

JAMES BIKRAM DHOJ JOSHI

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EDUCATION

- PhD, Computer Engineering, Purdue University (August, 2003).
- MS, Computer Science, Purdue University, (May, 1998).
- BE, Computer Science & Engineering, Motilal Nehru NIT, India (1993)
- *Short training*: Certificate in Applied Management Principles; 60 in-class hour mini-MBA for PhD students offered by the Krannert School of Management, Purdue University (May 15- June 2, 2000)

AREAS OF SPECIALIZATION/INTEREST

- Systems/Applications Security, Role Based Access Control, Secure Interoperability, Security and Privacy of Distribute, Multimedia Systems, Intrusion Detection Systems, Security and Privacy in Social Networks and Cloud Computing

PROFESSIONAL EXPERIENCE

- Associate Professor, University of Pittsburgh,
 - Graduate program in Information Science and Technology, and Telecommunications and Networking (September, 2008 – current)
 - Department of Computer Science (Secondary appointment; Feb, 2006 - current)
- Assistant Professor, University of Pittsburgh,
 - Graduate program in Information Science and Technology, and Telecommunications and Networking (August, 2003 – August 2008)
- Research Assistant, Distributed Multimedia Systems Lab, ECE, Purdue University
 - Involved Center of Education and Research in Information Assurance and Security (CERIAS) projects (1998-2003).
- Research Assistant, Purdue University (1997-1999)
 - National Water Quality Database Project, Agricultural/Biological Engineering,
- Research Assistant, Purdue University (1996-97)
 - Crystal Visualization lab, Veterinary Medicine Dept.,
- Lecturer, Computer Science and Engineering, Kathmandu University, Nepal (1993-1996)

GRANTS

External Grants with PI role

1. NSF Federal Cyber Service

A Scholarship Program for Security Assured Information Systems Track
(With M. B. Spring, P. Krishnamurthy, D. Tipper)
Amount: \$1.29Million ; Period: 2011-2014

2. NSF Federal Cyber Service

A Scholarship Program for Security Assured Information Systems Track
(With M. B. Spring, P. Krishnamurthy, D. Tipper)
Amount: \$1,055,553.00; Period: 2006-2011

3. NSF-CAREER (IIS Program)

A Trust-based Access Control Management Framework for Secure Information Sharing and Multimedia Workflows in Heterogeneous Environments;
Amount: \$416,419.00; Period: 2006-2011

4. DoD IASP proposal

Capacity Building (Research + Equipments) and IRMC Partnership
(with P. Krishnamurthy, D. W. Tipper, M. B. Spring)
Amount: -\$55,000 (Capacity Building only), 2006

5. DoD IA Scholarship Program

Program Partnership with the Information Resource Management College (IRMC) of the National Defense University (NDU) (For IRMC Partnership and Capacity Building)
Amount: \$273,660, (approved overall budget); in 2005

6. CISCO CIAG Equipment Grant

A Proposal for Cisco CIAG Equipment Grant
Amount: -\$130,000; Spring 2005.

External Grants with Co-PI role

7. NSF-IIS (CPATH Program)

CPATH-1: Health Computing: Integrating Computational Thinking into Health Science Education
(with Leming Zhao (PI), Bambang Parmanto, Qi Mi, Mervat Abdelhak)
Amount: \$104,537.00, Period: 2007-2009.

8. NSF CNS Division

CSR: SGER: Dynamic Data Driven Defense Mechanisms for Cybersecurity
(with Taieb Znati (PI), Prashant Krishnamurthy, and David Tipper)
Amount: \$104,537.00, Period: 2007-2009.

9. NSF Federal Cyber Service (as co-PI)

A Curriculum in Security Assured Information Systems
(With M. B. Spring (PI), P. Krishnamurthy, D. Tipper)
Amount: \$ 283640; Period: 2009-2011

Internal Grants – all with PI role

10. University of Pittsburgh CRDF

An Adaptive Framework for Security-Assured Survivable Information Systems;
Amount: \$19,988; Year: 2004-2006

11. Research Interest Group (RIG) – Phase I Funding from the Dean (through internal Competitive)

Security Assured Information Systems (SAIS) RIG
(as RIG Leader and its representative to the Research Advisory Committee)
Amount: \$20,000; Year 2006-07

12. Dean's Entrepreneurial Initiatives

LESAIS Seminar and Student Research Groups
(with P. Krishnamurthy, D. W. Tipper, M. B. Spring)
Amount: \$15,000; Year: 2005-06

13. Dean's Entrepreneurial Initiatives

Laboratory of Education and Research on Security Assured Information Systems

(with P. Krishnamurthy, D. W. Tipper, M. B. Spring)
Amount: \$12,000; Year: 2004-05 (1 Year)

AWARDS/HONORS

1. Best Student Paper Award in ACM SPRINGL, 2011
2. Best Paper Award in ACM CODASPY 2011
3. NSF-CAREER Award – January, 2006
4. Service Award, IEEE Conference on Information Reuse and Integration, 2006, 2007
5. Certificate of Appreciation, International Conference on Collaborative Computing, 2006
6. Listed in “Who's Who of Emerging Leaders” since 2007
7. Listed in “Who's Who in Science and Engineering” since 2005.
8. Honored for faculty accomplishments in 2004, & 2006 Honors Convocation of the University of Pittsburgh.
9. Listed in “Who's Who in America” since 2003.
10. Student Author Travel Award, International Conference on Multimedia and Expo, August 2000, New York
11. Colombo Plan Scholarship for pursuing BE Computer Science & Engineering degree at MNNIT, India
12. Gold medal for standing 7th in Nepal in School Leaving Certificate Examination (10th Grade)
13. Academic Scholarship Awards for the last three years in high school for standing first in class

PUBLICATIONS & PRESENTATION

Book

1. James B. D. Joshi et al. "Network Security: Know It All," May, 2008 (Contributor).
2. Co-Editor of Book titled: “Information Assurance: Survivability and Security in Networked Systems,” Published in 2007 by Elsevier, Inc. Editors: Yi Qian, James Joshi, David Tipper, Prashant Krishnamurthy.
3. James B. D. Joshi, “A Generalized Temporal Role Based Access Control Model for Developing Secure Applications”, PhD Thesis, Purdue University, August, 2003.

