

CURRICULUM VITAE

Selwyn Piramuthu

Information Systems and Operations Management (ISOM)
University of Florida, Gainesville, FL 32611-7169
phone: (352) 392-8882 email: selwyn@ufl.edu

Education

Ph.D., May 1992, University of Illinois at Urbana-Champaign, IL.

M.S., December 1987, University of Arizona, Tucson, AZ.

B.Tech., May 1985, Indian Institute of Technology, Madras, India.

[selected] Academic/Work Experience

July 2009 - *Professor*, ISOM Department, University of Florida.

September 1998 - May 2001 *Visiting Associate Professor*, OPIM Dept., The Wharton School.

July 1997 - June 2009 *Associate Professor [Tenured]*, ISOM Department, University of Florida.

August 1991 - June 1997 *Assistant Professor*, ISOM Department, University of Florida.

Research Interests

Supply Chain Management
Data Mining/Knowledge Discovery
Computer Integrated Manufacturing
Artificial Intelligence/Expert Systems

RFID
Electronic Commerce
Health Care Informatics
Decision Support Systems

Teaching Interests

Simulation
Systems Analysis and Design
RFID/Supply Chain Management

Electronic Commerce
Data Base Management
Data Mining/Decision Support Systems

PUBLICATIONS/PRESENTATIONS

Refereed Journals

- Zhou, W. and S. Piramuthu, "Manufacturing with Item-Level RFID Information: From Macro to Micro Quality Control," *International Journal of Production Economics*, 2011.
- Kapoor, G., and S. Piramuthu, "Vulnerabilities in Chen and Deng's RFID Mutual Authentication and Privacy Protection Protocol," *Engineering Applications of Artificial Intelligence*, 24, pp. 1300-1302, 2011.
- Kapoor, G., W. Zhou, and S. Piramuthu, "Multi-tag & Multi-owner RFID Ownership Transfer in Supply Chains," *Decision Support Systems*, 52(1), pp. 258-270, 2011.
- Bureau, S., Y. Meiller, W. Zhou, and S. Piramuthu, "Performance Drivers for RFID-Generated Item-Level Information in the Oil Industry," *Journal of Organizational Computing and Electronic Commerce*, 21(4), pp. 295-314, 2011.
- Meiller, Y., S. Bureau, W. Zhou, and S. Piramuthu, "Adaptive Knowledge-based System for Health Care Applications with RFID-generated Information," *Decision Support Systems*, 51(1), pp. 198-207, 2011.
- Piramuthu, S., "Vulnerabilities of RFID Protocols Proposed in ISF," *Information Systems Frontiers*, 2011.
- Kapoor, G. and S. Piramuthu, "Single RFID Tag Ownership Transfer Protocols," *IEEE Transactions on Systems, Man, and Cybernetics-C*, 2011.
- Piramuthu, S., "RFID Mutual Authentication Protocols," *Decision Support Systems*, 50(2), pp. 387-393, 2011.
- Tu, Y.-J., and S. Piramuthu, "A Decision Support Model for Filtering RFID Read Data in Supply Chains," *IEEE Transactions on Systems, Man, and Cybernetics-C*, 41(2), pp. 268-273, March 2011.
- Sundaram, D., W. Zhou, S. Piramuthu, and S. Pienaar, "Knowledge-based RFID-enabled Web Service Architecture for Supply Chain Management," *Expert Systems with Applications*, 37, pp. 7937-7946, 2010.
- Zhou, W., and S. Piramuthu, "Framework, Strategy, and Evaluation of Health Care Processes with RFID," *Decision Support Systems*, 50(1), pp. 222-233, 2010.
- Ahmed, D.M., D. Sundaram, and S. Piramuthu, "Knowledge-based Scenario Management - Process and Support," *Decision Support Systems*, 49(4), pp. 507-520, 2010.
- Wickboldt, A., S. Piramuthu, "Patient Safety Through RFID: Vulnerabilities in Recently Proposed Grouping Protocols," *Journal of Medical Systems*, 2010.
- Kapoor, G., and S. Piramuthu, "Vulnerabilities in Some Recently Proposed RFID Ownership Transfer Protocols," *IEEE Communications Letters*, 14(3) pp. 260-262, March 2010.
- Zhou, W., Y.-J. Tu, and S. Piramuthu, "RFID-Enabled Item-level Retail Pricing," *Decision Support Systems*, 48(1), pp. 169-179, 2009.
- Kapoor, G., W. Zhou, and S. Piramuthu, "Challenges Associated with RFID Implementations in Supply Chains," *European Journal of Information Systems*, 18, pp. 526-533, 2009.
- Zhou, W., G. Kapoor, and S. Piramuthu, "RFID Enabled Item-Level Product Information Revelation," *European Journal of Information Systems*, 18, pp. 570-577, 2009.

