference of Wireless Networks (ICWN'09)*, pp. 455-461, Las Vegas, July, 2009.
73. A. Vutukuru, B. Gupta, N. Mogharreban, S. Rahimi and L. Tallam, "A Domino-Effect Free Recovery Mechanism for Mobile Computing Environment," proceedings of *International Conference of Wireless Networks (ICWN'09)*, pp. 361-367, Las Vegas, July, 2009.
74. S. Rahimi, J. Dillard, and Bidyut Gupta, "An Expert System for Pi-Calculus and Api-Calculus Automated Reduction," proceedings of the *International Conference of Software Engineering Research and Practice (SER 08)*, pp. 462-468, 2008.
75. B. Gupta, S. Rahimi, R. Chirra, and P. Chimakurthy, "A Bandwidth-Efficient Multicasting Approach for Wide Area Networks," proceedings of the *International Conference of Wireless Networks (ICWN 08)*, pp. 387-391, 2008.
76. E. S. Khorasani, N. Carver, and S. Rahimi, "Performance Evaluation of DPS Coordination Strategies Modeled in Pi-Calculus," proceedings of the *International Conference of Artificial Intelligent (ICAI 08)*, pp. 120-127, 2008.
77. B. Gupta, S. Rahimi, V. Allam, and V. Jupaly, "Domino-Effect Free Recovery for Concurrent Failures in Distributed Computing Environment," proceedings of the *International Conference of Parallel and Distributed Techniques and Applications (PDPTA 08)*, pp. 428-432, 2008.

78. R. Ahmad, S. Rahimi, and B. Gupta, "A Formal Framework for Agent-Oriented Software Engineering," proceedings of the *International Conference of Artificial Intelligence (ICAI 07)*, pp. 541-546, 2007.
79. S. Rahimi, P. J. Rana, O. Koester, and B. Gupta, "Ontological Mediation for Information Agents," proceedings of the *International Conference of Artificial Intelligence (ICAI 07)*, Las Vegas, pp. 554-560, June 2007.
80. B. Gupta, S. Rahimi, and N. Mogharreban, "A New Recovery Algorithm for Distributed Computing Environment," proceedings of the *International Conference on Parallel and Distributed Processing Techniques (PDPTA 07)*, Las Vegas, pp. 214-217, 2007.
81. R. Ahmad, Y.C. Lee, S. Rahimi, B. Gupta, "Improving Parallel Performance of Particle Swarm Optimization Algorithm," proceedings of the *International Conference on Genetic and Evolutionary Methods (GEM 07)*, pp. xxx-xxx, 2007.
82. B. Gupta, R. Chirra, S. Rahimi, and P. Chimakurthy, "An Improved Reverse Path Forwarding Algorithm for Broadcasting in Wide Area Networks," proceedings of the *International Conference on Wireless Networks (ICWN 07)*, Las Vegas, pp. 18-22, 2007.
83. B. Gupta, S. Rahimi, and R. Chirra, "A New Efficient Recovery Algorithm for Cluster Federations," proceedings of *The International Conference on Computers and Their Applications (CATA 07)*, Honolulu, pp. 313-318, March 2007.
84. B. Gupta, S. Rahimi, and P. Sunke, "A Domino-Effect free Checkpointing / Recovery Mechanism for Cluster Federations," proceedings of *The International Conference on Computers and Their Applications*, Honolulu, pp.337-342, March 2007.
85. S. Rahimi, R. Ahmad, B. Gupta, K. Adya, "An Implicit-Feedback Based Ranking Methodology for Search Engines," proceedings of The 2006 *International Conference on Internet Computing (ICIC)*, Las Vegas, pp. 50-54, 2006.
86. B. Gupta, N. Mogharreban, S. Rahimi, A. Vemuri, "A High Performance Non-Blocking Checkpointing / Recovery Algorithm For Ring Networks," proceedings of *The 2006 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA06)*, 2006.
87. M. Wainer, S. Rahimi, D. Lewis, "An Analysis of Java Distributed Computing Communication Trade-offs: Performance and Programming," proceedings of *The 2006 International Conference on Parallel and Distributed Processing Techniques and Applications*, Las Vegas, Nevada, pp. 548-554, 2006.