Book Chapter

1. Yue Zhang, James Joshi, “Access Control and Trust Management for Emerging Multidomain Environments,” in *Annals of Emerging Research in Information Assurance, Security and Privacy Services*, Editors: S. Upadhyaya, R. O. Rao 2009.
2. Yue Zhang, James Joshi, “Temporal Access Control,” *Encyclopedia of Database Systems*, Editors-in-Chief: Ling Liu, M. Tamer Özsu, Springer, 2009.
3. Yue Zhang, James Joshi, “Role based Access Control”, *Encyclopedia of Database Systems*, Editors-in-Chief: Ling Liu, M. Tamer Özsu Springer, 2009.
4. James B. D. Joshi, Mei-Ling Shyu, Shu-Ching Chen, Walid Aref, Arif Ghafoor, "A Multimedia-Based Threat Management and Information Security Framework," in *Multimedia Technologies: Concepts, Methodologies, Tools, and Applications* (3 Volumes) Edited By: Mahbubur Rahman Syed, Minnesota State University, Mankato, USA, June, 2008
5. James B. D. Joshi, Siqing Du, Saubhagya R Joshi, “A Trust Based Access Control Management Framework for a Secure Grid Environment” in Book titled: *Security in Distributed, Grid, and Pervasive Computing*, Edited by Dr. Yang Xiao, to be published by Auerbach Publications, CRC Press 2007.
6. James B. D. Joshi, S. R. Joshi, and S. M. Chandran, "Information Security Issues and Challenges," in *Encyclopedia of Digital Government*, 2006.

7. James B. D. Joshi, S. R. Joshi, and S. M. Chandran, "Identity Management and Privacy Issues," in *Encyclopedia of Digital Government*, 2006.
8. James B. D. Joshi, S. M. Chandran, A. Ghafoor, and W. G. Aref, "Survivability Issues and Challenges," in *Encyclopedia of Digital Government*, 2006.
9. James B.D. Joshi, Mei-Ling Shyu, Shu-Ching Chen, Walid Aref, Arif Ghafoor, "A Multimedia-Based Threat Management and Information Security Framework," *Web and Information Security* (editors: Elena Ferrari, Bhavani Thuraisingham), IDEA Group, 2005.
10. James B. D. Joshi, Arif Ghafoor, Walid Aref, Eugene H. Spafford, "Digital Government Security and Privacy Challenges," William J. McIver, Jr. & Ahmed K. Elmagarmid (eds) *Advances in Digital Government: Technology, Human Factors, & Policy*. Boston, Kluwer, 2002, Chapter 7, pp. 121-136.

Refereed Journal /Articles

1. Youna Jung, James B.D. Joshi, "CRiBAC: Community based Role interaction Access Control Model", *Computers & Security*, Elsevier (Under review)
2. Youna Jung, Minsoo Kim, Amirreza Masoumzadeh, James B.D Joshi, "A Survey of Security for Multiagent Systems", *Artificial Intelligence Review*, Springer Netherlands, Doi: 10.1007/s10462-011-9228-8
3. Lei Jin, Hassan Takabi, James B. D. Joshi: Analyzing Security and Privacy Issues of Using E-mail Address as Identity, *Int. J. Information Privacy, Security and Integrity*, Vol. 1, No. 1, 2011
4. Amirreza Masoumzadeh and James Joshi, "Ontology-Based Access Control for Social Network Systems," submitted to *International Journal of Information Privacy, Security and Integrity* (Invited submission)
5. Xuelian Long, James Joshi, " BaRMS: A Bayesian Reputation Management Approach for P2P Systems, *Journal of Information & Knowledge Management*, Vol: 10, No: 3, pp 273-283 (2011)
6. Hassan Takabi, James Joshi, Gail-Joon Ahn, "Security and Privacy Challenges in Cloud Computing Environments," *IEEE Security and Privacy*, Jan-Feb, 2011.
7. Carlos E. Caicedo, James Joshi, Summit Tuladhar, "IPv6 Security Challenges," *ol(42)*, Issue(2), (Feb, 2009), *IEEE Computer*, Page(s): 36-42.
8. Yue Zhang, James Joshi, "SRBAC07: A Scoped Administration Model for RBAC with Hybrid Hierarchy," *The Third International Symposium on Information Assurance and Security, Journal of Information Assurance and Security 2007* (Volume 2, issue 4)
9. James, B.D. Joshi, Elisa Bertino, Arif Ghafoor and Yue Zhang, "Formal Foundations for hybrid hierarchies in GTRBAC", *ACM Transactions on Information and System Security (TISSEC)*, Vol. 10, No. 4, Jan, 2008, pp. 1-39.
10. Basit Shafiq, James B. D. Joshi, Elisa Bertino, Arif Ghafoor, "Secure Interoperation in a Multi-Domain Environment Employing RBAC Policies," *IEEE Transactions on Knowledge and Data Engineering*. Vol. 17, No. 11, Pages 1557 - 1577, Nov. 2005.
11. Rafae Bhatti, James B. D. Joshi, Basit Shafiq, Elisa Bertino, Arif Ghafoor, "X-GTRBAC Admin: A Decentralized Administration Model for Enterprise Wide Access Control," *ACM Transactions on Information and System Security (TISSEC)*, Vol. 8 No. 4, Nov, 2005.
12. James B. D. Joshi, Elisa Bertino, Arif Ghafoor, "Analysis of Expressiveness and Design Issues for a Temporal Role Based Access Control Model," *IEEE Transactions on Dependable and Secure Computing*, April, 2005.
13. James B. D. Joshi, Elisa Bertino, Usman Latif, Arif Ghafoor, "Generalized Temporal Role Based Access Control Model," *IEEE Transactions on Knowledge and Data Engineering*, Vol 17, No. 1 pages 4-23, Jan, 2005.
14. Rafae Bhatti, James B. D. Joshi, Elisa Bertino, Arif Ghafoor, "X-GTRBAC: An XML-based Policy Specification Framework and Architecture for Enterprise-Wide Access Control," *ACM Transactions on Information and System Security* Vol. 8, No. 2, Pages 187-227, May 2005.
15. Rafae Bhatti, James B. D. Joshi, Elisa Bertino, Arif Ghafoor, "XML-based Specification for Web-Services Document Security", *IEEE Computer*, Vol. 37, No. 4, April, 2004.

