

# Vijay Atluri

Professor

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## EDUCATION:

- **Ph.D.**, Information Technology, George Mason University, Fairfax, VA.
- **M.Tech.**, Electronics and Communication Engineering, (Controls and Automation), Indian Institute of Technology, Kharagpur, India.
- **B.Tech.** Electronics and Communications Engineering, Jawaharlal Nehru Technological University, Kakinada, India

## EXPERIENCE:

- **Professor**, MSIS Dept., Rutgers University. July 2006 - present; Associate Professor, July 2001 - June 2006; Assistant Professor, July 1995 - June 2001; Visiting Assistant Professor, Sept 1994- June 1995.
- **Research Director**, Center for Information Management, Integration and Connectivity (CIMIC). January 2002 - present
- **Member**, Graduate School-Newark Faculty of the Ph.D. in the Management program, Rutgers University. October 1996 - October 2006
- **Faculty Associate**, Center for Information Management, Integration and Connectivity (CIMIC). September 1994 - December 2001
- **Research Assistant**, Center for Secure Information Systems, George Mason University. Aug 90 - Aug 94

## AWARDS:

- Received the Research Award for untenured faculty for outstanding research contributions, Rutgers University, 1999
- Received National Merit Scholarship from the Government of India, June 1970 - May 1977
- Received the CAREER Award from National Science Foundation, 1996
- Listed in *International Who's Who of Professionals* in 1997
- Listed in *International Who's Who of Information Technology* in 1998
- Listed in *MARQUIS Who's Who in the World* in 2000, 2001

## EXTERNAL GRANTS:

1. Principal Investigator, "Computer and Communications Security: Issues and Research Directions," *Army Research Office*, \$10,000, September 2007 - February 2008. (No Co-PIs)
2. Principal Investigator, "Access Control for Spatial Databases," *National Science Foundation*, \$320,000, July 2003 - June 2007. (No Co-PIs)

3. Co-Principal Investigator, Improving Business Knowledge Management & Analysis Through the use of the RFID Technology and Semantic Web Services. \$538,254, August 01, 2007 - June 30, 2009, SAP America. (Nabil R. Adam, PI)
4. Principal Investigator, "Security of Sensor Networks: Issues and Research Directions," *Army Research Office*, \$10,000, September 2005 - February 2006. (No Co-PIs)
5. Co-Principal Investigator, "Secure Agency Interoperation for Effective Data Mining in Border Control and Homeland Security Applications," *National Science Foundation*, \$1,050,000, July 2003 - June 2007. (Nabil R. Adam, PI) 30% effort
6. Co-Principal Investigator, "Improving Business Knowledge Management and Analysis Through the use of Semantic Web Services and RFID Technology," *SAP Research Labs*, \$320,000, June 2004 - June 2007. (Nabil R. Adam, PI) 40% effort
7. Co-Principal Investigator, "Semantic Based Emergency Management System," *Department of Homeland Security*, \$80,000, July 2005 - December 2005 (Nabil R. Adam, PI) 40% effort
8. Co-Principal Investigator, "A Study for Improving Business Intelligence Through the use of Text Mining and Ontology" *Relevant Noise*, \$43,748, July 2005 - June 2006 (Nabil R. Adam, PI) 30% effort
9. Co-Principal Investigator, Meadowlands Environmental Research Institute, *Hackensack Meadowlands Development Commission*, \$350,000, July 2005 - June 2006. (Nabil R. Adam, PI). 30% effort
10. Co-Principal Investigator, Municipal Technology Initiative, *Hackensack Meadowlands Development Commission*, \$150,000, July 2005 - June 2006. (Nabil R. Adam, PI). 30% effort
11. Co-Principal Investigator, "Technology Transfer of Inter-agency e-Government Services and Their Transnational Feasibility Studies," *National Science Foundation*, \$99,928 September, 2004 - August, 2005. (Nabil R. Adam, PI) 30% effort
12. Co-Principal Investigator, "A Decision Support System to Assess Urban Women's HIV Sexual Risk Behavior," *National Library of Medicine*, \$398,000, Feb 2005 - Jan 2008. (Rachel Jones, PI) 30% effort
13. Principal Investigator, "Security of Sensor Networks: Issues and Research Directions," *Army Research Office*, \$10,000, July 2004 - June 2005. (No Co-PIs)
14. Co-Principal Investigator, Meadowlands Environmental Research Institute, *Hackensack Meadowlands Development Commission*, \$350,000, July 2004 - June 2005. (Nabil R. Adam, PI). 30% effort
15. Co-Principal Investigator, Municipal Technology Initiative, *Hackensack Meadowlands Development Commission*, \$150,000, July 2004 - June 2005. (Nabil R. Adam, PI). 30% effort
16. Co-Principal Investigator, "Improving Business Knowledge Management and Analysis Through the use of Semantic Web Services and RFID Technology," *SAP Research Labs*, \$320,000, June 2004 - July 2006. (Nabil R. Adam, PI). 30% effort
17. Principal Investigator, "Supporting Workflow, Long Duration and Nested Transaction Models in a Multilevel Secure Database Environment," *National Science Foundation*, The CAREER Award, \$214,337, June 1996 - May 2000. (No Co-PIs)
18. Principal Investigator, "A Petri Net Based Approach to Enforcing Mandatory and Discretionary Security in Workflow Management Systems," *National Security Agency*, \$59,986, October 1996 - December 1997. (No Co-PIs)
19. Co-Principal Investigator, "E-Government: Human-Centered Systems for Business Services," *National Science Foundation*, \$916,949, June 2000 - May 2003. (Nabil R. Adam, PI) 30% effort
20. Co-Principal Investigator, Meadowlands Environmental Research Institute, *Hackensack Meadowlands Development Commission*, \$8,000,000, Jan 2002 - December 2006. (Nabil R. Adam, PI) 25% effort

21. Co-Principal Investigator, "Spatially Integrated Coastal Permitting System," *National Oceanic and Atmospheric Administration* (NOAA), \$87,750 September 2002 - August 2003. (Robert Ceberio, PI) 30% effort
22. Co-Principal Investigator, "Workshop on Advanced Technologies in Real-Time Monitoring and Modeling for Drinking Water Safety and Security," *Environmental Protection Agency*, \$75,000, June 2002-December 2002. (Nabil R. Adam, PI) 30% effort
23. Co-Principal Investigator, "Exploratory Research on Reconfigurable and Scalable Enterprise Planning Systems," *National Science Foundation*, \$111,977, July 2000 - June 2001. (Mohsen Jafari, PI) 20% effort
24. Co-Principal Investigator, "On Management Theory and Approach under Electronic Commerce Environment," *National Science Foundation of China*, 600,000BMR (\$72,000), January 2001 - December 2003. (Prof. Deli Yang, Dallion Technology Institute, PI) 20% effort
25. Co-Principal Investigator, "Change Detection in Data Warehousing," *Lawrence Livermore National Laboratory*, \$21,271, September 1, 1998 - June 30, 1999. (Nabil R. Adam, PI) 30% effort
26. Co-Principal Investigator, Meadowlands Environmental Research Institute, *Hackensack Meadowslands Development Commission*, \$3,000,000, July 1998 - June 2003. (Nabil R. Adam, PI) 25% effort
27. Co-Principal Investigator, "Trader In Distributed Computing Environment," *National Security Agency*, \$50,000, April 1998 - September 1998. (Yelena Yesha, PI) 25% effort