88. B. Gupta, S. Rahimi, R. A. Rias, R. Bhupathi, "Low-Overhead Roll-Forward Checkpointing and Failure Recovery for Distributed Systems," proceedings of *Computers and their Applications (CATA06)*, Seattle, pp. 289-294, March 2006.
89. B. Gupta, S. Rahimi, "A Fast and Efficient Non-blocking Coordinated Checkpointing Approach for Distributed Systems," proceedings of *The 2006 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA06)*, Nevada, pp. 99-105, 2006.
90. B. Gupta, Y. Yang, S. Rahimi, A. Vemuri, "A High-Performance Recovery Algorithm for Distributed Systems," proceedings of *Computers and their Applications (CATA06)*, Seattle, pp. 283-288, March 2006.
91. M. Ganzha, W. Kuranowski, M. Paprzycki, S. Rahimi, M. Szymczak, "Designing an Agent-based Student Mobility Support System," proceedings of *the International Symposium for Information and Communication Technologies: W. Essaidi, N. Raissouni (ed.)*, Al Khalij Al Arabi, Tetuan, Morocco, pp. 44-50, 2005.
92. R. Chen, B. Gupta, and S. Rahimi, "An Efficient Routing Scheme for Clustered Mobile Ad-Hoc Networks," proceedings of *the 11th Annual International IEMS Conference*, Cocoa Beach, Florida, pp. 80-89, March 2005.
93. B. Gupta and S. Rahimi, "A Novel Non-Block Synchronous Checkpointing Scheme for Distributed Systems," proceedings of *the 9<sup>th</sup> WSEAS International Conference on SYSTEMS*, Vouliagment, Athens, Greece, July 11-16, 2005.
94. R. A. Rias, S. Rahimi, and B. Gupta, "A Novel Approach to Cooperative Caching in Clusters," proceedings of *the 11th Annual International IEMS Conference*, Cocoa Beach, Florida, pp. 98-104, March 2005.
95. S. Mandalapu, S. Rahimi, B. Gupta, and M. Zargham, "Dynamic Load Balancing in MPIAB – The General Architecture," proceedings of *the 2005 International Conference on Parallel and Distributed Processing Techniques and Applications*, Las Vegas, Nevada, pp.710-716, June 2005.
96. B. Gupta, S. Rahimi, A. Thakre, and N. Mogharreban, "An Efficient Non-Blocking Synchronous Checkpointing Scheme for Distributed Systems," proceedings of *the 2005 International Conference on Parallel and Distributed Processing Techniques and Applications*, Las Vegas, Nevada, pp.883-889, June 2005.
97. P. Varadarajan, N. Mogharreban, B. Gupta, and S. Rahimi, "A Robust Multicast Algorithm for Cellular Networks," proceedings of *the 2005 International Conference on Wireless Networks*, Las Vegas, Nevada, pp. 213-219, June 2005.

