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Education:

Certificate, Financial Engineering and Risk Management, Coursera, May 2013
Certificate, Advanced Cyber-Forensics Course, University of Texas at Tyler, December, 2011
Certificate, Beginning Cyber-Forensics Course, University of Texas at Tyler, November, 2011
Ph.D., Computer Science, University of Texas at Dallas, 2003
M.S., Electrical Engineering, Louisiana State University, Baton Rouge, 1997
Diploma, Marketing Management, Indira Gandhi Open University, New Delhi, India, 1996
M.E., Electronics and Communication, Delhi University, India, 1992
Diploma, Computer Applications, Annamalai University, India, 1990
B.E., Electronics and Communication, Birla Institute of Technology, Ranchi, India, 1988

Professional Experience:

Member of the Board, Association for Computer Educators in Texas, Fall 2014
Faculty Fellow for Service Learning, UT Tyler, Fall 2013 - Present
Cyber-Forensics Instructor, Texas First Responders Training Center, UT Tyler, Spring 2012.
Director, Center for Petroleum Security Research, University of Texas at Tyler, Sep 2010 – Aug 2012.
University of Texas at Tyler, Associate Professor of Computer Science, 2011-Present
University of Texas at Tyler, Assistant Professor of Computer Science, 2005-2011
Hofstra University, Assistant Professor of Engineering, 2003-2005
Senior Firmware Engineer, Anritsu Company, 2001-2003
Firmware Engineer, Anritsu Company, 1998-2003
Country Manager, Anritsu Corporation, New Delhi, India, 1991-1996
Computer Maintenance Engineer, Air India, Bombay, India, 1988-1991

Consulting Experience:

Subject Matter Expert, SBIR Air Force Grant, Praeses LLC, Shreveport, LA, Fall 2014.
Florida Gulf Coast University, Summer 2013, Reviewed Embedded Systems Modules.
Visiting Faculty Research Program, Air Force Research Lab, Rome NY, Summer 2012.
Visiting Faculty Research Program, Air Force Research Lab, Rome NY, Summer 2011.

Professional Society Membership:

Member, Institute of Electrical and Electronic Engineers (IEEE), 1988-Present.
Member, Association for Computing Machinery, 1999-2005.
Member, American Society for Engineering Education, 2008 – 2011.

Professional Service:

(a) Committees:

Member of Technical Program Committee, International Conference on Connected Vehicles & Expo (ICCVE 2015), Shenzhen, China, October, 2015.

Member of Program Committee, 5th International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH) to be held in France in July 2015.

Member of Program Committee, 14th IEEE/ACIS International Conference on Computer and Information Science (ICIS 2015), to be held in Las Vegas, NV, in June-July 2015.

Member of Program Committee, 16th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing (SNPD 2015),) to be held in Japan in June 2015.

Member of Program Committee, 9th IEEE International Systems Conference, to be held in Vancouver, Canada, April 2015.

Member of Program Committee, Emerging Information Technology and Engineering Solutions (EITES 2015), to be held in Pune, India, February 2015.

Member of Program Committee, 4th International Symposium on Cloud and Services Computing (SC2 2014), Beijing, China, September, 2014.

Member of Program Committee, 12th International Conference on Software Engineering Research, Management and Applications, August-September, 2014, Kitakyushu, Japan.

Member of Technical Program Committee, International Conference on Internet of Vehicles (IOV 2014), Beijing, China, August, 2014.

Member of Program Committee, SIMUL 2014, The Sixth International Conference on Advances in System Simulation, Nice, France, October 2014.

Member of Organizing Committee, 2nd ScienceOne International Conference on Information Technology (ICIT 2014), Dubai, UAE, January, 2014.

Member of Program Committee, The Ninth International Conference on Digital Telecommunications (ICDT'14) to be held in France, February, 2014

Member of Technical Program Committee, International Journal of Computing and Digital Systems.

Member of Program Committee, 4rd International Conference on Simulation and Modeling Methodologies, Technologies and Applications " - SIMULTECH 2014, Austria, August, 2014.

Member of the Technical Program Committee, IEEE Systems Conference, Ottawa, Canada, March-April, 2014.

Member Technical Program Committee for IEEE/SAE/ACM/IFAC International Conference on Connected Vehicles and Expo, Las Vegas, December 2013.