16. James B. D. Joshi, Rafae Bhatti, Elisa Bertino, Arif Ghafoor, "An Access Control Language for Multidomain Environments," *IEEE Internet Computing*, Nov-Dec 2004, pages 40-50.
17. James B. D. Joshi, Kevin Li, Husni Fahmi, Basit Shafiq, Arif Ghafoor, "A Model for Secure Multimedia Document Database System in a Distributed Environment," *IEEE Transactions on Multimedia: Special Issue on Multimedia Databases*, Vol. 4, No. 2, June, 2002, pp. 215-234.
18. James B. D. Joshi, Arif Ghafoor, Walid Aref, Eugene H. Spafford, "Digital Government Security Infrastructure Design Challenges," *IEEE Computer*, Vol. 34, No. 2, February, 2001, pp 66-72.
19. James B. D. Joshi, Walid G. Aref, Arif Ghafoor and Eugene H. Spafford, "Security Models for Web-Based Applications," *Communications of the ACM*, Vol. 44, No. 2, February, 2001, pp. 38-44.

Refereed Symposium/Conferences/Workshop

1. Amirreza Masoumzadeh, James Joshi, Anonymizing Geo-Social Network Datasets, *4th ACM SIGSPATIAL International Workshop on Security and Privacy in GIS and LBS*, November 1st, 2011, Chicago, IL, USA (**Best Student Paper Award**)
2. Hassan Takabi and James B. D. Joshi. Policy Management as a Service: An Approach to Manage Policy Heterogeneity in Cloud Computing Environment. In Proc. 45th *Hawaii International Conference on System Sciences (HICSS)*, Hawaii, USA, January 4-7, 2012.
3. Jesus M. Gonzalez, Mohd Anwar, James B. D. Joshi: A trust-based approach against IP-spoofing attacks. Ninth Annual Conference on Privacy, Security and Trust, PST 2011, 19-21 July, 2011, Montreal, Québec, Canada.(pg 63-70)
4. Amirreza Masoumzadeh, James Joshi: An Alternative Approach to k-Anonymity for Location-Based Services. The 8th International Conference on Mobile Web Information Systems (MobiWIS 2011), *Procedia CS Vol:5: 522-530* (2011)
5. Baracaldo, Nathalie; Masoumzadeh, Amirreza; Joshi, James; A secure, constraint-aware role-based access control interoperation framework. *The 5th International Conference on Network and System Security (NSS)*, Italy, 2011
6. Saman Taghavi Zargar, Hassan Takabi, and James B. D. Joshi, "DCDIDP: A Distributed, Collaborative, and Data-driven Intrusion Detection and Prevention Framework for Cloud Computing Environments.", the 7th *Intl Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom 2011)*, October 15-18, 2011, Orlando, FL.
7. Saman Taghavi Zargar, Hassan Takabi, and James B. D. Joshi, "DCDIDP: A Distributed, Collaborative, and Data-driven IDP Framework for Cloud", the 14th *International Symposium on Recent Advances in Intrusion Detection (RAID'11)*(Poster), September 20-21, 2011, Menlo Park, CA.
8. Youna Jung, Minsoo Kim, James B. D. Joshi, "DRiBAC: Context-Aware Dynamic Role Interaction Access Control", In Proc. of 12th *International Conference of Information Reuse and Integration*, pp. 88 – 93, USA, 2011
9. Lei Jin, Hassan Takabi, and James B.D Joshi, "Towards Active Detection of Identity Clone Attacks on Online Social Networks", In Proc. of the ACM Conference on Data and Application Security and Privacy (CODASPY 2011), San Antonio, TX, USA, 21-23 February 2011. (**Best Paper Award**)
10. Saman Taghavi Zargar, and James B. D. Joshi, "A Collaborative Approach to Facilitate Intrusion Detection and Response against DDoS Attacks", the 6th *Int'l Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom 2010)*, October 9-12, 2010, Chicago, IL.
11. Amirreza Masoumzadeh and James Joshi, "Preserving Structural Properties in Anonymization of Social Networks," in Proc. 6th *International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom 2010)*, Chicago, IL, USA, Oct. 9-12, 2010.
12. Amirreza Masoumzadeh and James Joshi, "OSNAC: An Ontology-Based Access Control Model for Social Networking Systems," in Proc. 2nd *IEEE Int'l Conference on Information Privacy, Security, Risk and Trust (PASSAT 2010)*, Minneapolis, MN, USA, Aug. 20-22, 2010.