98. L. Gandy, S. Rahimi, G.B. Nagaraja, B. Gupta, "An Expert System for Finding Strongly Consistent Global Checkpoints in A Distributed Computing Environment," proceedings of *the 11th Annual International IEMS Conference*, Cocoa Beach, Florida, pp. 90-97, March 2005.
99. B. Gupta, S. Rahimi, and P. Naskar, "A New Non-Blocking Synchronous Checkpointing Scheme for Distributed Systems," proceeding of *the ISCA 20<sup>th</sup> International Conference (Computers and Their Applications)*, New Orleans, Louisiana, pp.26-31, March 2005.
100. R. A. Rias, S. Rahimi, and B. Gupta, "Cooperative Caching in Clusters," proceedings of *Int. Conference on Computer Sc., Software Eng., Info. Tech., e-business and Applications (CSITeA-03)*, Cairo, pp. 445-450, Dec. 2004.
101. R. Jandhyala, V. Doraiswamy, S. Rahimi, and B. Gupta, "An Efficient Multicast Routing Protocol for Clustered MANET," proceedings of *International Conference on Computer Sc., Software Eng., Info. Tech., e-business and Applications (CSITeA-03)*, Cairo, pp. 97-102, Dec. 2004.
102. M. Sabharwal, S. Rahimi, R Ahmad, "A Deterministic-Heuristic Load Balancing Methodology for MPIAB," proceedings of *the ISCA 19<sup>th</sup> International Conference*, Seattle, Washington, pp. 131-135, 2004.
103. S. Rahimi, N. Mogharreban, R. Ahmad, "The First Stage of a System Verification Strategy for API-Calculus," proceedings of *The International Conference on Algorithmic Mathematics and Computer Science*, Las Vegas, Nevada, pp. 380-385, 2004.
104. S. Rahimi, G. Cjakravarthy, G. Rachamalla, "Handling Message Dependent Deadlocks," proceedings of *the 10<sup>th</sup> International Conference on Industry, Engineering and Management Systems, Decision Support Systems*, Cocoa Beach, Florid, pp. 119-123, 2004.
105. R. Ahmad, S. Rahimi, L. Gandy, D. Ali, "A Multi-Agent Information Retrieval System," proceedings of *the 10<sup>th</sup> International Conference on Industry, Engineering and Management Systems, Decision Support Systems*, Cocoa Beach, Florida, pp. 52-57, 2004.
106. Y. P. Sheng, Z. Chen, S. Rahimi, S. Mandalapu, "A Light-Weight Distributed Web Search Engine: Distributed Web Crawling Component," proceeding of *the ISCA 19<sup>th</sup> International Conference*, Seattle, pp.197-200, 2004.
107. A. Krovi and S. Rahimi, "A Distributed Approach to Content Based Image Retrieval," *The 2003 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'03)*, Las Vegas, Nevada, pp. 458-463, 2003.

108. J. Bjursell, S. Rahimi, D. Ali, M. Cobb, "Mobile Agents' Applicability for Information Retrieval and Processing," proceedings of *9th Annual International Conference on Industry, Engineering, and Management Systems*, Florida, pp. 235-242, 2003.
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121. S. Rahimi, A. Ali, D. Ali, "An Investigation on Intelligent Software-Agent Technology,” proceedings of *IEMS and IC&IE 2001 joint international conference*, Cocoa Beach, Florida, 2001, pp 84-90.
122. S. Rahimi, M. Paprzycki, "Parallel Processing for Forming a Reference Pattern Set for a Speaker-Independent Voice Recognition System," proceedings of *the 26th Summer School Applications of Mathematics in Engineering and Economics*, Sofia, Bulgaria, pp. 322-326, June, 2000.
123. S. Rahimi, C. Cobb, “An Expert System for Decision Making In Speaker-Independent Small Vocabulary Voice Recognition,” proceedings of *the Second Southern Conference on Computing*, Hattiesburg, MS, Oct. 2000.
124. M. Mascagni, S. Rahimi, "Parallel Inversive Congruential Generators: Software and Field-Programmable Gate Array Implementations," proceedings of *the International Conference on Monte Carlo Simulations MCS\_2000*, Monte Carlo, Monaco, pp. 35-40 June 2000.
125. S. Rahimi, D. Ali, "Utilizing Java Technology in Distributed Databases,” proceedings of *the IEMS International Conference 2K*, Florida, pp. 116-121, March 2000.
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## **IV. PROFESSIONAL SERVICES**

### **A. Editorial Appointments:**

- Editor-in-Chief of International Journal of Computational Intelligence Theory and Practice;
- Associate Editor of Informatica for north and south America;
- Editor of International Journal of Computer Science & Applications—IJCSA;
- Editor of Engineering Letters Journal;
- Editor of International Journal of Theoretical and Applied Computer Science;
- Editor of IADIS International Journal of Computer Science and Information Systems;
- Invited Editor for “Agent Based Computing,” a special issue of Informatica Journal, Vol. 28, No. 1, April 2004;
- Invited Editor for “Software Agent Technology,” a special issue of Scalable Computing Practice and Experience (SCPE), Vol. 7, No. 1, 2006;
- Invited Editor for “Intelligent Approaches to Internet Usage and Applications,” a special issue of WILEY’s International Journal of Intelligent Systems, to be published in 2006;
- Invited Editor for “Parallel Evolutionary Algorithms,” a special issue of Scalable Computing Practice and Experience (SCPE), to be published in 2007.