Member of Program Committee for 14th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing (SNPD), Hawaii, July, 2013.

Member of Program Committee, 3rd International Conference on Simulation and Modeling Methodologies, Technologies and Applications ” - SIMULTECH 2013, Iceland, July 2013

Member of Program Committee, 12th IEEE/ACIS International Conference on Computer and Information Science, Niigata, Japan, June, 2013.

Member of Program Committee, The Eighth International Conference on Digital Telecommunications (ICDT'13), Venice, Italy, April 2013

Member of the Program Committee, IEEE International Symposium on Signal Processing and Information Technology (ISSPIT), December 2012, Ho Chi Minh City, Vietnam

Member of the Technical Program Committee, IEEE Systems Conference, Orlando, Florida, April, 2013.

Member of Program Committee, 2nd International Conference on Simulation and Modeling Methodologies, Technologies and Applications ” - SIMULTECH 2012, Italy, July 2012.

Member of Program Committee, 11th IEEE/ACIS International Conference on Computer and Information Science, Shanghai, China, May-June, 2012.

Member of Program Committee, The Seventh International Conference on Digital Telecommunications (ICDT'12) to be held in France, April 2012

Member of Program Committee, Emerging Information Technology and Engineering Solutions 2012 (EITES 2012), to be held in Pune, India, February, 2012.

Member of Program Committee, 1st ACIS International Symposium on Software and Network Engineering in 2011, Korea, December, 2011.

Member of Program Committee, 1st International Conference on Simulation and Modeling Methodologies, Technologies and Applications ” - SIMULTECH 2011, Netherlands, July 2011.

Member of Program Committee, Software Engineering Research, Management and Applications (SERA2011), Baltimore, Maryland, August 2011.

Member of Program Committee, The Sixth International Conference on Digital Telecommunications (ICDT'11), Budapest, Hungary, April 2011.

Member of Program Committee, International Conference on Digital Telecommunications (ICDT'10), Athens, Greece, 2010.

Member of Program Committee, Special Session on Visual Environments, Languages, and Tools for Software Engineering (VELT-SE), Illinois, October, 2010.

Member of Program Committee, 4th International Conference on Digital Telecommunications (ICDT09), France, July 2009.

Member of Program Committee, Workshop of Quality Management of Service (QuaSM-08), Sydney, Australia, December, 2008.

Member of Program Committee of 3rd International Conference on Digital Telecommunications (ICDT08), Bucharest, Romania, June-July 2008.

Member of Program Committee of 7th IEEE/ACIS International Conference on Computer and Information Science (ICIS 2008), Portland, Oregon, May 2008.

Member of Program Committee for Fifth IEEE International Conference on Software Engineering Research, Management, and Applications (SERA 2007), Busan, Korea, August, 2007.

Member of Program Committee for Sixth International Workshop on System/Software Architectures (IWSSA'07), Las Vegas, June 2007.

Member of Program Committee for 2nd Workshop on Middleware and Performance (WOMP), Canada, August, 2007.

Member of Program Committee for 8th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing (SNPD) 2007, China.

Member of Program Committee for the 2nd IEEE International Workshop Towards Stable and Adaptable Software Architectures (SASA 2007), Las Vegas, August 2007.

Member of Program Committee for International Workshop for Software Architecture Research and Practice (SARP'07), San Diego, July 2007.

Member of Program Committee for Workshop on Middleware and Performance (WOMP) 2006.

Member of Program Committee for 7th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing (SNPD) 2006.

Member of Program Committee for TPC CAINE 2005.

Member of Program Committee for 3rd International Conference on Software Engineering Research, Management and Applications (SERA) 2005.

Member of Program Committee for 6th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing (SNPD) 2005.

(b) Chairships

Co-Chair for the 10th International Workshop on System/Software Architectures (IWSSA'12), Poland, June 2012.

Co-Chair for the 9th International Workshop on System/Software Architectures (IWSSA'11), London, June 2011.

Co-Chair for the 8th International Workshop on System/Software Architectures (IWSSA'09), Portugal, November 2009.

Co-Chair for the 7th International Workshop on System/Software Architectures (IWSSA'08), Monterrey, Mexico, Nov. 2008.