13. Hassan Takabi, James B. D. Joshi, and Gail-Joon Ahn, "SecureCloud: Towards a Comprehensive Security Framework for Cloud Computing Environments", *In Proc. of the First IEEE International Workshop on Emerging Applications for Cloud Computing (CloudApp2010)*. Held in conjunction (COMPSAC 2010), Seoul, Korea, July 19-23, 2010.
14. Lei Jin, Hassan Takabi, and James B.D Joshi, "Security and Privacy Risks: Using Email Address as Identity", *In Proc. of the Second IEEE International Conference on Information Privacy, Security, Risk and Trust (PASSAT2010)*, Minneapolis, USA, August 20-22, 2010.
15. Xuelian Long and James Joshi. "Enhanced One-Pass IP Multimedia Subsystem Authentication Protocol for UMTS." *International Communications Conference (ICC2010)*, South Africa, May 23-27, 2010
16. Hassan Takabi and James Joshi. "StateMiner: An Efficient Similarity-Based Approach for Optimal Mining of Role Hierarchy." *In Proc. ACM Symposium on Access Control Models and Technologies (SACMAT)*, Pittsburgh, June 9-11, 2010.
17. Guo, Yanhui & Joshi, James. "Topic-based personalized recommendation for collaborative tagging system," *ACM Hypertext-2011*, Toronto, Canada, June 13-16, 2010
18. Yue Zhang and James B.D. Joshi, "An Implementation Architecture of the GTRBAC Model", 2010 *International Conference on Computer Design and Applications (ICCD-10)*, Jun. 2010, Qinghuangdao, Hebei, China
19. Yue Zhang and James B.D. Joshi, "Understanding Access Control Challenges in Loosely-Coupled Multidomain Environment", *12th International Conference on Enterprise Information Systems (ICEIS-10)*, Jun. 2010, Funchal, Madeira, Portugal
20. Yue Zhang and James B.D. Joshi, "Role Based Domain Discovery in Decentralized Secure Interoperations", *2010 International Symposium on Collaborative Technologies and Systems (CTS-10)*, May. 2010, Chicago, IL
21. Amirreza Masoumzadeh, James Joshi, and Hassan A. Karimi, "LBS (k,T)-Anonymity: A Spatio-Temporal Approach to Anonymity for Location-Based Service Users," *in Proc. 17th ACM SIGSPATIAL GIS*, Seattle, WA, USA, Nov. 4-6 2009.
22. Hassan Takabi, James B. D. Joshi, and Hassan A. Karimi. A Collaborative K-anonymity Approach for Location Privacy in Location-Based Services. *In Proc. the 5th Int'l Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom 2009)*, Crystal City, Washington D.C., USA, November 11-14, 2009.
23. Hassan Takabi, Minsoo Kim, James B. D. Joshi, and Michael B. Spring. An Architecture for Specification and Enforcement of Temporal Access Control Constraints using OWL. *In Proc. 2009 ACM Workshop on Secure Web Services (SWS 2009)*, Held in conjunction with the 16th ACM Conference on Computer and Communications Security (CCS 2009), pages 21-28. Chicago, IL, USA, November 13, 2009.
24. Hassan Takabi and James B. D. Joshi. An Efficient Similarity-Based Approach for Optimal Mining of Role Hierarchy. *In Proc. 16th ACM Conference on Computer and Communications Security (CCS 2009)*(Poster), Chicago, IL, USA, November 9-13, 2009.
25. Saman Taghavi Zargar, Martin B.H. Weiss, and James B. D. Joshi, "Security Issues in Dynamic Spectrum Access", the *37th Research Conference on Communication, Information and Internet Policy (TPRC '09)*, September 25-27, 2009, Arlington, VA.
26. Saman Taghavi Zargar, M. Amir Moulavi, Rajkumar Buyya, Mahmoud Naghibzadeh, and James B. D. Joshi, "RRNA: Reliable Soft Real-Time Network Aware Grid Scheduling Algorithm Using Round Trip Time", *12th Communications and Networking Simulation Symposium (CNS'09)*, March 22 -27, 2009, San Diego, CA.
27. Amirreza Masoumzadeh and James B. D. Joshi, "PuRBAC: Purpose-aware role-based access control," *in Proc. 3rd Int'l Symposium on Information Security*, Lecture Notes in Computer Science. Springer, Nov. 10-11 2008.
28. Yue Zhang and James B.D. Joshi, "Temporal UAS: Supporting Efficient RBAC Authorization in Presence of the Temporal Role Hierarchy", *IEEE/IFIP International Symposium on Trust, Security and Privacy for Pervasive Applications (TSP-08)*, Dec. 2008, ShangHai, China