- Emerson, D., W. Zhou, and S. Piramuthu, "Goodwill, Inventory Penalty, and Adaptive Supply Chain Management," *European Journal of Operational Research*, 199(1), pp. 130-138, 2009.
- Piramuthu, S. and M.J. Shaw, "Learning-Enhanced Adaptive DSS: A Design Science Perspective," *Information Technology & Management*, 10(1), pp. 41-54, 2009.
- Tu, Y.-J., W. Zhou, and S. Piramuthu, "Identifying RFID-Embedded Objects in Pervasive Healthcare Applications," *Decision Support Systems*, 46(2), pp. 586-593, 2009.
- Piramuthu, S., and R. Sikora, "Iterative Feature Construction for Improving Inductive Learning Algorithms," *Expert Systems with Applications*, 36, pp. 3401-3406, 2009.
- Kapoor, G., and S. Piramuthu, "Sequential Bias in Online Product Reviews," *Journal of Organizational Computing and Electronic Commerce*, 19(2), pp. 85-95, 2009.
- Zhang, J., S. Bandyopadhyay, and S. Piramuthu, "Real Option Valuation on Grid Computing," *Decision Support Systems*, 46(1), pp. 333-343, 2008.
- Tu, Y.-J., and S. Piramuthu, "Reducing False Reads in RFID-Embedded Supply Chains," *Journal of Theoretical and Applied Electronic Commerce Research*, 3(2), pp. 60-70, August 2008.
- Piramuthu, S., "Adaptive Framework for Collisions in RFID Tag Identification," *Journal of Information & Knowledge Management*, 7(1), pp. 9-14, March, 2008.
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- Piramuthu, S., "Protocols for RFID Tag/Reader Authentication," *Decision Support Systems*, 43(3), pp. 897-914, 2007.
- Sikora, R., and S. Piramuthu, "Framework for Efficient Feature Selection in Genetic Algorithm based Data Mining," *European Journal of Operational Research*, 180, pp. 723-737, 2007.
- Piramuthu, S., "On Preprocessing Data for Financial Credit Risk Evaluation," *Expert Systems with Applications*, 30(3), pp. 489-497, 2006.
- Piramuthu, S., "Machine Learning for Dynamic Multi-Product Supply Chain Formation," *Expert Systems with Applications*, 29(4), pp. 985-990, 2005.
- Piramuthu, S., "Knowledge-based Web-enabled Agents and Intelligent Tutoring Systems," *IEEE Transactions on Education*, 48(4), pp. 750-756, 2005.
- Sikora, R., and S. Piramuthu, "Efficient Genetic Algorithm Based Data Mining using Feature Selection with Hausdorff Distance," *Information Technology and Management*, 6(4), pp. 315-331, 2005.
- Piramuthu, S., "Feature Selection for Reduction of Tabular Knowledge-Based Systems," *Information Technology and Management*, 6(4), pp. 351-362, 2005.
- Piramuthu, S., "Knowledge-Based Framework for Automated Dynamic Supply Chain Configuration," *European Journal of Operational Research*, 165, pp. 219-230, 2005.
- Piramuthu, S., "Knowledge-based Framework for Validating Workflow Sequences," *Journal of Information & Knowledge Management*, 3(3), pp. 1-6, September 2004.
- Piramuthu, S., "Feature Construction for Reduction of Tabular Knowledge-Based Systems," *Information Sciences*, 168, pp. 201-215, 2004.