Co-Chair of the Fifth International Workshop on System/Software Architectures (IWSSA'06), Las Vegas, June 2006.

Co-Chair of the Fourth International Workshop on System/Software Architectures (IWSSA'05) held in Las Vegas in June 2005.

Co-Chair of the International Workshop on System/Software Architectures (IWSSA'04) held in Las Vegas in June 2004.

Co-Chair of the International Workshop on Adaptable Software Architecture (WASA) held in Las Vegas in June 2003.

Co-Chair of the Session on Adaptable Software Architecture held in Las Vegas in June 2002 as part of the International Conference on Software Engineering Research and Practice.

(c) Journals

Reviewer, IEEE Systems Journal, 2013 - Present

Reviewer, Journal of Knowledge and Information Systems, 2007 – Present

Reviewer, Journal of Science of Computer Programming, 2006 – Present

Reviewer, International Journal of Systems Assurance Engineering & Management, 2013 - Present

(d) Editorials

Member, International Editorial Board of International Journal of Software Architectures, June 2007 - Present

Guest Editor, *International Journal of Systems Assurance Engineering and Management*, Special Issue on Advances in Software Testing.

Guest Editor, *Journal of Systems and Software*, Special Issue on System/Software Architectures, Vol. 85, No. 3, March 2012, pp. 459 – 770.

Guest Editor, *Journal of Science of Computer Programming*, Special Issue on System/Software Architectures, Vol. 66, No. 1, April 2007, pp. 1 -102.

Guest Editor, *Journal of Science of Computer Programming*, Special Issue on System/Software Architectures, Vol. 57, No. 1, July 2005, pp. 1 -128.

Guest Editor, *Journal of System Architectures*, Special Issue on Adaptable Software Architectures, Vol. 50, No. 7, July 2004, pp. 365-444.

Guest Editor, *International Journal of Computer Standards and Interfaces*, Special Issue on Adaptable Software Architectures, Vol. 25, No. 3, June, 2003.

Associate Editor, *Proceedings of the International Conference on Software Engineering Research and Practice*, Las Vegas, June, 2007.

Associate Editor, *Proceedings of the International Conference on Software Engineering Research and Practice*, Las Vegas, June, 2006.

Associate Editor, *Proceedings of the International Conference on Software Engineering Research and Practice*, Las Vegas, June, 2005.

Associate Editor, *Proceedings of the International Conference on Software Engineering Research and Practice*, Las Vegas, June, 2004.

Associate Editor, *Proceedings of the International Conference on Software Engineering Research and Practice*, Las Vegas, June, 2003.

Associate Editor, *Proceedings of the International Conference on Software Engineering Research and Practice*, Las Vegas, June, 2002.

Refereed Publications:

- L. Chung, N. Subramanian, T. Hill, and G. Park, "Silverlining: A Simulator to Forecast Cost and Performance in the Cloud", *CrossTalk*, The Journal of Defense Software Engineering, March/April, 2015.
- N. Subramanian, "Challenges in Academia in Producing Prepared IT Workforce", *CrossTalk*, The Journal of Defense Software Engineering, Jan/Feb, 2015, pp. 9-13.
- N. Subramanian, S. Drager, W. McKeever, "Recovering Software Design from Interviews Using the NFR Approach: An Experience Report", *Journal of Advances in Software Engineering*, Hindawi Publication, vol. 2014, Article ID 124701, 14 pages, 2014. doi:10.1155/2014/124701.
- N. Subramanian and J. Zalewski, "Quantitative Assessment of Safety and Security of System Architectures for Cyberphysical Systems Using the NFR Approach", *IEEE Systems Journal*, January, 2014.
- N. Subramanian, S. Drager, W. McKeever, "Identifying Trustworthiness Deficit in Legacy Systems Using the NFR Approach", *CrossTalk*, The Journal of Defense Software Engineering, Special Issue on Legacy System Software Sustainment, Vol. 27, No. 1, January/February, 2014, pp. 4-11.
- N. Subramanian, S. Drager, W. McKeever, "Designing Trustworthy Software Systems using the NFR Approach", Chapter Paper, *Emerging Trends in ICT Security*, Edited by Babak Akhgar and Hamid Arabnia, Elsevier Publication, 2014, pp. 203-225.
- N. Subramanian, "Spyware", *Encyclopedia of Cryptography and Security* (2nd Ed.), Editors: S. Jajodia and H. C. A. van Tilborg, Springer Publication, 2011.
- N. Subramanian, "Biometric Authentication", *Encyclopedia of Cryptography and Security* (2nd Ed.), Editors: S. Jajodia and H. C. A. van Tilborg, Springer, 2011.
- L. Chung, S. Supakkul, N. Subramanian, et al., "Goal-Oriented Software Architecting", Chapter Paper, *Relating Software Requirements and Software Architectures*, Springer, 2011, pp. 91-110.
- N. Subramanian, "Requirements Specifications and Analysis", *Wiley Encyclopedia of Computer Science and Computer Engineering*, Wiley Publication, 2008, pp. 1 – 10.
- N. Subramanian and G. Whitson, "Augmented WebHelix: Practical Process for Web Engineering", *Software Engineering for Modern Web Applications: Methodologies and Technologies*, Edited by Dan Brandon, IDEA Publishers, 2008, pp. 25 – 52.