### **B. Consultantships:**

- Technology Advisory Board (TAB), <http://www.technologyboard.com/>
- The University of Southern Mississippi, Graduate School
- DATAURA Co., a data visualization software company, 1956 Territorial Dr., Sierra Vista, AZ 85635

### **C. Membership in Professional Associations:**

- Phi Kappa Phi Honor Society
- Institute of Electrical and Electronics Engineers (IEEE)
- Association for Computing Machinery (ACM)
- Tennessee Academy of Science

### **D. Conferences and Major Tracks Organizing**

- International Conference on Knowledge Intensive Multi-Agent Systems, Program Chair, St. Louis, USA. October 2009.
- International Multi-conference on Computer Science and Information Technology (IMCSIT), Wisla, Poland, October 2008.
- Agent Based Computing V (ABC'08)-the 5<sup>th</sup> workshop, Wisla, Poland, October, 2008.

- Mobile Agents and Systems 2008 (MAS'08), during the 23rd Annual ACM Symposium on Applied Computing (ACM-SAC), March 16-20, 2008, Fortaleza, Ceará, Brazil.
- Agent Based Computing IV (ABC'07)-the 4<sup>th</sup> workshop, Wisla, Poland, October, 2007.
- International Workshop on (Multi-)Agent Systems in E-Business: Concepts, Technologies and Applications (MASEB'2007), within the framework of IEEE Intelligent Agent Technology (IEEE-IAT-07) conferences, November 2-5, 2007, Silicon Valley, USA.
- IEEE International Conference on Integration of Intensive Multi-Agent Systems (KIMAS'07), April 29 to May 3, 2007, Waltham, MA, USA.
- Agents, Interactions, Mobility, and Systems (AIMS), The 22<sup>nd</sup> ACM Symposium on Applied Computing (SAC 2007), March 11 - 15, 2007, Seoul, Korea.
- The 3ed Agent-Based Computing (Workshop III) — ABC 2006, In collaboration with First International Multi-conference on Computer Science and Information Systems, Wisla, Poland, November 6-10, 2006.
- (Multi-)Agent Systems in E-Business: Concepts, Technologies and Applications (MASEB'2006), Workshop during 2006 IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IEEE-IAT-06), December, 2006, Hong-Kong, China.
- The 2<sup>nd</sup> Agent Based Computing (ABC05), Distributed ABC...Spanning the World..., May in Cancun (Mexico), June in Tetuan (Morocco), and September in Melbourne (Australia), 2005.
- The 18<sup>th</sup> International FLAIRS Conference, Intelligent Agent Systems (IAS05): Theory, Design and Implementation special track chair, May 15-17, 2005.
- The 17<sup>th</sup> International FLAIRS Conference, Intelligent Agent Systems: Theory, Design and Implementation special track chair, May 17-19, 2004.
- The IEEE International Conference on Intelligent Agent Technology (IEEE-IAT) 2003, session chair.
- The First Agent-Based Computing (ABC03) at SCI 2003, Orlando, Florida, July 23-30, 2003.

#### **E. Conference Program Committees:**

- The Fourth International Information Security and Cryptology Conference (ISCTurkey'10), Ankara, Turkey, May 06-07, 2010.
- 2010 IEEE International Conference on Information Reuse and Integration (IRI-2010), August, Las Vegas, Nevada.
- 8th ACIS International Conference on Software Engineering Research, Management and Applications (SERA2010), May 24-26, 2010, Montreal, Canada.
- 4<sup>th</sup> International Symposium of Intelligent Distributed Computing (IDC 2010), September 16-18, 2010, Tangier, Morocco.
- The Intelligent Systems Symposium, a part of the 2009 World Congress on Computer Science and Information Engineering (CSIE 2009), March 31 - April 2, 2009, Los Angeles/Anaheim.

