

SERVICE AT US NATIONAL SCIENCE FOUNDATION

- As Program Director of NSF CNS and SaTC Program (Fall, 2019 Aug, 2023); And as Expert in NSF TIP Directorate (Sept, 2023 – present)
- Co-Chair of Networking and Information Technology Research and Development (NITRD)
 Privacy Interagency Working Group (Privacy IWG); Spring, 2021 Aug, 2023
- 2. Co-Chair of NITRD Fast Track Action Committee for Advancing Privacy-Preserving Data Sharing and Analytics (developing National Strategy for PPDSA) till Aug, 2023
- 3. Co-Chair of NITRD Fast Track Action Committee for developing National Digital Assets R&D Agenda (currently in progress) till Aug, 2023
- 4. Member, CSIA R&D Strategic Priority Task Force, (currently ongoing)
- 5. NSF representative for National Security Council (NSC) Interagency Policy Subcommittee (IPC-Sub) on Digital Identity; NSC IPC-Sub on Digital Assets; NSC IPC-Sub on Privacy Preserving Machine Learning (May, 2021 Sec, 2021)
- 6. Managing Panels/Proposals: that falls within *Privacy and Applied Crypto* portfolio; assist in *Systems Security* panels. Proposal categories: *Small, Medium* and *Frontier*/Large projects
- 7. Contribution in the following projects/activities (in collaboration with others)
 - Co-lead US-UK PETs Prize Challenge
 - Contribution to NSF RINGS program
 - Co-Lead initiation of *Workshop* on Secure and Privacy-preserving Federal Data Sharing (May 21, 26) (Cognizant Program Office for this project)
 - Co-lead initiation of *Workshop* to explore Security, Privacy and Ethical issues in Health/Biomedical research to create research roadmap (May-June) (Cognizant Program Office for this project)
 - Co-lead initiation of a Virtual Organization for Computing Research for Pandemic Preparedness and Resilience – the project is now called PREPARE VO (Cognizant Program Officer for this project): prepare-vo.org/
 - NSF DCL engagements: (i) AI-Cybersecurity Education (through Dear Colleague Letter solicitation); (ii) EU-US NGI partnership
 - Exploring collaborative funding opportunities with Cybersecurity Research Coordination Center, Australia (2020)

PROFESSIONAL ACTIVITIES/SERVICES

Editor-in-Chief

- 1. IEEE Transactions on Services Computing (Jan, 2017 Dec, 2021)
- 2. EAI Endorsed Transactions on Collaborative Computing (Founding co-EiC): 2014 2015)

Associate Editor / Editorial Review Board

- 1. EB Member of ACM Transactions on Digital Threats: Research and Practice (Since 2018)
- 2. EB Member of Springer's Journal of BigData (Since 2013)

[Past]

- 3. Associate Editor Associate Editor of IEEE Transactions on Services Computing (Since Jan 2013 2016)
- 4. EB Member of International Journal of Multimedia and Ubiquitous Engineering (Since 2007; few years)
- 5. EB Member of International Journal of E-Business Research (Since Jan, 2005 till 2011)
- 6. EB Member of International Journal of Network Security (June, 2005 June, 2007)

Steering Committees

- 1. <u>Founding Chair</u> of Steering Committee of International Conference on Trust, Privacy and Security of Intelligent Systems, and Applications (IEEE TPS) (2019 current)
- Founding Chair of Steering Committee of IEEE International Conference on Cognition Machine Intelligence and (IEEE CogMI) (2019 – current)
- 3. <u>Founding Chair</u> of Steering Committee of IEEE International Conference on Collaboration and Internet Computing (IEEE CIC) (2015 current)
- 4. Co-Chair of CollaborateCom Steering Committee (Nov 2012 2014)
- 5. Member of IEEE IRI Steering committee (2014 current)
- 6. Member of ACM ACMAT Steering Committee (2011 2017)
- 7. Member of Steering Committee of IEEE International Conference on Multimedia & Expo (IEEE ICME) IEEE CS representative (2013 2015)

IEEE Committee Memberships

 Member 2022 IEEE Computer Society Pubs Board ad hoc committee on new topic areas (2023)