29. Youna Jung, Amirreza Masoumzadeh, James B.D. Joshi, Minkoo Kim, " RiBAC: Role Interaction based Access Control Model for Community Computing", *The 4th International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom2008)*, Nov.13-16, 2008, Orlando, FL, USA.
30. Minsoo Kim, James B.D. Joshi, Minkoo Kim, " Access Control for Cooperation Systems based on Group Situation", *The 4th International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom2008)*, Nov. 13-16, 2008, Orlando, FL, USA
31. Yue Zhang and James B.D. Joshi, "A Framework for User Authorization Query Processing in RBAC extended with Hybrid Hierarchy and Constraints", *ACM symposium on access control models and technologies (SACMAT)*, Jun. 2008, Estes Park, CO.
32. Yue Zhang, James Joshi, "SRBAC07: A Scoped Administration Model for RBAC with Hybrid Hierarchy," *The Third International Symposium on Information Assurance and Security*, August 29-31, 2007, Manchester, United Kingdom.
33. Yue Zhang, James Joshi, "ARBAC07: A Role-based Administration Model for RBAC with Hybrid Hierarchy," *IEEE Proceedings of the International Conference on Information Reuse and Integration*, Las Vegas, Aug13-15, 2007.
34. Summit R. Tuladhar, Carlos E. Caicedo, James B. D. Joshi, "Inter-Domain Authentication for Seamless Roaming in Heterogeneous Wireless Networks," *IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing*, June 11-13, 2008 Taichung, Taiwan.
35. Carlos E. Caicedo, James B. D. Joshi, "Security Issues in IPv6," *ITERA-08*, March 27-29, 2008
36. Yue Zhang, James Joshi, "SRBAC07: A Scoped Administration Model for RBAC with Hybrid Hierarchy," *The Third International Symposium on Information Assurance and Security*, August 29-31, 2007, Manchester, United Kingdom
37. Yue Zhang, James Joshi, "ARBAC07: A Role-based Administration Model for RBAC with Hybrid Hierarchy," *IEEE Proceedings of the International Conference on Information Reuse and Integration*, Las Vegas, Aug13-15, 2007.
38. Kai Ouyang James B. D. Joshi, "CT-RBAC: A Temporal RBAC Model with Conditional Periodic Time," *Third International Workshop on Information Assurance*, New Orleans, April 2007.
39. Michael Chuang, Suronapee Phoomvuthisarn, James B. D. Joshi, "An Integrated Framework for Trust-Based Access Control for Open Systems," *CollaborateCom 2006*, GA, USA.
40. Jun-Hyung Park, Min-Soo Kim, Bong-Nam Noh, James B. D. Joshi, "A Similarity based Technique for Detecting Malicious Executable files," *IEEE Proceedings of the International Conference on Information Reuse and Integration*, Hawaii, 2006.
41. Siqing Du, James B. D. Joshi, "Supporting Authorization Query and Inter-domain Role Mapping in Presence of Hybrid Role Hierarchy," *The 11th ACM Symposium on Access Control Models and Technologies*, USA, June 2006.
42. James B. D. Joshi, Elisa Bertino, "Fine-grained Role-based Delegation in Presence of Hybrid Role Hierarchy," *The 11th ACM Symposium on Access Control Models and Technologies*, USA, June 2006.
43. Suroop M Chandran, Korporn Panyim, James B. D. Joshi, "A Requirements-Driven Trust Framework for Secure Interoperation in Open Environments", *The Fourth International Conference on Trust Management*, (iTrust-06), May 16-19, Italy, 2006.
44. Suroop M Chandran, James B. D. Joshi, "LoT RBAC: A Location and Time-based RBAC Model", *Proceedings of the 6th International Conference on Web Information Systems Engineering (WISE 2005)*, New York, Nov 2005.
45. Suroop M Chandran, James B. D. Joshi, "Towards Administration of a Hybrid Role Hierarchy", *IEEE International Conference on Information Reuse and Integration*, Las Vegas, Aug 15-17, 2005.
46. Smithi Piromruen, James B. D. Joshi, "An RBAC Framework for Time Constrained Secure Interoperation in Multi-domain Environment," *IEEE Workshop on Object-oriented Real-time Databases (WORDS-2005)*, 2005.

47. Basit Shafiq, Ammar Masood, and Arif Ghafoor, James B. D. Joshi, "A Role-Based Access Control Policy Verification Framework for Real-Time Systems", *IEEE Workshop on Object-oriented Real-time Databases (WORDS-2005)*, 2005.
48. Rafae Bhatti, James B. D. Joshi, Elisa Bertino, Arif Ghafoor, "X-GTRBAC Admin: A Decentralized Administration Model for Enterprise Wide Access Control", *The 9th ACM Symposium on Access Control Models and Technologies*, New York, June 2004.
49. James B. D. Joshi, Elisa Bertino, Basit Shafiq, Arif Ghafoor, "Dependencies and Separation of Duty Constraints in GTRBAC", *The 8th ACM Symposium on Access Control Models and Technologies*, Como, Italy, June 2003.
50. Rafae Bhatti, James B. D. Joshi, Elisa Bertino, Arif Ghafoor, "Access Control in Dynamic XML-based Web-Services with X-RBAC", *The First International Conference in Web Services*, June 23-26, Las Vegas, Nevada, 2003.
51. James B. D. Joshi, Elisa Bertino, Arif Ghafoor, "Hybrid Role Hierarchy for Generalized Temporal Role Based Access Control Model," *26th Annual International Computer Software and Applications Conference Workshop, (COMPSAC 2002 Workshop)*, Oxford, England, 26-29th August, 2002, pp. 951-956.
52. James B. D. Joshi, Elisa Bertino, Arif Ghafoor, "Temporal Hierarchy and Inheritance Semantics for GTRBAC," *The 7th ACM Symposium on Access Control Models and Technologies*, June 3-4, 2002, Moterey, CA, pp 74-83.
53. J. Joshi, A. Ghafoor, "A Petri-Net Based Multilevel Security Specification Mechanism for Multimedia Documents in a Multidomain Environment," *The Second Annual Systems Security Engineering Conference*, February 28 – March 2, 2001, Orlando, FL.
54. J. Joshi, A. Ghafoor, "A Petri-Net Based Multilevel Security Specification Model for Multimedia Documents," *IEEE International Conference on Multimedia and Expo*, New York, USA, July 30-August 2, 2000, pp 533-536.
55. S. Sedigh, J. Joshi, A. Bashandy, A. Ghafoor, "Quality Based Evaluation of Filtering Mechanisms in MPEG Video Communications," *Proc. of 17th IEEE Symposium on Reliable and Distributed Computing*, West Lafayette, IN, USA, October 20-23, 1998, pp. 449-454.