- Piramuthu, S., "Evaluating Feature Selection Methods for Learning in Data Mining Applications," *European Journal of Operational Research*, 156, pp. 483-494, 2004.
- Piramuthu, S. "On Learning to Predict Web Traffic," *Decision Support Systems*, 35(2), pp. 213-229, 2003.
- Park, S. C., S. Piramuthu and M. J. Shaw, "Dynamic Rule Refinement in Knowledge-Based Data Mining Systems," *Decision Support Systems*, 31(2), pp. 205-222. 2001.
- Watson-Manheim, M.B., S. Piramuthu and S. Narasimhan, "Exploratory Analysis of Factors Influencing Performance Dynamics of Telecommuters and Traditional Office Workers," *IEEE Transactions on Systems, Man and Cybernetics: Part-C*, 30(2), pp. 239-251, May 2000.
- Piramuthu, S., M. J. Shaw, and B. Fulkerson., "Information-based Dynamic Manufacturing System Scheduling," *International Journal of Flexible Manufacturing Systems*, 12(2), pp. 219-234, 2000.
- Piramuthu, S., "Feature Selection for Credit-Risk Evaluation Decisions," *INFORMS Journal on Computing*, 11(3), pp. 258-266, 1999.
- Piramuthu, S., "Financial Credit-Risk Evaluation with Neural and Neurofuzzy Systems," *European Journal of Operational Research*, 112(2), pp. 310-321, January 1999.
- Wickboldt, A., J. Bercovitch, and S. Piramuthu, "Dynamics of International Mediation: Analysis using Machine Learning Methods," *Conflict Management and Peace Science*, 17(1), pp. 49-68, 1999.
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- Piramuthu, S., N. Raman, and M. J. Shaw, "Learning-based Scheduling in a Flexible Manufacturing Flow Line," *IEEE Transactions on Engineering Management*, 41(2), pp. 172-182, May 1994.
- Piramuthu, S., M. J. Shaw, and J. A. Gentry, "A Classification Approach Using Multi-layered Neural Networks," *Decision Support Systems*, 11(5), pp. 509-525, 1994.
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Piramuthu, S., C. Kuan, and M. J. Shaw, "Learning Algorithms for Neural-Net Decision Support," *ORSA Journal on Computing*, 5(4), pp. 361-373, Fall 1993.

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Shaw, M. J., J. A. Gentry, and S. Piramuthu, "Inductive Learning Methods for Knowledge-Based Decision Support: A Comparative Analysis," *Computational Economics*, 3(2), pp. 147-165, June 1990.

Chapters in Books

Shaw, M.J., and S. Piramuthu, "A Learning-Enhanced Adaptive Decision Support System Framework," in Frada Burstein and Clyde W. Holsapple (eds.) *Handbook on Decision Support Systems - 1*, Berlin/Heidelberg: Springer-Verlag, pp. 697-717, 2008.

Wei, C.-P., S. Piramuthu, and M.J. Shaw, "Knowledge Discovery and Data Mining," in Clyde W. Holsapple (ed.) *Handbook on Knowledge Management*, Berlin/Heidelberg: Springer-Verlag, 2002.

Park, S. C., S. Piramuthu, N. Raman and M. J. Shaw, "Intelligent Scheduling with Machine Learning," in D. E. Brown and W. T. Scherer (eds.), *Intelligent Scheduling Systems*, 193-214, Kluwer, 1995 [refereed].

Piramuthu, S., "Second-order Gradient Methods in Back-Propagation," in Souček (ed.), *Fast learning and Invariant Object Recognition*, 27-38, Wiley Series in Sixth Generation Computer Technology, 1992.

Piramuthu, S., "Constructing Efficient Features for Back-Propagation," in Souček (ed.), *Fast learning and Invariant Object Recognition*, 39-46, Wiley Series in Sixth Generation Computer Technology, 1992.

Conference/Workshop Presentations [refereed]

Zhou, W., E.J. Yoon, and S. Piramuthu, "Hierarchical RFID Tag Ownership & Transfer in Supply Chains," *Proceedings of the Tenth Workshop on eBusiness (WeB2011)*, Shanghai, LNBP, Springer, 2011.

Zhou, W., E.J. Yoon, and S. Piramuthu, "Varying Levels of RFID Tag Ownership in Supply Chains," *Proceedings of the 3rd International Workshop on Information Systems in Distributed Environments (ISDE'11)*, Crete, pp. 228-235, Springer LNCS 7046, 2011.

Zhou, W., and S. Piramuthu, "Remanufacturing/Refurbishing with RFID-generated Item-Level Information," *Proceedings of the International Conference on Advances in Production Management Systems (APMS)*, Stavanger, Springer, 2011.

Zhou, W., and S. Piramuthu, "RFID and the Automation of Green Supply Chain Management," *Proceedings of the Hamburg International Conference of Logistics (HICL)*, Hamburg, 2011.