- 2. 2020 2023 IEEE Innovation in Societal Infrastructure Award Committee (Chair: 2020-2022; member 2023)
- 3. 2019 IEEE Innovation in Societal Infrastructure Award Committee (Member)
- 4. EiC Search Committee for ACM Transactions on Internet Computing (June, 2018)
- 5. EiC Search Committee for IEEE Internet Computing (Done in May, 2018)
- 6. EIC Search Committee for IEEE Transactions on Dependable and Secure Computing (Done in Fall, 2017)
- 7. EIC Search Committee for IEEE Transactions on Multimedia (Done in Summer, 2017)
- 8. 2014 & 2015 IEEE CS Technical Achievement Award Committee (2015??)
- 9. IEEE Technical Committee on Multimedia (TCMC) SIG on Multimedia Security and Privacy; (Chair; 2016 -present)
 - a. Member of TCMC Special Issue Evaluation Committee (Spring, 2016)
- 10. Nomination Committee of IEEE CS Technical Committee on Semantic Computing for TC Chair Election (2014)

General (Co) Chair of Conferences/Workshops

- 1. The 4th International IEEE Conference on Collaboration and Internet Computing (CIC 2018), Philadelphia, Oct 18-20, 2018, PA, USA
- 2. The 8th International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2011*), USA, 2012
- 3. The 7th International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2011*), USA, 2011
- 4. The 15th ACM Symposium on Access Control Models and Technologies, SACMAT2010, USA, 2010.
- 5. The 6th International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2010*), USA, 2010
- 6. The 5th International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2009*), USA, 2009

[Workshop]

- 7. The 9th International Workshop on Trusted Collaboration (Aug, TrustCol 2014)
- 8. The 8th International Workshop on Trusted Collaboration (TrustCol 2013)
- 9. The 7th International Workshop on Trusted Collaboration (TrustCol 2012)
- 10. The 6th International Workshop on Trusted Collaboration (TrustCol 2011)
- 11. The 5th International Workshop on Trusted Collaboration (TrustCol 2010)

Program Chair or Track Chair of Conferences/Workshops

- 1. IEEE International Conference on Edge Computing (IEEE EDGE part of IEEE SERIVICES), July 8-13, Milan, Italy, 2019,
- 2. IEEE Information Reuse & Integration (IEEE IRI) in Data Science, 2019, (Jul-Aug, 2019)
- 3. International Conference on Blockchain (ICBN; part of SCF SERVICES), 2019
- 4. IEEE Big Data 2016, Washington D.C., USA
- 5. The IEEE International Conference on Information Reuse and Integration, USA, 2016 (IRI2016), Pittsburgh, USA
- 6. The First International Conference on Collaboration and Internet Computing (IEEE CIC 2015), Hangzhao, China, 2015
- 7. The IEEE International Conference on Information Reuse and Integration, USA, 2015 (IRI2015), San Francisco, USA
- 8. <u>Area-Lead</u> of Cloud Security at IEEE CLOUD 2015
- 9. IEEE ISM 2014: IEEE International Symposium on Multimedia (Dec, 2014)
- 10. The IEEE International Conference on Information Reuse and Integration, USA, 2014 (IRI2014)
- 11. The IEEE International Conference on Information Reuse and Integration, USA, 2013 (IRI2013)
- 12. SafeConfig 2013: IEEE 6th Symposium on Security Analytics and Automation (Collocated with IEEE Conference on Communications and Network Security)
- 13. The IEEE International Conference on Information Reuse and Integration, Las Vegas, 2012 (IRI2012)
- 14. The IEEE International Conference on Information Reuse and Integration, Las Vegas, 2011 (IRI2011)
- 15. IEEE COMPSAC 2010 (Track: Security)
- 16. The IEEE International Conference on Information Reuse and Integration, Las Vegas, 2010 (IRI2010)
- 17. The 14th ACM Symposium on Access Control Models and Technologies, SACMAT09, Italy, 2009.
- 18. The 4rd International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2008*), Florida, USA, 2008
- 19. IEEE COMPSAC 2009 (Track: Social and Collaborative Networks)
- 20. The IEEE International Conference on Information Reuse and Integration, Las Vegas, 2007
- 21. The IEEE International Conference on Information Reuse and Integration, Hawaii, 2006

22. <u>Program Vice Co-chair</u> of Multimedia Security Track at 2007 IEEE International Symposium on Multimedia (ISM'07), Taiwan, December, 2007.