Technical Reports

1. James Joshi, Rafae Bhatti, Elisa Bertino, Arif Ghafoor, "X-RBAC: An Access Control Language for Multi-domain Environments," CERIAS TR 2004-46.
2. Basit Shafiq, James B. D. Joshi, Arif Ghafoor "A Petri-net Model for Verification of RBAC Policies," *CERIAS Technical Report TR 2002-33*, Purdue University, 2003.
3. Joshi, J., Bhatti, R., Bertino, E., Ghafoor, A., "X- RBAC : An Access Control Language for Multi-domain Environments," CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2004-46
4. Bhatti, R., Bertino, E., Ghafoor, A., Joshi, J., "XML-Based Specification for Web Services Document Security" CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2004-65
5. Bhatti, R., Joshi, J, Bertino, E., Ghafoor, A, "X-GTRBAC Admin: A Decentralized Administration Model for Enterprise Wide Access Control," CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2004-04
6. Bhatti, R., Joshi, J., Bertino, E, Ghafoor, A., "Access Control in Dynamic XML-based Web-Services with X-RBAC" CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2003-26
7. Joshi, J., "Generalized Temporal Role Based Access Control Model for Developing Secure Systems" CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2003-23

8. Shafiq, B. Joshi, J., Bertino, E., Ghafoor, A., "Optimal Secure Interoperation in a Multi-Domain Environment Employing RBAC Policies" CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2003-24
9. Joshi, J., Bertino, E., Shafiq, Ghafoor, A., "Dependencies and Separation of Duty Constraints In GTRBAC" CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2003-04
10. Joshi, J., Bertino, E., Latif, U., Ghafoor, A., "Generalized Temporal Role Based Access Control Model (GTRBAC) (Part I) - Specification and Modeling" CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2001-47
11. Joshi, J., Bertino, E., Shafiq, B., Latif, U., Ghafoor, A., "Generalized Temporal Role Based Access Control Model (GTRBAC) (Part II) - Expressiveness and Design Issues" CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2003-01
12. Shafiq, B., Joshi, J. B. D., and Ghafoor, A., "A Petri-Net Model for Verification of RBAC Policies," CERIAS, Purdue University, Technical Report TR 2002-33, 2002.
13. Shafiq, B., Joshi, J., Bertino, E., and Ghafoor, A., "Optimal Secure Interoperation in a Multi-Domain Environment Employing RBAC Policies," CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2003-24, 2003.
14. Joshi, J. Bertino, E. Ghafoor, A., "Temporal Hierarchy and Inheritance Semantics for GTRBAC" CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2001-52
15. Joshi, J. Ghafoor, A., Aref, W. G., Spafford, E., "Digital Government Security Infrastructure Design Challenges" CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2001-31
16. Joshi, J., Ghafoor, A., "A Petri-net Based Multilevel Security Specification Model for Multimedia Documents" CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2000-09
17. Joshi, J., Ghafoor, A., "A Petri-net Based Multilevel Security Specification Model for Multimedia Documents" CERIAS, School of Electrical and Computer Engineering, Purdue University, Technical Report CERIAS TR 2000-09

PROFESSIONAL ACTIVITIES

Guest Editor

1. ACM SACMAT09 Special issues in ACM TISSEC
2. ACM SACMAT09 Special issues in Computer & Security journal
3. Springer MONET special issues from CollaborateCom08, CollaborateCom09, CollaborateCom10

Editorial Review Board

4. International Journal of E-Business Research (Since Jan, 2005)
5. International Journal of Network Security (June, 2005 – June, 2007)
6. International Journal of Multimedia and Ubiquitous Engineering (2007)

General (Co) Chair

1. The 7th International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2011*), USA, 2011
2. The 15th ACM Symposium on Access Control Models and Technologies, SACMAT10, USA, 2010.
3. The 6th International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2010*), USA, 2010
4. The Fifth International Workshop on Trusted Collaboration (TrustCol 2010)

5. The 5th International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2009*), USA, 2009

Program Chair or Track Chair

1. The IEEE International Conference on Information Reuse and Integration, Las Vegas, 2011 (IRI2011)
2. IEEE COMPSAC 2009 (Track: Security)
3. The IEEE International Conference on Information Reuse and Integration, Las Vegas, 2010 (IRI2010)
4. The 14th ACM Symposium on Access Control Models and Technologies, SACMAT09, Italy, 2009.
5. 2009 International Workshop on Network Assurance and Security Services in Ubiquitous Environments (NASSUE-2009)
6. The 4th International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2008*), Florida, USA, 2008
7. IEEE COMPSAC 2009 (Track: Social and Collaborative Networks)
8. The IEEE International Conference on Information Reuse and Integration, Las Vegas, 2007
9. The IEEE International Conference on Information Reuse and Integration, Hawaii, 2006
10. Program vice co-chair of Multimedia Security Track at 2007 IEEE International Symposium on Multimedia (ISM'07), Taiwan, December, 2007.
11. International Workshop on Trusted Collaboration (TrustCol-07), New York, 2007.
12. International Workshop on Trusted Collaboration (TrustCol-06), Georgia, 2006.
13. International Workshop on Information Assurance, (with IPCCC-07), New Orleans, 2007.
14. International Workshop on Information Assurance, (with IPCCC-06), Phoenix, 2006.
15. International Workshop on Information Assurance, (with IPCCC-04), Phoenix, 2004.