#### **INTERNAL GRANTS:**

1. Co-Principal Investigator, "information Technology for Emergency mAnageMent (iTEAM)," Academic Excellence Fund (AEF), Rutgers University, \$40,000 2007-08.
2. Principal Investigator, "Enforcing Security and Privacy Policies in a Mobile Commerce Environment," *Rutgers Business School*, \$4000 July 2007 - June 2008.
3. Principal Investigator, "Efficient Enforcement of Security Policies in a Peer-to-Peer Mobile Environment," *Rutgers Business School*, \$3000 July 2006 - June 2007.
4. Principal Investigator, "Spatio-temporal Indexing Structure for the CIMIC Image Database," *Meadowlands Environmental Research Institute*, \$10,500, January 1, 2000 - December 31, 2000.
5. Co-Principal Investigator, "Strengthening the Electronic Commerce Certificate and Graduate Program at Rutgers Newark - Support for Resources," *Strategic Resources and Opportunity Analysis (SROA) Process*, \$30,000, 1999-2000.
6. Co-Principal Investigator, "Developing and Implementing an Innovative Instruction Methodology for MSIS Courses," *GE Grant*, \$14,000, 1988-99.
7. Principal Investigator, "A Multi-layered Clinical Decision Support System," *Rutgers FOM Research Grant*, \$4,800, March 1997 - February 1998.
8. Principal Investigator, "Microsoft Access for SOM-ENG," *Newark Campus Computer Planning Committee*, \$1,970, July 1996.
9. Co-Principal Investigator, "Computer Proficiency Assessment for Effective MIS Undergraduate Education," *Rutgers Dialogues Grant*, \$6,100, January 1995 - June 1995.

### Books (Selected):

1. A. Bagchi and V. Atluri (Eds.), "Proceedings of the Second International conference on Information Systems Security," 2006, Lecture Notes in Computer Science, LNCS 4332. ISBN 978-3-540-68962-1
2. V. Atluri, B. Pfitzmann and P. McDaniel (Eds.), Proceedings of the 11th ACM Conference on Computer and Communications Security, 2004.
3. V. Atluri (Ed.), ACM Transactions on Information Systems Security, Special Issue on Computer and Communications Security, in press.
4. V. Atluri and I. Ray (Ed.), Journal on Digital Libraries (JDL), Special Issue on Security, Volume 4, Number 3, 2004.
5. V. Atluri, A. Joshi and Y. Yesha (Ed.), The VLDB Journal, Special Issue on Semantic Web, Volume 12, Number 4, November 2003.
6. S. Jajodia, V. Atluri and T. Jaeger (Eds.), 10th ACM Proceedings on Computer and Communications Security, 2003.
7. R. Sandhu and V. Atluri (Eds.), 9th ACM Proceedings on Computer and Communications Security, 2002.
8. V. Atluri (Ed.), ACM Transactions on Information Systems Security, Special Issue on Role-Based Access Control, Volume 4, Number 3, August 2001.
9. V. Atluri and J. Hale (Eds.), Journal of Computer Security, Special Issue on Database Security, Volume 8, 2000
10. V. Atluri (Ed.) Proceedings of the 5th ACM Workshop on Role-Based Access Control, ACM Press, 2000, ACM ISBN: 1-58113-259-X
11. V. Atluri and J. Hale (Eds.), Research Advances in Database and Information Systems Security, Kluwer Academic Publishers, 2000, ISBN 0-7923-7848-2, 332 pages.
12. V. Atluri and P. Samarati (Eds.), Distributed and Parallel Databases: An International Journal, Special Issue on Security of Data and Transaction Processing", Vol.8, No.1, January 2000. ISBN 0926-8782, 145 pages.
13. V. Atluri, S. Jajodia and B. George, Multilevel Secure Transaction Processing, Kluwer Academic Publishers, November 1999. ISBN 0-7923-7702-8, 144 pages.

### REFEREED PUBLICATIONS (Selected):\*

1. J. Vaidya, V. Atluri, Q. Guo and N. Adam, "Migrating to Optimal RBAC with Minimal Perturbation," ACM Symposium on Access Control Models and Technologies, 2008. (acceptance rate: 21/95)
2. H. Shin, V. Atluri and J. Vaidya, "A Profile Anonymization Model for Privacy in a Personalized Location Based Service Environment," International Conference on Mobile Data Management, April 2008. (Acceptance Ratio: 26/119)
3. V. Atluri, H. Shin and J. Vaidya, "Efficient Security Policy Enforcement for the Mobile Environment," Journal of Computer Security, accepted, 2008.
4. V. Janeja and V. Atluri, "Spatial Outlier Detection in Heterogeneous Neighborhoods," *Intelligent Data Analysis - An International Journal*, accepted for publication, 2008.
5. L. Qin and V. Atluri, "Ontology Evolution: Evaluating the Validity of Data Instances over the Semantic Web," accepted, 2008.
6. H. Lu, J. Vaidya and V. Atluri "Optimal Boolean Matrix Decomposition: Application to Role Engineering," IEEE International Conference on Data Engineering, April 2008, (Acceptance ratio: 44/627).

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\*For refereed conference publications, acceptance rates of less than 25% have been noted.

7. V. Atluri, S. Chun, R. Mukkamala and P. Mazzoleni, "A Decentralized Workflow Execution Model for Inter-organizational Workflows," *Distributed and Parallel Databases*, Volume 22, Number 1, August, 2007, pages 55-83.
8. V. Atluri and H. Shin, "Efficient Security Policy Enforcement in a Location Based Service Environment," *21st Annual IFIP WG 11.3 Working Conference on Data and Applications Security*, July, 2007.
9. J. Warner, V. Atluri, R. Mukkamala, J. Vaidya, "Using Semantics for Automatic Enforcement of Access Control Policies among Dynamic Coalitions," *ACM Symposium on Access Control Models and Technologies*, June, 2007.
10. J. Vaidya, V. Atluri and Q. Guo, "The Role Mining Problem: Finding a Minimal Descriptive Set of Roles," *ACM Symposium on Access Control Models and Technologies*, June, 2007.
11. D. Guo, H. Xiong, V. Atluri and N. Adam, "Semantic Feature Selection for Object Discovery in High-Resolution Remote Sensing Imagery," *Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, May 2007. (Acceptance Ratio: 34/730)
12. V. Atluri and S. Chun, "An Authorization System for Geospatial Image Databases," *International Journal of Information and Computer Security*, Vol. 1, No. 1/2, 2007, pages 143-168.
13. L. Qin and V. Atluri, "SemDiff: An Approach to Detecting Semantic Changes to Ontologies," *International Journal on Semantic Web and Information Systems*, 2(4), 1-16, October-December 2006, pages 1-32.
14. L. Qin and V. Atluri, "An Ontology-Guided Approach to Change Detection to the Semantic Web Data," *Journal on Data Semantics V*, 2006, pages 130-157.
15. J. Vaidya, V. Atluri and J. Warner, "RoleMiner: Mining Roles using Subset Enumeration," *13th ACM Conference on Computer and Communication Security*, October 2006. (Acceptance ratio: 38/256)
16. S. Yu, V. Atluri, and N.R. Adam, "Preview: Optimizing View Materialization Cost in Spatial Data Warehouses," *8th International Conference on Data Warehousing and Knowledge Discovery (DaWaK 2006)* September, 2006.
17. S. Yu, V. Atluri, and N.R. Adam, "Cascaded Star: an Efficient Hyper-dimensional Model for a Data Warehouse," *17th International Conference on Database and Expert Systems Applications (DEXA)*, September, 2006.
18. V. Atluri and H. Shin, "Efficient Enforcement of Security Policies based on Tracking of Mobile Users," *20th Annual IFIP WG 11.3 Working Conference on Data and Applications Security*, July, 2006.
19. R. Mukkamala, V. Atluri, J. Warner and R. Abbadasari "A Distributed Coalition Service Registry for Ad-hoc Dynamic Coalitions: A Service-oriented Approach," *20th Annual IFIP WG 11.3 Working Conference on Data and Applications Security*, July, 2006.
20. J. Warner and V. Atluri, "Inter-Instance Authorization Constraints for Secure Workflow Management," *ACM Symposium on Access Control Models and Technologies*, June, 2006, pages 190-199.
21. P. Liu, P. Mitra, C. Pan and V. Atluri, "Privacy-preserving Semantic Interoperation and Access Control of Heterogeneous Databases," *ACM Symposium on InformAtion, Computer and Communications Security*, March 2006. (Acceptance Ratio: 32/186)
22. R. Mukkamala, V. Atluri and J. Warner, "A Distributed Service Registry for Resource Sharing among Ad-hoc Dynamic Coalitions," *IFIP Joint Working Conference on Security Management, Integrity, and Internal Control in Information Systems*, December 2005.
23. V. Janeja and V. Atluri, " $FS^3$  : A Random Walk based Free-Form Spatial Scan Statistic for Anomalous Window Detection," *IEEE International Conference on Data Mining*, November 2005 (short paper, Acceptance ratio 72/561)