- IEEE International Conference on Information Reuser and Integration (IRI2009), La Vegas, USA, August 2009.
- The 5th International Conference on Cybernetics and Information Technologies, Systems and Applications (CITSA 2008), July 2008, Orlando, Florida.
- North American Simulation Technology Conference (NASTEC), Montreal, Canada, August 2008.
- 2nd International Workshop on Evolutionary Techniques in Data Processing Held in collocation with DEXA 2008, September 1-5, 2008, Turin, Italy.
- The 2008 IEEE International Conference on Information Reuse and Integration, Hilton Hotel, Las Vegas, July 13-15, 2008.
- 2nd International Symposium on Intelligent Distributed Computing - IDC'2008, September 18-20, 2008, Catania, Italy.
- IEEE Region 5 Technical, Professional and Student Conference, to be held on April 17-20 2008 at the Intercontinental Hotel, Kansas City, Missouri.
- 6th International Conference on Interaction Design and Children (IDC-07) June 6-8, 2007, Aalborg, Denmark.
- IEEE International Symposium on Industrial Electronics (ISIE 07), June 4-7, 2007, Centro Cultural and Centro Social Caixanova - Vigo, Spain.
- 22nd International Conference on Computers and their Applications, March 28-30, 2007, Sheraton Princess Kaiulani Hotel, Honolulu, Hawaii U.S.A.
- IEEE Symposium Series on Computational Intelligence, Honolulu, Hawaii, April 1-5, 2007.
- IEEE International Conference on Integration of Intensive Multi-Agent Systems (KIMAS'07), Waltham, MA, 29 April to 3 May, 2007.
- Agents, Interactions, Mobility, and Systems (AIMS), The 22nd ACM Symposium on Applied Computing (SAC 2007), March 11 - 15, 2007, Seoul, Korea.
- IEEE International Symposium on Industrial Electronics, June 4-7, 2007, Centro Cultural and Centro Social Caixanova - Vigo, Spain
- The 4th International Conference on Cybernetics and Information Technologies, Systems and Applications: CITSA 2007, July 12-15, 2007 – Orlando, Florida, USA.
- (Multi-)Agent Systems in E-Business: Concepts, Technologies and Applications (MASeB'2006), Workshop during 2006 IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IAT-06), December, 2006, Hong-Kong, China.
- 2006 IEEE/WIC/ACM International Conference on Intelligent Agent Technology, December 18 - 22, 2006 in Hong Kong.
- Knowledge-Based Intelligent Information & Engineering Systems (KES'2006), 9-11, October 2006, Bournemouth, UK.
- Information and communication technologies International Symposium (ICTIS), 3-6, June 2005, Tetuan (Northern Morocco).
- 4th international conference on Computer & Information Science (ICCIS'2005), 15-17, December 2005, Kolhapur, India.
- IADIS International Conference on Applied Computing, 22-25, February 2005, Algarve, Portugal.
- The 11th International Conference on Information Systems Analysis and Synthesis: ISAS 14 - 17, July 2005, Orlando, Florida, USA.

- The 2nd International Conference on Cybernetics and Information Technologies, Systems and Applications: CITSA 2005, 14-17, July 2005 in Orlando, Florida, USA.
- Workshop on Large Scale Computations on Grids (LaSCoG), 11-14, September 2005, Poznan, Poland.
- 13th Annual Meeting of the IEEE International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS), 27-29, September 2005, Georgia Tech Hotel and Conference Center.
- 9<sup>th</sup> WSEAS International Conference on SYSTEM, Athena, Greece, 11-13, July 2005, Session Chair: Systems Theory and Computer Techniques.
- Agents, Interactions, Mobility, and Systems (AIMS), at 19th ACM Symposium on Applied Computing, 14-17, March 2004, Nicosia, Cyprus.
- IADIS International Conference on Applied Computing, 23-26, March 2004, Lisbon, Portugal.
- The 10th International Conference on Information Systems Analysis and Synthesis: ISAS, 21 - 25, July 2004, Orlando, Florida.
- International Conference on Cybernetics and Information Technologies, Systems and Applications: CITSA04, 21 - 25, July 2004, Orlando, Florida.
- 2nd International Symposium on Parallel and Distributed Computing (ISPDC) 2003
- Software Agents in Business Information Systems (SABIS), at BIS 2003.
- International Conference on Management of e-Commerce and e-Government (2003ICMeCG), (October 28-30, 2003, Nanchang, China).