Panels Chair

1. The 6th International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2010*), USA, 2010
2. The 13th ACM Symposium on Access Control Models and Technologies, SACMAT08, USA, 2008.

Workshop Chair

1. *Workshop on Cooperative Autonomous Resilient Defenses in Cyberspace (CyberCARD 2011)*, DC, USA, Jan 2011
2. The 3rd International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2007*), New York, USA, 2007
3. The 2nd International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2006*), Georgia, USA, 2006

Publicity Chair

1. The First International Workshop on Research Challenges in Next Generation Networks for First Responders and Critical Infrastructures, in conjunction (with IEEE IPCCC), New Orleans, Louisiana, April 11-13, 2007.
2. The IEEE International Conference on Information Reuse and Integration, Las Vegas, 2005.

Panelist

1. The 9th ACM Symposium on Access Control Models and Technologies, SACMAT 2004, New York; Panel title: Security for Grid-based Computing Systems Issues and Challenges.

Session Chair

1. The 9th ACM Symposium on Access Control Models and Technologies, SACMAT 2004, New York

2. The IEEE International Conference on Information Reuse and Integration, Las Vegas, 2005
3. The IEEE International Conference on Information Reuse and Integration, Hawaii, 2006
4. The IEEE International Conference on Information Reuse and Integration, Las Vegas, 2007
5. The 2nd International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom-2006), Georgia, USA, 2006
6. International Workshop on Information Assurance, (with IPCCC-07), New Orleans, 2007.
7. International Workshop on Information Assurance, (with IPCCC-06), Phoenix, 2006.
8. International Workshop on Information Assurance, (with IPCCC-04), Phoenix, 2004.

Technical Program Committee Membership

1. SACMAT 2011, COMPSAC 2011, SoCInfo2011,
2. SACMAT2008, IFIPTM2009, SSC09, IFIPTM2010
3. ICC'08 - Wireless Networking Symposium, Beijing, China, 2008.
4. The 14th International MultiMedia Modeling (MMM), Kyoto, Japan, Jan, 2008.
5. ICIW 2007 committee, Peter Kiewit Institute, University of Nebraska Omaha, USA on the 24-25 April 2008
6. The 12th ACM Symposium on Access Control Models and Technologies, SACMAT07, USA, 2007.
7. The 2nd International Conference on Collaborative Computing: Networking, Applications and Worksharing, New York, USA, 2007
8. 2nd International Conference on Information Warfare and Security, Naval Postgraduate School, Monterey, California, USA, 8-9 March 2007
9. The 8th IFIP Working Conference on Virtual Enterprises (PRO-VE'07), Guimaraes, Portugal, 10-12 Sept, 2007
10. The Third IEEE International Workshop on Multimedia Information Processing and Retrieval (IEEE-MIPR 2007) will take place in Taichung, Taiwan, R.O.C. on December 10-12, 2007.
11. 3rd international workshop on security in systems and networks (SSN 2007), to be held in conjunction with 21st IEEE IPDPS March 26-30, 2007, Long Beach, California, USA.
12. The Second IEEE International Workshop on Multimedia Information Processing and Retrieval (MIPR'06), in conjunction with IEEE International Symposium on Multimedia (ISM2006), San Diego, California, USA, December 11-13, 2006.
13. 3rd IEEE Workshop on Situation Management (SIMA 2007) at MILCOM 2007, Orlando, Florida, Oct 29-31, 2007
14. Workshop on Parallel and Distributed Multimedia Computing (ParDMCom-06) held in conjunction with ISPA-06: The International Symposium on Parallel and Distributed Processing and Application, Sorrento, Italy, December 1-4, 2006
15. The Second IEEE LCN Workshop on Network Security (WNS 2006) Tampa, Florida, U.S.A. 14 November 2006
16. The 2007 International Conference on Genetic and Evolutionary Methods (GEM'07) (*Honorary*)
17. The 2007 International Conference on Bioinformatics and Computational Biology (BIOCOMP'07) (*Honorary*)
18. The 2007 International Conference on Scientific Computing (CSC'07) (*Honorary*)
19. The 2007 International Conference on Artificial Intelligence (ICAI'07) (*Honorary*)
20. The 12th ACM Symposium on Access Control Models and Technologies, SACMAT06, Prance, 2006.
21. The 8th IFIP Working Conference on Virtual Enterprises (PRO-VE'07), Guimaraes, Portugal, 10-12 Sept, 2007