24. J. Warner, V. Atluri and R. Mukkamala, "An Attribute Graph Based Approach to Map Local Access Control Policies to Credential Based Access Control Policies," International Conference on Information Systems Security (ICISS 2005), December, 2005.
25. V. Atluri and Q. Guo, "Unified Index for Mobile Object Data and Authorizations," *10th European Symposium on Research in Computer Security*, (ESORICS05) September, 2005. (Acceptance ratio 26/158)
26. S. Yu, V. Atluri and N. R. Adam, "Selective View Materialization in a Spatial Data Warehouse," *7th International Conference on Data Warehousing and Knowledge Discovery (DaWaK 2005)*, August 2005.
27. J. Warner, V. Atluri and R. Mukkamala, "A Credential-based Approach for Facilitating Automatic Resource Sharing among Ad-hoc Dynamic Coalitions," 19th Annual IFIP WG 11.3 Working Conference on Data and Applications Security, August, 2005.
28. D. Guo, V. Atluri and N. Adam, "Texture-based Remote-sensing Image Segmentation," IEEE International Conference on Multimedia & Expo, July, 2005.
29. V. Atluri and J. Warner, "Supporting Conditional Delegation in Secure Workflow Management Systems," ACM Symposium on Access Control Models and Technologies (SACMAT), June 2005. (Acceptance ratio: 19/90)
30. S. Chun, V. Atluri, N.R. Adam, "Using Semantics to Achieve Policy-based Composition of Web Services," *Distributed and Parallel Databases: An International Journal*, Volume 18, Number 1, July 2005 pages: 37 - 64.
31. V. Janeja, V. Atluri, J. Vaidya and N. R. Adam, "Collusion Set Detection through Outlier Discovery," IEEE International Conference on Intelligence and Security Informatics, May 2005.
32. V. Janeja, V. Atluri, A. Goomaa, N. Adam, C. Bornhoevd and T. Lin, "DM-AMS: Employing Data Mining Techniques for Alert Management," NSF Conference on Digital-Government, May, 2005.
33. A. Goomaa, N. Adam and V. Atluri, "Adapting Spatial Constraints of Composite Multimedia Objects to achieve Universal Access," The First IEEE International Workshop on Multimedia Systems and Networking (WMSN05), held in conjunction with the 24th IEEE International Performance, Computing, and Communications Conference (IPCCC), Phoenix, Arizona, USA, April 2005.
34. V. Janeja and V. Atluri, "LS<sup>3</sup>: A Linear Semantic Scan Statistic Technique for Detecting Anomalous Windows," ACM Symposium on Applied Computing, March, 2005. (Acceptance ratio: 12/35)
35. A. Goomaa, N. Adam and V. Atluri, "Color Time Petri Net For Interactive Adaptive Multimedia Objects," 11th International Multi-Media Modelling Conference (MMM 2005), January 2005, Melbourne, Australia.
36. V. Atluri and S. Chun, "An Access Control Model for Geo-spatial Data," *IEEE Transactions on Dependable and Secure Systems*, October-December, 2004, Vol.1, No. 4, pp. 238-254.
37. V. Atluri and J. Warner, "Automatic Enforcement of Access Control Policies among Dynamic Coalitions," International Conference on Distributed Computing & Internet Technology (ICDCIT 2004), December 2004. (Acceptance ratio: 51/211)
38. V. Atluri, S. Chun and P. Mazzoleni, Chinese Wall Security for Decentralized Workflow Management Systems, *Journal of Computer Security*, Volume 12, Number 6, 2004.
39. R. Clark, N. R. Adam, V. Atluri, M. Halem, E. Vowinkel, P. C. Tao, L. Cummings, E. A. Ibrahim, "Developing an Early Warning System for Drinking Water Safety and Security," *Water Supply Systems Security*, McGraw Hill, 2004.
40. N. Adam, V. Atluri, D. Guo and S. Yu, "Challenges in Environmental Data Warehousing and Mining," in *Data Mining: Next Generation Challenges and Future Directions*, edited by H. Kargupta, A. Joshi, K. Sivakumar, and Y. Yesha, AAAI (American Association for Artificial Intelligence), 2004.

41. L. Qin and V. Atluri, "Ontology-guided Change Detection to the Semantic Web Data," 23rd International Conference on Conceptual Modeling (ER2004), November, 2004. (Acceptance ratio: 57/293)
42. D. Kim, I. Im, N. Adam, V. Atluri, M. Bieber and Y. Yesha, "A Clickstream-Based Collaborative Filtering Personalization Model: Towards A Better Performance," 6th ACM International Workshop on Web Information and Data Management (WIDM 2004), November, 2004,
43. V. Atluri and Q. Guo, "STAR-Tree: An Index Structure for Efficient Evaluation of Spatiotemporal Authorizations," IFIP WG 11.3 Working Conference on Database and Applications Security, July, 2004.
44. V. Janeja, V. Atluri and N. Adam, "Detecting Anomalous Geospatial Trajectories through Spatial Characterization and Spatio-Semantic Associations," NSF Conference on Digital-Government, May, 2004. acceptance ratio (13/35)
45. S. Chun, V. Atluri and N.R. Adam, "Policy-based Web Service Composition," The 14th International Workshop on Research Issues on Data Engineering: Digital Government Services (RIDE-DGS'2004), March, 2004.
46. N. R. Adam V. Janeja, and V. Atluri, "Neighborhood based detection of anomalies in high dimensional spatio-temporal Sensor Datasets," ACM Symposium on Applied Computing, March, 2004.
47. L. Qin and V. Atluri, "Concept-level Access Control for the Semantic Web," Workshop on XML Security, held in conjunction with the 10th ACM Conference on Computer and Communications Security, October 2003.
48. V. Atluri, N.R. Adam and M. Youssef, "Towards a Unified Index Scheme for Mobile Data and Customer Profiles in a Location-Based Service Environment," Workshop on Next Generation Geospatial Information (NG2I'03), Cambridge, Massachusetts, USA October, 2003
49. L. Qin and V. Atluri, "An Access Scheduling Tree to Achieve Optimal Freshness in Local Repositories," Database and Expert Systems Applications (DEXA), ECweb, September, 2003.
50. V. Atluri and S. Chun, "Handling Dynamic Changes in Decentralized Workflow Execution Environments," Database and Expert Systems Applications (DEXA), September, 2003.
51. V. Atluri, E. Bertino, E. Ferrari, P. Mazzoleni, Supporting Delegation in Secure Workflow Management Systems, IFIP WG 11.3 Conference on Data and Application Security, August 2003.
52. N. Adam, F. Artigas, V. Atluri, I. Bora, R. Ceberio, S. Chun and A. Paliwal, "Spatially Integrated Coastal Permitting System (SICOP)," Coastal Zone 03 conference, July, 2003.
53. S. Chun and V. Atluri, "Ontology-based Workflow Change Management for Flexible eGovernment Service Delivery," NSF Conference on Digital-Government, May, 2003.
54. A. Paliwal, N. Adam, V. Atluri and Y. Yesha, "Electronic Negotiation of Government Contracts through Transducers," NSF Conference on Digital-Government, May, 2003.
55. V. Atluri, N.R. Adam, A. Goma and I. Adiwijaya, "Self-Manifestation of Composite Multimedia Objects to Satisfy Security Constraints," ACM Symposium on Applied Computing, March 2003.
56. S. Chun, V. Atluri, N. R. Adam, "Domain Knowledge-based Automatic Workflow Generation," Database and Expert Systems Applications (DEXA), September, 2002.
57. V. Atluri and P. Mazzoleni, "A Uniform Indexing Scheme for Geo-spatial Data and Authorizations," 16th IFIP WG11.3 Working Conference on Database Security, July 2002.
58. S. Chun, V. Atluri and N. R. Adam, "Dynamic Composition of Workflows for Customized Service Delivery," NSF Conference on Digital-Government. May, 2002.
59. N. Adam, F. Artigas, V. Atluri, S. Chun and P. Mazzoleni, "Customized Visualization of GeoSpatial Government Regulations," NSF Conference on Digital-Government. May, 2002.
60. V. Janeja, V. Atluri and N. R. Adam, "OUTLAW: Using Geo-Spatial Associations for Outlier Detection and Visual Analysis of Cargo Routes," NSF Conference on Digital-Government, May, 2002.