- N. Subramanian, L. Chung, and Y-t. Song, "Propagatory Framework: An NFR-Based Framework for Establishing Traceability between Enterprise Architectures and System Architectures", *International Journal of Computer and Information Sciences*, Volume 7, No. 1-4, 2006.
- L. Chung and N. Subramanian, "Adaptable Architecture Generation of Embedded Systems", *Journal of Systems and Software*, Volume 71, No. 3, May 2004, pp. 271 – 295.
- L. Chung and N. Subramanian, "Architecture-based Semantic Evolution for Embedded Systems: A Study of Remotely Controlled Systems", *Journal of Software Maintenance and Evolution: Research and Practice*, Volume 15, Issue 3, May/June 2003, pp. 145 -190.
- N. Subramanian and L. Chung, "SA³ - A Tool for Supporting Adaptable Software Architecture Generation for Embedded Systems", *Journal of Computer Standards and Interfaces*, Vol. 25, No. 3, June, 2003, pp. 283 - 290.
- N. Subramanian and L. Chung, "Testable Embedded System Firmware Development: The Out-In Methodology", *Journal of Computer Standards and Interfaces*, Vol. 22, Issue 5, December 2000, pp. 337-352.
- N. Subramanian, "Using Object-Oriented Technology to Design Efficient IEEE-488.2 (GPIB) Interface Instruments", *Journal of Computer Standards and Interfaces*, Volume 22, Issue 3, August 2000, pp. 217-225.

Conference Proceedings (Reviewed):

- S. Krishnan and N. Subramanian, "Evaluating Carbon-Reducing Impact of Document Management Systems", IEEE Green Technologies (GreenTech) Conference, New Orleans, LA, April, 2015.
- J. Zalewski and N. Subramanian, "Developing a Green Computer Science Program", IEEE Green Technologies (GreenTech) Conference, New Orleans, LA, April, 2015.
- N. Subramanian, "A Successful Peer Evaluation System for Capstone Projects in Computer Science", Proceedings of the ASEE GSW Conference, San Antonio, TX, March 2015.
- A. Kornecki, N. Subramanian, and J. Zalewski, "Studying Interrelationships of Safety and Security for Software Assurance in Cyber-Physical Systems: Approach Based on Bayesian Belief Networks", *Proceedings of IEEE International Workshop on Cyber-Physical Systems*, Krakow, Poland, September 2013.
- N. Subramanian and J. Zalewski, "Assessment of Safety and Security of System Architectures for Cyberphysical Systems", Proceedings of the IEEE Systems Conference, Orlando, Florida, April 2013, pp. 634 – 641.
- N. Subramanian, "Evaluating Complexity of Information Systems Architecture using Fractals", *Proceedings of Advanced Information Systems Engineering Workshops, 23rd International Conference on Advanced Information Systems Engineering International Workshops*, (Eds.) C. Salinesi and O. Pastor, London, UK, June, 2011, pp. 308 – 317.
- N. Subramanian, "Incentivizing Security Education Programs through Centers for Security Research" poster presentation at *15th Colloquium for Information Systems Security Education*, Fairborn, Ohio, June, 2011.
- N. Subramanian and G. Whitson, "Implementing a CNSS 4012 Certification in an Information Systems Curriculum", *Proceedings of the 14th Colloquium for Information Systems Security Education*, ISBN No. 1-933510-99-4, Baltimore, Maryland, June 2010, pp. 190 - 196.