[Workshop]

- 23. IEEE C-Big: Workshop on Collaborative BigData (Oct, 2014)
- 24. 2009 International Workshop on Network Assurance and Security Services in Ubiquitous Environments (NASSUE-2009)
- 25. IEEE International Workshop on Trusted Collaboration (TrustCol-07), New York, 2007.
- 26. IEEE International Workshop on Trusted Collaboration (TrustCol-06), Georgia, 2006.
- 27. IEEE International Workshop on Information Assurance, (with IPCCC-07), New Orleans, 2007.
- 28. IEEE International Workshop on Information Assurance, (with IPCCC-06), Phoenix, 2006.
- 29. IEEE International Workshop on Information Assurance, (with IPCCC-04), Phoenix, 2004.

Test of Time Best Paper Awards Committee Chair

1. ACM SACMAT 2019

Finance Co-Chair

- 2. The Third International Conference on Collaboration and Internet Computing (IEEE CIC 2017), San Jose, USA, 2017.
- 3. The Second International Conference on Collaboration and Internet Computing (IEEE CIC 2016), Pittsburgh, USA, 2016.

Sponsorship Co-Chair;

1. IEEE IRI 2017, Salt Lake City, USA, Jul 7-9, 2018

Panels Co-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. Very Large Databases 2012 (VLDB2012), Turkey, 2012
- 2. Workshop on Cooperative Autonomous Resilient Defenses in Cyberspace (CyberCARD 2011), DC. USA, Jan 2011

- 3. The 3rd International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2007*), New York, USA, 2007
- 4. The 2nd International Conference on Collaborative Computing: Networking, Applications and Worksharing (*CollaborateCom-2006*), Georgia, USA, 2006

Publicity Chair

- 1. IEEE CIC 2018, Philadelphia, USA, Oct 18-20, 2018
- 2. 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.
- 3. The IEEE International Conference on Information Reuse and Integration, Las Vegas, 2005.

Panelist/Panel Moderator

- 1. IEEE BigData 2016 "Big Data Security and Privacy" panelist.
- 2. CollaborateCom 2014 (Panel Moderator): BigData Challenges and Opportunities
- 3. 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. The International Symposium on Cyber Security, Cryptology and Machine Learning (CSCML) 2023
- 2. ACM SACMAT 2023,
- 3. ACM SACMAT 2022, ICML 2022 Workshop on Machine Learning for Cybersecurity
- 4. IEEE BigData 2022 PC; Osaka, Japan, Dec 17-20

- 5. ACM SACMAT 2022, 2021, SACMAT 2020, SACMAT2019, SACMAT2018, SACMAT2013, SACMAT2012, SACMAT 2011, SACMAT2008, SACMAT07, SACMAT06, SACMAT2005, SACMAT2004, SACMAT2003
- 6. IFIPTM'20 (IFIP WG 11.11 international Conference on Trust Management), IFIPTM 2019, IFIPTM2010, IFIPTM2009,
- 7. 2019 IEEE Conference on Dependable and Secure Computing DSC 2019, China
- 8. ICDCS 2019: 39th IEEE International Conference on Distributed Computing System, TX, 2019 (Security, Privacy, and Trust in Distributed Systems)
- 9. The 5th IEEE International Conference on Multimedia Big Data (BigMM) Singapore, 2019
- 10. Workshop on Distributed Analytics Infrastructure and Algorithms for Multi-Organization Federations (DAIS), 2019 (@SMARTCOMP 2019)
- 11. Workshop on Research for Insider Threat WRIT 2018, WRIT 2014
- 12. IEEE International Conference on Services Computing (IEEE SCC) SCC2019, SCC2018,
- 13. ACM Conference on Data and Applications Security and Privacy (ACM CODASPY) CODASPY 2017, CODASPY 2016, CODASPY 2015
- 14. The 25th ACM International Conference on Information and Knowledge Management (CIKM 2016)
- 15. International Conference on Network and System Security: NSS 2018 NSS2013, NSS2012
- 16. 1st IEEE International Conference on Multimedia Big Data BigMM 2015
- 17. Fourth International Workshop on Privacy, Security and Trust in Mobile and Wireless Systems – MobiPST 2014
- 18. Annual International Computers, Software & Applications Conference COMPSAC 2014, COMPSAC 2011
- 19. ACM Cloud and Autonomic Computing Conference CAC 2013
- 20. International Conference on Social Informatics -- SoCInfo2012, SoCInfo2011,
- 21. IEEE/EAI International Conference on Collaborative Computing: Networking, Applications and Worksharing: CollaborateCom2013, CollaborateCom2012, CollaborateCom2011, CollaborateCom2010, CollaborateCom2007, CollaborateCom2006
- 22. ASE/IEEE International Conference on Privacy, Security, Risk and Trust PASSAT2012
- 23. LBSN2012, PST2011, MobiWIS2011, WSRAS2012
- 24. ACM Workshop on Security and Privacy in GIS and LBS -- SPRING11, SPRINGL10, SPRINGL09,
- 25. SSC09, SSC09, WWW2009Posters, WWW2011Posters
- 26. ICC'08 Wireless Networking Symposium, Beijing, China, 2008.
- 27. The 14th International MultiMedia Modeling (MMM), Kyoto, Japan, Jan, 2008.