61. N. R. Adam, V. Atluri, S. Yu and Y. Yesha, "Efficient Storage and Management of Environmental Information," 10th NASA Goddard Conference on Mass Storage Systems and Technologies 19th IEEE Symposium on Mass Storage Systems, April 2002.
62. A. Gal, V. Atluri and G. Xu, "An Authorization System for Temporal Data," The 18th *IEEE International Conference on Data Engineering*, February, 2002.
63. V. Atluri and R. Mukkamala "Employing an Extended Transaction Model in Multilevel Secure Transaction Processing," *Informatica*, An International Journal of Computing and Informatics, Special Issue on Security, Volume 26, 2002, pages 105-115.
64. E. Ferrari, N.R. Adam, V. Atluri, E. Bertino and U. Capuozzo, "An Authorization System for Digital Libraries," The VLDB Journal (The International Journal on Very Large Data Bases), Volume 11, issue 1, 2002.
65. N.R. Adam, V. Atluri, E. Bertino and E. Ferrari, "A Content-based Authorization Model for Digital Libraries," *IEEE Transactions on Knowledge and Data Engineering*, Volume 14, Number 2, 2002, pages 296-315.
66. V. Atluri and A. Gal, "An Authorization Model for Temporal and Derived Data: Securing Information Portals," *ACM Transactions on Information Systems Security*, Volume 5, Number 1, 2002, pages 62-94.
67. V. Atluri, S. Chun, R. Holowczak, and N. R. Adam, "Automating the Delivery of Governmental Business Services Through Workflow Technology," in *Advances in Digital Government: Technology, Human Factors, and Policy* (eds.) William J. McIver and Ahmed K. Elmagarmid, Kluwer Academic Publishers, 2002, pages 69-84.
68. V. Atluri, Security for Workflow Systems, Information Security Technical Report, Volume 6, Number 2, 2001, Elsevier Science, pages 59-68.
69. N.R. Adam, V. Atluri, I. Adiwijaya and S. Banerjee, "A Dynamic Manifestation Approach for Providing Universal Access to Digital Library Objects," *IEEE Transactions on Knowledge and Data Engineering*, Volume 13, Number 4, 2001, pages 705-716.
70. S. Jajodia, V. Atluri, T.F. Keefe, C. McCollum, and R. Mukkamala, "Multilevel Secure Transaction Processing," *Journal of Computer Security*, Volume 9, Issue 3, 2001, pages 165-195.
71. V. Atluri, S. Chun and P. Mazzoleni, "A Chinese Wall Security Model for Decentralized Workflow Systems," 8th ACM Conference on Computer and Communication Security, November 2001. (Acceptance ratio: 27/153)
72. R. Holowczak, S. Chun, F. Artigas and V. Atluri, "Customized Geospatial Workflows for E-Government Services," 9th ACM International Symposium on Advances in Geographical Information Systems (ACM-GIS 2001), November 2001, (Acceptance ratio: 29/95)
73. C. Ghirardini, S. Chun, V. Atluri, I. Kamel and N. Adam "A Study on the Indexing of Satellite Images at NASA Regional Application Center," a special track on "Image-Based Geospatial Databases" at QPMIDS'2001, September 2001.
74. V. Atluri and R. Mukkamala "An Extended Transaction Model Approach for Multilevel Secure Transaction Processing," 15th IFIP WG11.3 Working Conference on Database Security, July 2001.
75. J. Cranford, R. Mukkamala, and V. Atluri, "Modeling and Evaluation of Distributed Workflow Algorithms", Joint conference of the 5th World Multiconference on Systemics, Cybernetics and Informatics (SCI 2001) and the 7th International Conference on Information Systems Analysis and Synthesis (ISAS 2001), July, 2001.
76. N. Adam et al. "E-Government: Human-Centered Systems for Business Services," NSF Workshop on Digital-Government. May, 2001.
77. V. Atluri and W-K. Huang, "A Petri Net Based Safety Analysis of Workflow Authorization Models," *Journal of Computer Security*, Volume 8, Issue 2/3, 2000, pages 209-240.