22. The First International Workshop on Research Challenges in Next Generation Networks for First Responders and Critical Infrastructures, in conjunction (with IEEE IPCCC), New Orleans, Louisiana, April 11-13, 2007.
23. Database and Data Mining track of 2007 ACS/IEEE International Conference on Computer Systems and Applications, AICCSA '2007, May 13-16, 2007, Amman, Jordan.
24. International Conference on E-business (ICE-B), 28-31 July, Barcelona, Spain.
25. First International Workshop on Trust and Reputation Management in Massively Distributed Computing Systems (TRAM 2007), to be held in conjunction with The 27th International Conference on Distributed Computing Systems (ICDCS 2007), Toronto, Canada, June 25-29, 2007.
26. Second International Workshop "Dependability Aspects on Data Warehousing and Mining applications" DAWAM 2007, in conjunction with The Second International Conference on Availability, Reliability and Security- ARES 2007.
27. The Second IEEE International Workshop on Multimedia Databases and Data Management (MDDM'07), in conjunction with 2007 IEEE 23rd International Conference on Data Engineering (ICDE 2007), April 16-20, 2007, The Marmara Hotel, Istanbul, Turkey.
28. 3rd international workshop on security in systems and networks (SSN 2007), to be held in conjunction with 21st IEEE IPDPS March 26-30, Long Beach, California, USA.
29. The 2nd International Conference on Collaborative Computing: Networking, Applications and Worksharing, Georgia, USA, 2006
30. The 3rd International Workshop on Visualization for Computer Security (VizSec06), held in conjunction with the 13th ACM Conference on Computer and Communications Security (CCS 2006)
31. 2006 IEEE International Workshop on Multimedia Databases and Data Management (MDDM'06), in conjunction with The 22nd IEEE International Conference on Data Engineering (ICDE2006), 4/3/2006 - 4/7/2006, Atlanta, Georgia, USA.
32. International Conference on e-Business (ICE-B) (Sponsored by IEEE and ACM-SIGMIS), 2006,
33. The 10th Colloquium for Information Systems Security Education, MD, June, 2006.
34. Workshop on Parallel and Distributed Multimedia Computing (ParDMCom-06), to be held in conjunction with ISPA-06: The International Symposium on Parallel and Distributed Processing and Application, Sorrento, Italy, December 1 -4, 2006.
35. International MultiMedia Modeling Conference (MMM) 2007, Singapore, January 9-12, 2007.
36. 2007 International Conference on Multimedia and Ubiquitous Engineering (MUE 07), April 26th - 28th, 2007, Seoul Olympic Parktel, Seoul, Korea.
37. The 2nd IEEE LCN Workshop on Network Security, (WNS 206), Tampa, Florida, U.S.A. 14 November 2006.
38. International Conference on Privacy, Security and Trust (PST 2006). Theme: Bridge the Gap between PST Technologies and Business Services, Ontario, Canada, Oct 30 - Nov 1, 2006
39. The IEEE GLOBECOM 2006 Computer and Network Security Systems Symposium, San Francisco, CA, USA, 27 November - 1 December 2006 (reviewer)
40. The IEEE International Workshop on Multimedia Technology and Ubiquitous Computing (MTUC 2006) in conjunction with The IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing (SUTC 2006)
41. 10th Colloquium for Information Systems Security Education (CISSE), Maryland, June, 2006
42. The 4th European Conference on Information Warfare and Security (ECIW 2006), University Of Glamorgan, UK, 2006
43. The 2nd international workshop on Security in systems and Networks (SSN'2006), to be held in conjunction with 20th IEEE IPDPS, April 25-29, Rhode Island, Greece.

44. The 5th European Conference on Information Warfare and Security (ECIW 2006), University Of Glamorgan,
45. 2005 IEEE International Workshop on Multimedia Information Processing and Retrieval (MIPR'05), in conjunction with IEEE International Symposium on Multimedia (ISM2005), Irvine, CA, December 12-14, 2005.
46. The 8th IEEE International Symposium on Object-oriented Real-time distributed Computing, May 18-20, 2005, Seattle, Washington
47. The 2005 IEEE International Conference on Information Reuse and Integration, Las Vegas, 2005
48. The 10th ACM Symposium on Access Control Models and Technologies, SACMAT, Sweden, 2005
49. The International Workshop on Frontiers of Information Technology (FIT), being held on Dec. 20-21, 2004 in Islamabad, Pakistan.
50. The 4th European Conference on Information Warfare and Security (ECIW 2005), University Of Glamorgan, UK, 11-12 July 2004
51. The 1st International Workshop on Systems and Network Security (SNS 2005) Denver, Colorado, USA, April 8, 2005 (to be held in conjunction with in conjunction with the IEEE 19th IPDPS)
52. The 9th ACM Symposium on Access Control Models and Technologies, SACMAT 2004, New York - *Session Chair and Panelist*
53. The 8th ACM Symposium on Access Control Models and Technologies, SACMAT, Como, Italy, 2003 – *Session Chair*
54. Workshop on Information Assurance, 2004, April 14-17, Phoenix, *Session Chair and Program Co-Chair*,
55. The 6th International Symposium on Multimedia Software Engineering (IEEE MSE'04), Florida International University, Miami, FL, USA December 13-15, 2004.
56. The Second ACM Workshop on Multimedia Databases (ACM MMDB'04) to be held in conjunction with the 13th International Conference on Information and Knowledge Management (ACM CIKM 2004).
57. The First Annual International Conference on Mobile and Ubiquitous Systems: Networking and Services, August 22-26, 2004 - Boston, Massachusetts, USA

PROFESSIONAL AFFILIATION

- Member of the ACM and the IEEE

EXTRA CURRICULUM

Sports

- Temporary Coach for Pittmandu Soccer club in Pittsburgh
- Member of school soccer team, Modern School (1987-88): 2 gold medals, 1 silver medal.
- Member of college soccer team; Captain of CS soccer team, MNREC (1990-93): 1 silver medal
- Participation in Volleyball and Badminton, MNREC 1992: 1 silver medal

Cultural

- Represented Nepal in “International Youth Exchange Program”, Japan, July, 1995. Selected among a national pool of applicants.
- Invited to attend the “50th commemoration of the Holocaust” by the Japanese prime minister in December 1995.
- Participated in solo singing (a silver medal), musical band shows and dances in yearly cultural events in MNREC.
- Participation in “House Ballet” and “School Ballet”.
- Represented Nepal in “Children's Assembly, The Banner of Peace” held in Bulgaria in 1984. Selected by school as a poet and a folk dancer.

Other

- Participated in inter-school poetry competitions, maths quizzes, and science exhibitions.
- Wrote, composed, sang and produced a Nepali solo music album titled “Bhulidiun Ma Afulai” in 1996.