- 28. ICIW 2007 committee, Peter Kiewit Institute, University of Nebraska Omaha, USA on the 24-25 April 2008
- 29. 2nd International Conference on Information Warfare and Security, Naval Postgraduate School, Monterey, California, USA, 8-9 March 2007
- 30. The 8th IFIP Working Conference on Virtual Enterprises (PRO-VE'07), Guimaraes, Portugal, 10-12 Sept, 2007
- 31. 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.
- 32. 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.
- 33. 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.
- 34. 3rd IEEE Workshop on Situation Management (SIMA 2007) at MILCOM 2007, Orlando, Florida, Oct 29-31, 2007
- 35. 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
- 36. The Second IEEE LCN Workshop on Network Security (WNS 2006) Tampa, Florida, U.S.A. 14 November 2006
- 37. The 2007 International Conference on Genetic and Evolutionary Methods (GEM'07) (*Honorary*)
- 38. The 2007 International Conference on Bioinformatics and Computational Biology (BIOCOMP'07) (*Honorary*)
- 39. The 8th IFIP Working Conference on Virtual Enterprises (PRO-VE'07), Guimaraes, Portugal, 10-12 Sept, 2007
- 40. 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.
- 41. International Conference on E-business (ICE-B), 28-31 July, Barcelona, Spain.
- 42. First International Workshop on Trust and Reputation Management in Massively Distributed Computing Systems (TRAM 2007), to be held in conjunction withThe 27th International Conference on Distributed Computing Systems (ICDCS 2007), Toronto, Canada, June 25-29, 2007.
- 43. 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.

- 44. 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.
- 45. 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.
- 46. 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)
- 47. 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.
- 48. International Conference on e-Business (ICE-B) (Spronsored by IEEE and ACM-SIGMIS), 2006,
- 49. The 10th Colloquium for Information Systems Security Education, MD, June, 2006.
- 50. 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.
- 51. International MultiMedia Modeling Conference (MMM) 2007, Singapore, January 9-12, 2007.
- 52. 2007 International Conference on Multimedia and Ubiquitous Engineering (MUE 07), April 26th 28th, 2007, Seoul Olympic Parktel, Seoul, Korea.
- 53. The 2nd IEEE LCN Workshop on Network Security, (WNS 206), Tampa, Florida, U.S.A. 14 November 2006.
- 54. 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
- 55. The IEEE GLOBECOM 2006 Computer and Network Security Systems Symposium, San Francisco, CA, USA, 27 November 1 December 2006 (reviewer)
- 56. 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)
- 57. 10th Colloquium for Information Systems Security Education (CISSE), Maryland, June, 2006
- 58. The 4th European Conference on Information Warfare and Security (ECIW 2006), University Of Glamorgan, UK, 2006
- 59. 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.