78. N. Adam, V. Atluri and I. Adiwijaya, System Integration in Digital Libraries, *Communications of the ACM*, June 2000, Volume 43, Number 6, pages 64-72.
79. V. Atluri, W-K. Huang and E. Bertino, "A Semantic Based Execution Model for Multilevel Secure Workflows," *Journal of Computer Security*, Special Issue on Database Security, eds. T.Y. Lin and Shelly Qian, Volume 8, Number 1, 2000, pages 3-41.
80. N.R. Adam, V. Atluri and Y. Yesha, "Electronic Commerce: Technological Challenges," *McGraw-Hill 2000 Yearbook of Science & Technology*, pages 143-146.
81. A. Gal and V. Atluri, An Authorization Model for Temporal Data, 7th ACM Conference on Computer and Communication Security, November 2000. (Acceptance ratio: 28/131)
82. V. Atluri and R. Mukkamala, "Modeling and Evaluation of Redesigning Methodologies for Distributed Workflows," *ACM/IEEE International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems*, August 2000, pages 248-255.
83. S. Chun and V. Atluri, Protecting Privacy from Continuous High-resolution Satellite Surveillance, 14th IFIP WG11.3 Working Conference on Database Security, August 2000, pages 399-420.
84. E. Bertino, E. Ferrari and V. Atluri, "The Specification and Enforcement of Authorization Constraints in Workflow Management Systems," *ACM Transactions on Information Systems Security*, Volume 2, Number 1, February 1999, pages 65-104.
85. W-K. Huang and V. Atluri, "SecureFlow: A Secure Web-enabled Workflow Management System," *4th ACM Workshop on Role-based Access Control*, October, 1999, pages 83-94.
86. N.R. Adam, V. Atluri and W-K. Huang, "Modeling and Analysis of Workflows Using Petri Nets," *Journal of Intelligent Information Systems*, Special Issue on Workflow and Process Management, Volume 10, Number 2, March 1998, pages 131-158.
87. V. Atluri, W-K. Huang and E. Bertino, "A Semantic Based Redesigning of Distributed Workflows," *9th International Conference on Management of Data*, December 1998, pages 328-345.
88. V. Atluri, "Modification of Integrity Constraints through Knowledge Discovery," *Second Annual IFIP WG 11.5 Working Conference on Integrity and Internal Control in Information Systems: Bridging Business Requirements and Research Results*, November 1998, pages 191-209.
89. W-K. Huang and V. Atluri, "Analyzing the Safety of Workflow Authorization Models," *Database Security, XII: Status and Prospects* Chapman & Hall, 1999, eds. Sushil Jajodia, pages 43-57.
90. N.R. Adam, I. Adiwijaya, V. Atluri and Y. Yesha, "EDI Through A Distributed Information Systems Approach," *Thirty-First Hawaii International Conference on System Sciences*, January 1998.
91. E. Bertino, E. Ferrari and V. Atluri, "A Flexible Model Supporting the Specification and Enforcement of Role-based Authorizations in Workflow Management Systems," *2nd ACM Workshop on Role-based Access Control*, November 1997, pages 1-12.
92. V. Atluri, W-K. Huang and E. Bertino, "An Execution Model for Multilevel Secure Workflows" August 1997, and *Database Security, XI: Status and Prospects* Chapman & Hall, 1998, eds. T.Y. Lin and Shelly Qian, pages 151-165.
93. V. Atluri, S. Jajodia, T.F. Keefe, C. McCollum, and R. Mukkamala, "Multilevel Secure Transaction Processing: Status and Prospects," position paper, *Database Security, X: Status and Prospects*, Chapman & Hall 1997, eds. Pierangela Samarati and Ravi Sandhu, pages 80 - 98.
94. V. Atluri and W-K. Huang, "Enforcing Mandatory and Discretionary Security in Workflow Management Systems," invited paper, *Journal of Computer Security*, Special Issue on Database Security, eds. Pierangela Samarati and Ravi Sandhu, Vol. 5, No. 4, 1997, pages 303-339.
95. V. Atluri, S. Jajodia and E. Bertino, "Transaction Processing in Multilevel Secure Databases using Kernelized Architecture: Challenges and Solutions," *IEEE Transactions on Knowledge and Data Engineering*, Vol. 9, No. 5, 1997, pages 697-708.

96. V. Atluri, E. Bertino, and S. Jajodia, "A Theoretical Framework for Degrees of Isolation in Databases," *Information and Software Technology*, Elsevier Science, Vol. 39, No. 1, 1997, pages 47-53.
97. V. Atluri, S. Jajodia, and E. Bertino, "Alternative Correctness Criteria for Concurrent Execution of Transactions in Multilevel Secure Databases," *IEEE Transactions on Knowledge and Data Engineering*, Vol. 8, No. 5, 1996, pages 839 - 854.
98. V. Atluri and W-K. Huang, "An Authorization Model for Workflows," Proceedings of the *Fifth European Symposium on Research in Computer Security*, Rome, Italy, in Lecture Notes in Computer Science, No.1146, Springer-Verlag, September, 1996, pages 44-64.
99. N.R. Adam, V. Atluri and W-S. Li, "Toward High Performance Clinical Information Systems," Mini-track on Heterogeneous Database Interoperability, The *Second Annual Americas Conference on Information Systems*, August 1996, pages 689-691.
100. V. Atluri and W-K. Huang, "An Extended Petri Net Model for Supporting Workflows in a Multi-level Secure Environment," *Database Security, X: Status and Prospects* Chapman & Hall, 1997, eds. Pierangela Samarati and Ravi Sandhu, pages 240 - 257.
101. V. Atluri, "Multilevel Secure Transaction Processing in Advanced Database Applications," invited position paper, *10th IFIP Working Conference on Database Security*, July, 1996.
102. P. Ammann, V. Atluri, and S. Jajodia, "The Partitioned Synchronization Rule for Planar Extendible Partial Orders," *IEEE Transactions on Knowledge and Data Engineering*, Vol. 7, No. 5, 1995, pages 797 - 808.
103. V. Atluri, E. Bertino, and S. Jajodia, "Providing Different Degrees of Recency Options to Transactions in Multilevel Secure Databases," *Database Security, IX: Status and Prospects* Chapman & Hall, 1996, eds. D. Spooner, S. Demurijian and J. Dobson, pages 231-247.
104. V. Atluri, E. Bertino, and S. Jajodia, "Degrees of Isolation, Concurrency Control Protocols, and Commit Protocols," *Database Security, VIII: Status and Prospects* North Holland, 1995, eds. J. Biskup, M. Morgenstern and C. E. Landwehr, pages 259-274.
105. V. Atluri, E. Bertino, and S. Jajodia, "Achieving Stricter Correctness Requirements in Multilevel Secure Database Management Systems," *Journal of Computer Security*, Vol. 2, No. 4, 1993, pages 311-351.
106. V. Atluri, E. Bertino, and S. Jajodia, "Achieving Stricter Correctness Requirements in Multilevel Secure Databases: The Dynamic Case," *Database Security, VII: Status and Prospects*, North Holland, 1994, eds. Thomas Keefe and Carl Landwehr, pages 135-158.
107. V. Atluri and S. Jajodia, "ISR-Consistency: A New Notion of Correctness for Multilevel Secure, Multiversion Database Management Systems," *Proc. XIX Latin American Informatics Conf.*, Buenos Aires, Argentina, August 1993, pages 195-214.
108. V. Atluri, E. Bertino, and S. Jajodia, "Achieving Stricter Correctness Requirements in Multilevel Secure Databases," *Proceedings of the IEEE Symposium on Research in Security and Privacy*, Oakland, CA, May 1993, pages 135-147. (Acceptance ratio: 17/70)
109. S. Jajodia and V. Atluri, "Alternative Correctness Criteria for Concurrent Execution of Transactions in Multilevel Secure Databases," *Proceedings of the IEEE Symposium on Research in Security and Privacy*, Oakland, CA, May 4-6, 1992, pages 216-224. (Acceptance ratio: 21/89)

#### **PROFESSIONAL ACTIVITIES:**

- *Secretary/Treasurer*, ACM SIGSAC (Special Interest Group in Security, Audit, and Control), Elected, July 2005 - June 2007.
- *Steering Committee Member*
  - ACM SIGSAC (Special Interest Group in Security, Audit, and Control), 2001 - present