Zhou, W., and S. Piramuthu, "Combining Fuzzy Evidence from HB Protocol Variant for RFID Authentication in Supply Chains," *Proceedings of the 8th International Conference on Fuzzy Systems and Knowledge Discovery (FSKD'11)*, Shanghai, pp. 816-819, IEEE, 2011.

Zhou, W., and S. Piramuthu, "Protocol for Simultaneous Ownership Transfer of Multiple RFID Tags with TTP," *Proceedings of the 4th International Conference on Network Security & Applications (CNSA)*, Chennai, CCIS 196, pp. 151-156, Springer-Verlag, 2011.

- Zhou, W., and S. Piramuthu, "RFID for Verifying the Absence of Prohibited Items in a Food Supply Chain," *Proceedings of the 13th International Conference on Modern Information Technology & Innovation Processes of the Enterprises (MITIP)*, Trondheim, pp. 192-201, 2011.
- Zhou, W., and S. Piramuthu, "Verifying Simultaneous Presence of Two RFID Tags," *Proceedings of the National Conference on Recent Trends in Information Technology & Communication (NCR-TIC'11)*, Chennai, 2011.
- Meiller, Y., S. Bureau, W. Zhou, and S. Piramuthu, "RFID-embedded Decision Support for Tracking Surgical Equipment," *Proceedings of the 44th Hawaii International Conference on System Sciences (HICSS-44)*, Kauai, IEEE Computer Society, 2011.
- Piramuthu, S., "Inclusion/Exclusion Protocol for RFID Tags," *Proceedings of the 1st International Conference on Computer Science and Information Technology (COSIT)*, Bangalore, CCIS 133, pp. 431-437, Springer-Verlag, 2011.
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- Bureau, S., M. Bick, S. Piramuthu, Y. Meiller, W. Zhou, S.F. Wamba, "Radio Frequency Identification: A Case for Health Care," *Proceedings of the Emerging Research Projects and Work in Progress Symposium (ERPAS) at the 12th International Conference on Information Integration and Web-based Applications & Services (iiWAS2010)*, Paris, ACM, pp. 875-878, 2010.
- Zhou, W., and S. Piramuthu. "Remanufacturing Decision Support System with RFID," *Proceedings of the 1st International Conference on Computational Logistics*, Shanghai, LNCS Springer 2010.
- Piramuthu, S., "Relay Attack-Resisting Inclusion/Exclusion Protocol for RFID," *2nd International Workshop on Dynamic Networks: Algorithms and Security (DYNAS2010)*, Bordeaux, 2010.
- Piramuthu, S., "Sequential Bias, Online Product Review, and Recommender Systems," *Proceedings of the Workshop on Data Mining in Marketing (DMM'2010) at the Industrial Conference on Data Mining (ICDM2010)*, Berlin, pp. 5-13, IBAI Publishing, 2010.
- Piramuthu, S., "Variation of HB Authentication Protocol for Multiple RFID Tags," *Proceedings of the International Conference on Advanced and Emerging Trends in Computing Technologies (ICAET10)*, Chennai, 2010.
- Zhou, W., and S. Piramuthu, "Effective Remanufacturing via RFID," *Proceedings of the European Workshop on RFID Systems and Technologies (RFID-SysTech2010)*, Ciudad Real, 2010.
- Meiller, Y., S. Bureau, W. Zhou, and S. Piramuthu, "Decision Support with RFID for Health Care," *Proceedings of the 2nd International Conference on Networks & Communications (NeCoM-2010)*, Chennai, pp. 243-249, CCIS 90, Springer-Verlag, 2010 - Keynote Speaker.
- Zhou, W., and S. Piramuthu. "Intelligent Manufacturing with RFID," *Proceedings of the International Workshop of Advanced Manufacturing and Automation (IWAMA)*, Shanghai, 2010.
- Kapoor, G., and S. Piramuthu. "Shared RFID Ownership Transfer Protocols," *Proceedings of the National Conference on Emerging Trends in IT and Communication Systems (NCET'10)*, pp. 177-180, Chennai, 2010.
- Meiller, Y., S. Bureau, W. Zhou, S. Piramuthu. "Simulation of a Health Care Knowledge-based System with RFID-generated Information," *Proceedings of the Asian Simulation Technology Conference (ASTECS2010)*, pp. 110-114, Shanghai, 2010.