- 60. The 5th European Conference on Information Warfare and Security (ECIW 2006), University Of Glamorgan,
- 61. 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.
- 62. The 8th IEEE International Symposium on Object-oriented Real-time distributed Computing, May 18-20, 2005, Seattle, Washington
- 63. The 2005 IEEE International Conference on Information Reuse and Integration, Las Vegas, 2005
- 64. The International Workshop on Frontiers of Information Technology (FIT), being held on Dec. 20-21, 2004 in Islamabad, Pakistan.
- 65. The 4th European Conference on Information Warfare and Security (ECIW 2005), University Of Glamorgan, UK, 11-12 July 2004
- 66. 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)
- 67. Workshop on Information Assurance, 2004, April 14-17, Phoenix, Session Chair and Program Co-Chair,
- 68. The 6th International Symposium on Multimedia Software Engineering (IEEE MSE'04), Florida International University, Miami, FL, USA December 13-15, 2004.
- 69. 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).
- 70. The First Annual International Conference on Mobile and Ubiquitous Systems: Networking and Services, August 22-26, 2004 Boston, Massachusetts, USA

ADVISORY BOARDS

- 1. Member, External Advisor of Cyber Security Research Coordination Center, Australia (Dec, 2019 2021)
- 2. Member, External Advisory Board of Robert Morris University Computer and Information Systems program (2018 2021)
- 3. CAE Advisory Board of Robert Morris University (2018-2019)

SERVICE at UNIVERSITY of PITTSBURGH

University of Pittsburgh, USA (since Fall, 2003)

1. University Council on Graduate Studies (2023 – present)

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- 2. Interpersonal Assignment (IPA) Act Policy Committee (2022)
- 3. SCI Academic Council (2017 2019)
- 4. University of Pittsburgh Executive Export Control Committee (2018 2020)
- 5. SIS Council (elected)
 - i. Chair (Elected 2014 2017)
 - ii. Member (2012 2014)
- 6. Faculty Search Committee (2013, two faculty members recruited)
- 7. Curriculum Committee, Graduate program in Information Science and Technology
 - i. Chair in 2013 academic year
 - ii. Member since 2004
- 8. *Chair* of the *Departmental Colloquium* Committee
 - Organizer for the Departmental Colloquium (2005 2006).
- 9. Director and co-founder of Laboratory of Education and Research on Security Assured Information Systems (LERSAIS) since 2024
 - Led the faculty team to get the University designated as a *National Center of Academic Excellence in Information Assurance Education* (NCAE/IAE) by the NSA and DHS.
 - i. Oversaw the entire application process for original as well as the redesignation
 - Currently the *Point of Contact* for the NCAE/IAE program.
 - Established the state-of-the-art lab facility with CISCO equipment grant and DoD capacity building grant (as PI)

10. Developed Security Curriculum and formalized Security Track

- Developed the first Certificate of Advanced Studies in SAIS Track
 - i. Post-bac as well as Post-grad CAS
 - Preparation of online course offering in security track starting in Spring, 2015
- Formalized the Security Assured Information Systems (SAIS) Track at SIS first track that set the example for other tracks.
- Led the LERSAIS team towards receiving the certification for the SAIS track courses for all the five national IA standards CNSS 4011, 4012, 4013, 4014 and 4015. Pitt is one of only about a dozen institutions with all the five certifications.
- Established and currently manage the prestigious NSF-Cyber Corp SFS Scholarship Program
 - i. Since 2006: two sounds of funding

ii. Director of the SFS program

Oversee all aspect of SFS program management including: recruitment, student evaluation, student mentoring, and students' activity planning

- *Leader* of the *Information Assurance Research Interest Group* (nine members) in the School of Information Sciences (SIS) (Summer, 2006-2007).
- Developed and taught three new security courses for the security track and revised over the years
 - i. *Introduction to Security* (Mapped to about 85% of CNSS 4011, 4012 and 4013 standards)
 - ii. *Security Management* (Mapped to CNSS 4014 and 4015)
 - iii. Developing Secure Systems
- 11. External Partnerships
 - Information Resource Management College partnership for DoD IA Scholarship Program to facilitate transfer of students with IRMC certificates to pursue MSIS/MST degree programs at DIST (passed by the department)
- 12. Organizing Workshop/Training
 - Microsoft Onsite Security Training, Dec 2-3, 2004 attended by 32 (students and some University personnel)
 - Cisco Professors Security Boot Camp, July 6-9, 2005

Service at Kathmandu University, Nepal (1993 - 1996)

- Developed the first Undergraduate Computer Science and Engineering curriculum in Nepal in 1993-1994.
- Designed and taught several courses for the first time at KU (Computer Foundation Course; Introduction to Structured Programming; Data Structures and Algorithms, Communications and Networking, Hardware and System Maintenance, and Software Lab)
- Managed the procurement, setting-up and maintenance of KU's computer centers in the schools of Engineering and Management