- ACM Symposium on Access Control Models and Technologies (SACMAT), 2001 - 2008
- International Conference on Information Systems Security, 2007 - present
- Annual Conference on Privacy, Security and Trust (PST 2006,2008)
- Workshop on Advanced Technologies in Real-Time Monitoring and Modeling for Drinking Water Safety and Security, June 2002, and December 2002, Rutgers University
- Science on the Semantic Web (SWS) Workshop: Building the Next Generation of Environmental Information Systems, Oct 24 and 25, 2002, Rutgers University
- *Associate Editor*, IEEE Transactions on Knowledge and Data Engineering (TKDE) (2005 - )
- *Editorial Board*
  - International Journal on Digital Libraries (JDL) (2004 - )
  - International Journal of Information and Computer Security (IJICS)(2004 - )
  - International Journal of E-Business Research (IJEBR) (2004 - 2008)
  - ACM SIGMOD DiSC (Digital Symposium Collection) (2002 - 2005)
- *Editor, Special Issue*
  - ACM Transactions on Information Systems Security, Special Issue on Computer and Communications Security, 2005.
  - Journal on Digital Libraries (JDL), Special Issue on Security (with Indrakshi Ray), 2004
  - The Very Large Databases (VLDB) Journal, Special Issue on the Semantic Web (with Anupam Joshi and Yelena Yesha), 2003.
  - ACM Transactions on Information Systems Security, Special Issue on Role-Based Access Control, 2001
  - Journal of Computer Security, Special Issue on Database Security, 2000 (with John Hale)
  - Distributed and Parallel Databases: An International Journal, Special Issue on Security of Data and Transaction Processing, Vol.8, No.1, January 2000 (with Pierangela Samarati)
  - Area editor in Geo-security, Encyclopedia of Geographic Information Science, Springer, 2007.
- *General Chair*
  - 11th and 12th ACM Conference on Computer and Communications Security, 2004 and 2005.
  - International Conference on Information Systems Security 2006 (ICISS 2006) (with Aditya Bagchi)
  - Web Information Systems Engineering (WISE) 2005 (with Dimitrios Georgakopoulos)
- *Program Chair*
  - 22nd IFIP Working Conference on Database Security, 2008
  - 2nd International Conference on Information Systems Security (ICISS 2006) (with Aditya Bagchi)
  - 10th ACM Conference on Computer and Communications Security, 2003.
  - 5th ACM Workshop on Role-based Access Control, 2000
  - 13th IFIP Working Conference on Database Security, 1999 (with John Hale)
- *Organization Committee Chair* ACM SIGMOD/PODS 2005 (with Anupam Joshi)
- *Workshops Chair* 14th ACM Conference on Computer and Communications Security, 2007.
- *Panel Leader*, Panel on Data Aggregation, Data Mining and Privacy, NSF Cyber Trust PI Conference, August 2004.
- *Panelist* in the panel discussion on
  - “Access Control for Assured Information Sharing,” ACM Symposium on Access Control Models and Technologies, June 2007.

- “E-commerce Security,” International Symposium on Distributed Autonomous Systems, March 2001
  - “Role-Based Access Control in Workflow Systems” in the 5th ACM Workshop on Role-based Access Control, 2000
  - “Directions for Securer Data and Applications Security,” in the 14th IFIP Working Conference on Database Security, 2000
  - “Multilevel Secure Transaction Processing: Is it Well-understood?” in the 10th IFIP Working Conference on Database Security, 1996
- *Program Committee Member*
    - ACM Symposium on Access Control Models and Technologies (SACMAT), 2001, 2002, 2003, 2005, 2006, 2007, 2008
    - ACM Conference on Computer and Communications Security, 2001, 2002, 2006, 2007, 2008
    - IFIP WG 11.3 Working Conference on Database and Applications Security, 2003, 2004, 2005, 2006, 2007
    - Annual Computer Security Applications Conference (ACSAC), 2008
    - Informatin Security Conference (IS), 2008
    - International Conference on Advanced Information Networking and Applications (AINA), 2009
    - ACM Symposium on Information, Computer and Communications Security (AsiaCCS), 2006, 2007
    - International Conference on Database Systems for Advanced Applications (DASFAA), 2006, 2007, 2008
    - 9th International Conference of Digital Government Research, 2008
    - IEEE International Conferences on Intelligence and Security Informatics (ISI), 2007, 2008.
    - The Joint Conference of the 9th Asia-Pacific Web Conference and the 8th International Conference on Web-Age Information Management, 2007
    - International Conference on Trust, Privacy and Security in Digital Business (TrustBus’08)
    - 10th IEEE International Conference on Multimedia (ISM), 2008
    - The Secure Knowledge Management Workshop (SKM) 2006, 2008
    - First International Workshop on Privacy-Aware Location-based Mobile Services (PALMS 07)
    - Third International Workshop on Information Assurance (WIA-2007)
    - International Workshop on Security and Trust Management (STM), 2007, 2008
    - 1st ACM Workshop on Information and Communications Security Standards and Regulations (StaR\_SEC 2007)
    - “Multimedia Security” track of the IEEE International Symposium on Multimedia (ISM2007)
    - 9th Information Security Conference (ISC), 2006
    - Eighth International Conference on Information and Communications Security (ICICS 2006,2007,2008)
    - Workshop on Trusted Collaboration 2006 (TrustCol-2006)
    - 20th International Conference on Data Engineering (ICDE 2004, 2008)
    - European Symposium on Research in Computer Security (ESORICS) 2004, 2005, 2007, 2008
    - IEEE International Conference on Information Reuse and Integration, 2006, 2007, 2008 (IEEE-IRI)
    - International Workshop on Security, Privacy and Trust in Pervasive and Ubiquitous Computing, 2006, 2007 (SecPerU)
    - International Conference on Emerging Trends in Information and Communication Security (ET-RICS), 2006
    - ACM Symposium on Applied Computing, Datamining Track, 2006, 2007, 2008.
    - International Conference on Information Systems Security (ICISS 2005, 2007, 2008)

- 3rd International Conference on Business Process Management (BPM05)
- Semantic Web and Policy Workshop, 2005
- Workshop on Policy Management for the Web, 2005
- 2nd International Workshop P2P Data Management, Security and Trust (PDMST'05)
- Third Workshop on Security in Information Systems, 2005
- IASTED International Conference on Databases and Applications (DBA) 2005, 2006
- 2005 IRMA international conference, San Diego, May 2005.
- The Fifth International Workshop on Multimedia Data Mining (MDM/KDD2004)
- The 14th International Workshop on Research Issues on Data Engineering: Digital Government Services (RIDE-DGS'2004)
- The International Conference on Distributed Computing and Internet Technology (Systems Security Track), 2004
- The Workshop on Geographic and Biological Data Management, to be held in conjunction with COMPSAC'04
- 18th IFIP International Information Security Conference, 2003
- Next Generation Information Technologies and Systems (NGITS'2002)
- The Third International Symposium on Electronic Commerce (ISEC-02)
- The Second International Conference on Web-Age Information Management (WAIM'01), 2001, 2007
- 20th International Conference on Conceptual Modeling (ER2001)
- 2001 International Workshop on Data Semantics in Web Information Systems (DASWIS-2001)
- IEEE Conference on Advances in Digital Libraries, 1999, 2000
- HICSS33: Minitrack on Evolution of Business to Business Electronic Commerce, 2000
- 3rd and 4th ACM Workshop on Role-based Access Control, 1998, 1999

- *Session Chair*

- Temporal Access Control and Usage Control, Annual IFIP WG 11.3 Working Conference on Database and Applications Security, July 2007.
- Secure Operating Systems, ACM Symposium on Access Control Models and Technologies, June 2007.
- Data and Application Security, International Conference on Information Systems Security, December 2006.
- Anonymity, 13th ACM Conference on Computer and Communications Security, October 2006
- Role-based Access Control, 21st Annual IFIP WG 11.3 Working Conference on Database and Applications Security, July 2006.
- Access Control Technology, ACM Symposium on Access Control Models and Technologies, June 2006.
- Intrusion detection, European Symposium on Research in Computer Security, September 2005.
- Handling Encrypted Data, 19th Annual IFIP WG 11.3 Working Conference on Database and Applications Security, August 2005.
- Access Control for XML Documents, ACM Symposium on Access Control Models and Technologies, June 2005
- Access Control, 18th Annual IFIP WG 11.3 Working Conference on Database and Applications Security, August 2004
- Access Control Models and Technologies, 17th Annual IFIP WG 11.3 Working Conference on Database and Applications Security, August 2003
- Constraints, ACM Symposium on Access Control Models and Technologies, June, 2003.
- Metadata, NSF Conference on Digital-Government, May, 2003.