- Piramuthu, S., and W. Zhou. "Optimistic Dynamic Inference Control," *Proceedings of the Workshop on Information Security & Privacy (WISP2009)*, pp. 9.1-9.6, Phoenix, 2009.
- Zhou, W., and S. Piramuthu. "Remanufacturing with RFID Item-Level Information," *Proceedings of the Eighth Workshop on eBusiness (WeB2009)*, Phoenix, LNBIP-Springer, 2009.
- Zhou, W., and S. Piramuthu. "RFID Item-Level Information Sharing and Coordination," *Proceedings of the 3^{as} Jornadas Científicas sobre RFID*, pp. 31-38, Bilbao, 2009.
- Kapoor, G., and S. Piramuthu. "A Secure Ownership Transfer Protocol for RFID," *Proceedings of the 3^{as} Jornadas Científicas sobre RFID*, pp. 73-79, Bilbao, 2009.
- Zhou, W., and S. Piramuthu. "Health Care Process Mining with RFID," *Proceedings of the 2nd International Workshop on Event-Driven Business Process Management (edBPM09)*, Ulm, LNBIP 43, pp. 405-411, Springer-Verlag, 2009.
- Kapoor, G., and S. Piramuthu. "Vulnerabilities in Some Recently Proposed RFID Ownership Transfer Protocols," *Proceedings of the 1st International Workshop on Wireless & Mobile Networks (Wi-MoNe)*, Chennai, IEEE Computer Society, 2009.
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- Sundaram, D., F. Shafiei, S. Piramuthu. "Implementing a Multi-Enterprise Collaborative DSS," *Proceedings of the 1st workshop on Service-Oriented Business Networks and Ecosystems (SOBNE)* at EDOC, pp. 220-229, Auckland, IEEE Computer Society, 2009.
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- Zhou, W., and S. Piramuthu. "RFID and Real-Time CRM," *Proceedings of the Workshop on RFID Technology (RFID'09) at the 5th International Conference on Intelligent Environments (IE09)*, pp. 125-133, Barcelona, 2009.
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- Zhou, W., G. Kapoor, and S. Piramuthu. "Challenges Associated with Radio-Frequency Identification Tag Implementations in Supply Chains," *Proceedings of the National Conference on Recent Trends in Information Technology and Communication (NCRCTIC)*, pp. 116-120, Chennai, 2009.
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- Sikora, R., and S. Piramuthu, "Genetic Algorithm-based Learning using Feature Construction," *INFORMS AI/DM Workshop*, Pittsburgh, 2006.
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- Piramuthu, S., "On Existence Proofs for Multiple RFID Tags," *IEEE International Conference on Pervasive Services (ICPS'06)*, pp. 317-320, Lyon, 2006.
- Piramuthu, S., "Using Knowledge-base and Auction Mechanisms in Agent-Based Framework for Supply Chain Management," *Agent Oriented Information Systems Workshop at the 18th Conference on Advanced Information Systems Engineering (CAISE'06)*, pp. 76-83, Luxembourg, 2006.

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- Piramuthu, S., "On Validating Supply Chain Nodes," *26th Annual Conference of the Gesellschaft für Klassifikation (GfKl 2002)*, Mannheim, 2002.
- Piramuthu, S., "Data Mining Applications in Supply Chain Management," *Second Annual Conference on Business and Industrial Statistics*, Rimini, 2002.
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- Piramuthu, S., "Knowledge-based Approach to Validating Patient Workflow Sequences in the Healthcare Industry," *EUNITE Workshop on Intelligent Systems in Patient Care*, pp. 43-48, Vienna, 2001.
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- Piramuthu, S., "Electronic Commerce and Data Mining: Discovering Association Rules from Electronic Grocery Shopping Data," *Second Electronic Grocery Shopping Workshop - EGS99*, Charlotte, 1999.
- Piramuthu, S. and C. Lincicum, "Application of Knowledge Discovery Methods for Identifying Factory Floor Problems," *First International Workshop on Enterprise Management and Resource Planning Systems: Methods, Tools, and Architectures - EMRPS'99* Venice, 1999.

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- Park, S. C., J. H. Kim, M. J. Shaw, and S. Piramuthu, "A Comparative Study on Rule Refinement in Expert Systems," *Proceedings of the 4th Conference of the International Society for Decision Support Systems (ISDSS'97)*, Lausanne, 1997.
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