- Intrusion Detection, 9th ACM Conference on Computer and Communications Security, 2002.
  - Mobile and Cooperative Systems, ACM Symposium on Access Control Models and Technologies, 2002.
  - Graph Models, ACM Symposium on Access Control Models and Technologies, 2001.
  - Information Warfare and Intrusion Detection, 15th IFIP Working Conference on Database Security, 2001
  - Encryption and Related Security Mechanisms, 14th IFIP Working Conference on Database Security, 2000
  - Implementations, 5th ACM Workshop on Role-based Access Control, 2000
  - Constraints, 4th ACM Workshop on Role-based Access Control, 1999
  - Database querying and mining, IEEE Conference on Advances in Digital Libraries, 1999
  - Applications of RBAC, 3rd ACM Workshop on Role-based Access Control, 1998
  - Concurrency Control, The Fourteenth International Conference on Data Engineering, 1998
- *Proceedings Chair*
    - 9th ACM Conference on Computer and Communications Security, 2002.
    - 3rd and 4th ACM Workshop on Role-based Access Control, 1998 and 1999
- *Registration Chair*, The Fourteenth IEEE International Conference on Data Engineering, 1998
- *Publicity Chair*
    - ACM Symposium on Access Control Models and Technologies (SACMAT), 2006
    - 7th ACM Conference on Computer and Communications Security, 2000
    - IEEE Conference on Advances in Digital Libraries, 1998
- *Publicity Co-Chair*, International Workshop on Advanced Transaction Models and Architectures, August, 1996 held in conjunction with VLDB'96 Conference
- *Proposal Reviewer*
    - National Science Foundation: Information and Data Management, Trusted Computing, Small Business Innovative Research, Biodiversity and Ecosystems Informatics, and International programs
    - Natural Sciences and Engineering Research Council
    - Council for International Exchange of Scholars - The Fulbright Program for Faculty and Professionals
- *SIGSAC Volunteer* for the ACM's Career Resource Centre for the Special Interest Group in Security, Audit, and Control
- *Referee for numerous journals and conferences*
- Journals and Books:
- ACM Transactions on Database Systems, IEEE Transactions on Knowledge and Data Engineering, IEEE Transactions on Computers, IEEE Transactions on Dependable and Secure Computing, IEEE Transactions on Parallel and Distributed Systems, IEEE Transaction on Systems, Man and Cybernetics, IEEE Computer, IEEE Internet Computing, ACM Transactions on Information Systems Security (TISSEC), ACM Transactions on Information Systems (TOIS), ACM Computing Surveys, Information Systems, Kluwer Academic Publishers, Journal of Computer Security, Distributed and Parallel Databases, Journal of Intelligent Information Systems, International Journal of Cooperative Information Systems, SIGMOD Record, Data and Knowledge Engineering Journal, Decision Support Systems, International Journal of Information Security, Theory and Practice of Object Systems, Journal of Digital Libraries, The Computer Journal, Computing Systems Journal, International Journal of

Semantic Web and Information Systems, Journal of Systems Architecture, Information & Software Technology, International Journal of Foundations of Computer Science, Journal of Database Management, Information Processing Letters, Theoretical Computer Science, The VLDB Journal, Information Sciences, Journal of Network and Systems Management, ACM Journal of Educational Resources in Computing, International Journal of Advanced Manufacturing Technology, International Journal of Information and Computer Security, IEEE Transactions on Software Engineering (TSE), Knowledge and Information Systems, Information Systems Frontiers, ACM Transactions on Internet Technology Conferences: All the conferences serving as the program committee member.

#### **RECENT INVITED TALKS:**

1. "Efficient Enforcement of Authorizations in Geospatial Databases," College of Computing, Georgia Tech, April, 2006.
2. "Unified Indexing of Spatio-temporal Data and Authorizations," Computer Science Department, Polytechnic University, April, 2004.
3. "Access Control for Spatio-temporal Databases," Computer Science Department, University of Pittsburgh, April, 2004.
4. "Unified Indexing of Spatio-temporal Data and Authorizations," Computer Science Department, New Jersey Institute of Technology, March, 2004.
5. "Security Challenges in an Electronic Commerce Environment," International Institute of Information Technology, Hyderabad, India, December 2003.
6. "Access Control for Spatial Databases," Computer Science and Engineering Colloquium, Pennsylvania State University, University Park, November 2003.
7. "Secure Agency Interoperation for Effective Data Mining in Container Security Applications," The European Workshop Exploring R&D Supporting Container Security, Hamburg October, 2003.
8. "Secure Agency Interoperation for Effective Data Mining in Border Control and Homeland Security Applications," IBM Global Services, Reston, VA, October, 2002.
9. "Secure Agency Interoperation for Effective Data Mining in Border Control and Homeland Security Applications," SAP Research Labs, Palo Alto, CA, July 2002.
10. "Border Control Challenges: Secure Agency Interoperation for effective data mining," SAP Public Services, Washington, DC June, 2002.
11. "Building E-government Services with the State of New Jersey," NSF Conference on Digital-Government, May, 2002.
12. "A Content-based Authorization Model for Digital Libraries," SUNY Buffalo, October, 2001, invited talk.
13. "E-government for State Business Services," Office of Information Technology, State of New Jersey, October, 2001
14. "Digital Libraries Research at CIMIC" School of Information and Library Studies (SCILS), Rutgers University, October 2000.
15. "Procuring Grants: Some Guidelines," Orientation for New Faculty, FoM, Rutgers University, September 1999, 2000, 2001.
16. "Digital Libraries: Multimedia Distribution" Panasonic Information and Networking Technologies Laboratory, Princeton, NJ, March 1999.

## **DOCTORAL THESIS SUPERVISION:**

### **Primary Adviser:**

1. Wei-Kuang Huang, Rutgers University, graduated in May, 1998, Associate professor, Department of Operation and Information Management, University of Connecticut.  
Dissertation: Incorporating Security into Workflow Management Systems (Co-Adviser: N. Adam)
2. Soon Ae Chun, Rutgers University, May 2003, Assistant Professor, City University of New York  
Dissertation: Decentralized Management of Dynamic and Distributed Workflows (Co-Adviser: N. Adam)
3. Li Qin, Rutgers University, May 2005, Assistant Professor, Western New England College  
Dissertation: Change Detection and Management for the Semantic Web
4. Songmei Yu, Rutgers University, May 2006  
Dissertation: Efficient Data Management in Spatial Data Warehouses (Co-Adviser: N. Adam)
5. Vandana Janeja, Rutgers University, May 2007, Assistant professor, Department of Information Systems, University of Maryland, Baltimore County  
Dissertation: Inter-domain Anomaly Detection in Highdimensional Datasets (Co-Adviser: N. Adam)
6. Janice Warner, Rutgers University, May 2007  
Dissertation: Secure Resource Sharing in Dynamic Ad-hoc Collaborations
7. Qi Guo, Rutgers University, 3rd year (Co-Adviser: J. Vaidya)
8. Heechang Shin, Rutgers University, 2nd year
9. Haibing Lu, Rutgers University, 1st year, (Co-Adviser: J. Vaidya)

### **Co-Adviser:**

1. Igg Adiwijaya, Rutgers University, graduated in May, 2000, AdvanTechnologies Inc.  
Dissertation: Detecting Changes to Data and Schema in Semi-structured Documents (Primary Adviser: N. Adam)
2. June-Suh Cho, Rutgers University, December 2001, Hankuk University of Foreign Studies, South Korea  
Dissertation: Recognition of Partially Occluded Objects in Content-based Image Retrieval (Primary Adviser: N. Adam)
3. Mahamoud Youseff Mohamed, Rutgers University, May 2005,  
Dissertation: Semantically Enhanced and Efficient Location Services for Preserving Mobile Consumer's Privacy (Primary Adviser: N. Adam)
4. Ahmed Gomaa, Rutgers University, May 2006  
Dissertation: Self-manifestation of composite multimedia objects to achieve Universal access (Primary Adviser: N. Adam)
5. Dihua Guo, Rutgers University, October 2006  
Dissertation: Semantic-based High Resolution Remote Sensing Image Retrieval (Primary Adviser: N. Adam)

### **Member of Dissertation Committee:**

1. Richard Holowczak, Rutgers University, 1997, Currently assistant professor, Department of Statistics and CIS, Baruch College, City University of New York.  
Dissertation: Extractors for Digital Library Objects

2. Binto George, Indian Institute of Science, Bangalore, India, December 1998, currently assistant professor, Department of Computer Science, Western Illinois University.  
Dissertation: Secure Real-time Transaction Processing
3. Dong-Ho Kim, Rutgers University, May 2005  
Dissertation: A Learning-Based Model In Clickstream-based Collaborative Filtering
4. Francis Mendez, Rutgers University, July 2005  
Dissertation: Using Discrete Multivariate MCMC Bayesian Methods for Change Detection and Disclosure Control
5. External Supervisor, Elena Ferrari, University of Milan, Italy, May 1998, Currently professor, Department of Computer Science, University of Milan, Italy.  
Dissertation: Temporal Authorization Models
6. External Supervisor, Sabrina De Capitani di Vimercati , University of Milan, Italy, January 2001, Currently associate professor, Department of Electronics for Automation, University of Brescia, Italy.  
Dissertation: Protecting Information in the Global Infrastructure
7. External Examiner, Frans A. Lategan, August 2002, Rand Afrikans University, South Africa.  
Dissertation: Enforcing Privacy on the Internet
8. External Reader, Li Zhang, August 2004, SUNY Buffalo  
Dissertation: VizStruct: Visual Exploration for Gene Expression Profiling
9. External Examiner, Sergio Mascetti, University of Milan, December 2007  
Dissertation: Privacy Protection through Anonymity in Location-based Services
10. Mudhakar Srivatsa, College of Computing, Georgia Tech, May 2007  
Dissertation: Security Architectures and Algorithms for Overlay Network Services
11. Aabhas Paliwal, Rutgers University, May 2007  
Dissertation: Semantic based Discovery of Web Services and Orchestration of Web Service Process
12. Wugang Xu, New Jersey Institute of Technology, June 2007  
Dissertation: Automatic Physical Database Design: Recommending Indexes and Materialized Views

#### **Comprehensive Examination Committee:**

Heechang Shin, Xinwin Zhou, Xioyun He, Qi Guo, Janice Warner, Aabhas Paliwal, Vandana Janeja, Dihua Guo, Ahmed Gomaa, Mahamoud Youseff Mohamed, Li Qin, Songmei Yu, Xin Wei, Jia Wu, Tanya Levina, Francisco Badua, Francis Mendez, Yu Cong, Rani Hoitash, Soon Ae Chun, Igg Adiwijaya, June-Suh Cho, Yuri Korostyshevski, Dong-Ho Kim, Richard Holowczak, Wei-Kuang Huang, Chao-Min Chiu, Sidan Lin, Barry Davis and Loverton Okwuosa.

#### **MASTERS THESIS SUPERVISION**

1. Co-adviser, Chiara Ghirardini, University of Milan, December 2000  
Thesis: Performance Evaluation of Spatio-temporal indexing structures for geo-spatial satellite imagery
2. Co-adviser, Pietro Mazzoleni, University of Milan, December 2001  
Thesis: Decentralized Workflow Management: Issues and Solutions
3. Co-adviser, Anna Curridori, University of Milan, May 2002  
Thesis: Network Analysis And Graph Drawing Applied To The Development Of A Tool For The Analysis Of A Network Of Alliances

## **COURSES TAUGHT:**

### **Courses Taught at Rutgers:**

1. 26:198:731 Applications of Database Systems (Ph.D.)
2. 26:198:732 Multimedia Information Systems (Ph.D.) (first to offer)
3. 26:198:685 Information Systems Security (Ph.D.) (first to offer)
4. 22:198:649 Introduction to Electronic Commerce (M.B.A.) (first to offer)
5. 22:198:611 Security for Electronic Commerce (M.B.A.) (first to offer)
6. EC2: Security for Electronic Commerce (Certificate Program in Electronic Commerce) (first to offer)
7. 22:198:603 Database Systems (M.B.A.)
8. 22:198:604 Computers & Information Systems (M.B.A.)
9. 22:198:605 Computer Technology (M.B.A.)
10. 29:623:220 Management Information Systems (Undergraduate, Newark)
11. 29:623:319 Database Management (Undergraduate, Newark)

### **Independent Study**

1. M.B.A.: Yue Wang, Barton Karboz, Johnathan Sloan
2. Ph.D.: Soon Ae Chun, Li Qin, Songmei Yu, Vandana Janeja, Dihua Guo, Ahmed Gomaa, Mahamoud Youseff Mohamed

**Courses Taught at Other Schools:** Several graduate and undergraduate courses in Computer Science and Engineering including Database Management Systems, Computers & Information Systems, Operating Systems, Programming Languages, Management Information Systems, Microprocessors and Applications, Logical design of digital computers, Computer Architecture, Integrated Circuits and Applications, Basic Electronics, Analog and Digital Circuits, Circuit Theory, Networks and Transmission Lines, Control Systems, Communication Systems, Power Electronics.

### **NEW COURSES DEVELOPED:**

1. 26:198:685 Information Systems Security (Ph.D.)
2. 26:198:732 Multimedia Information Systems (Ph.D.)
3. 22:198:649 Introduction to Electronic Commerce (M.B.A.) (jointly with Nabil R. Adam)
4. 22:198:611 Security for Electronic Commerce (M.B.A.) (jointly with Nabil R. Adam)
5. EC2: Security for Electronic Commerce (Certificate Program in Electronic Commerce)
6. 29:623:375 Computer Network Applications (Undergraduate, Newark) (jointly with Nabil R. Adam)
7. 29:623:325 Computer Information Systems: Technology and Applications (Undergraduate, Newark) (jointly with Nabil R. Adam)

### **UNIVERSITY SERVICE:**

#### **Department:**

1. Faculty Search Committee, 1997-98, 1996-97, 2001-02, 2003-04
2. Member, Department's Hiring Needs Assessment Committee, 2001
3. Coordinator, For the course "Management Information Systems" (29:623:220) (1997-2000)
4. Member, MIS Course Study Team, 1996-97
5. Member, MIS Programs Study Team, 1996-97

**School:**

1. Member, Ph.D. Executive Committee (elected, 2003 - 2007)
2. Chair and Coordinator, Master of Information Technology Governing Committee (2006-)
3. Member, RBS junior faculty research awards evaluation committee (2005,2006)
4. Member, MBA policy committee (2006)
5. Member, Provost's Committee for Strengthening the Ph.D. program, 2004
6. Member, Teaching Innovations Committee (2002-2003)
7. Member, Courses of Study Committee (2002)
8. Member, Information Systems Committee (2001)
9. Member, Courses of Study Committee, Graduate School-Newark, 1998-1999
10. Member, Ph.D. Admissions Committee, 1996-97
11. Member, Ph.D. Program Committee, 1997-98
12. Member, Affirmative Action Committee, 1997-98, 1996-97, 1995-96
13. Member, Computer Policy Committee, 1995-96
14. Member, Library Committee, 1994-95

**Campus:**

1. Newark Faculty Council, 2006-2009