- A. Vemulapalli and N. Subramanian, "Evaluating Consistency between BPEL Specifications and Functional Requirements of Complex Computing Systems using the NFR Approach", *Proceedings of 2010 IEEE International Systems Conference*, San Diego, April 2010, pp. 153-158.
- H. Yakkali and N. Subramanian, "Efficient design of SCADA systems using minimum spanning trees and the NFR Framework", *Proceedings of the 2010 42nd IEEE Southeastern Symposium on System Theory*, March 2010, Tyler, Texas, pp. 346- 351.
- A. Vemulapalli and N. Subramanian, "Transforming Functional Requirements from UML into BPEL to Efficiently Develop SOA-Based Systems", *Lecture Notes in Computer Science*, No. 5872, November 2009, pp. 337-349, Proceedings of On The Move 2009 Conference, Editors: R. Meersman, P. Herrero, and T. Dillon.
- P. Kumar, N. Subramanian, and K. Zhang, "SaViT: Technique for Visualization of Digital Home Safety", *Proceedings of the 8th IEEE/ICIS International Conference on Computer and Information Science*, Shanghai, June 2009, pp. 1120 – 1125.
- N. Subramanian and S. Rainwater, "Closed-Loop Industry Partnership for Successful Interdisciplinary Capstone Projects in Computer Science", *TCEA Educational Technology Research Symposium*, Vol. 3, DEStech Publications, ISBN No. 978-1-60595-009-9, Feb. 2009, pp. 94-106.
- N. Subramanian, "Improving Security of Oil Pipeline SCADA Systems Using Service-Oriented Architectures", *Lecture Notes in Computer Science*, No. 5333, November 2008, pp. 344-353.
- P. Kumar, N. Subramanian, and K. Zhang, "Evaluation of Information Visualization Tools Using the NFR Approach", *Lecture Notes in Computer Science*, 2008, Volume 5188/2008, pp. 44-55
- N. Subramanian, "Visualizing Safety Score for the Digital Home", *Proceedings of the International Conference on Software Engineering Theory and Practice*, July, 2008, pp. 1-7. (on CD).
- V. Chunduru and N. Subramanian, "Perimeter-Based High Performance Home Security System", *Proceedings of the 11th IEEE International Symposium on Consumer Electronics*, Dallas, Texas, 1 June, 2007, pp. 1 -7.
- P. P. Sancho, C. Juiz, R. Puigjaner, L Chung, and N. Subramanian, "An Approach to Ontology-aided Performance Engineering through NFR Framework", *Proceedings of the 6th International Workshop on Software Performance, 2007 (WOSP'07)*, February, 2007, Buenos Aires, Argentina, ACM Press, pp. 125 – 128.
- V. Chunduru and N. Subramanian, "Effects of Power Line on Performance of Home Control Systems", *Proceedings of the IEEE Conference on Power Electronics, Drives and Energy Systems for Industrial Growth*, New Delhi, India, Dec., 2006, pp. 1 – 6.
- N. Subramanian and L. Chung, "An NFR-Based Framework for Aligning Software Architectures with System Architectures", *Proceedings of the International Conference on Software Engineering Research and Practice*, Las Vegas, June, 2006, pp. 764 - 770.
- N. Subramanian, L. Chung, and Y-t Song, "An NFR-Based Framework for Establishing Traceability Between Application Architectures and System Architectures", *Proceedings of the 7th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing (SNPD 2006)*, Las Vegas, June 2006, pp. 21 - 28.

- N. Subramanian, R. Puerzer and L. Chung, "A Comparative Evaluation of Maintainability: A Study of Engineering Department's Website Maintainability," *Proceedings of the International Conference on Software Maintenance*, Budapest, IEEE Computer Society, Hungary, September, 2005, pp. 669-672.
- N. Subramanian and L. Chung, "Supporting the Development of Adaptable and Secure Software Systems: An NFR Approach", *Proceedings of the International Conference on Software Engineering Research and Practice*, Las Vegas, June, 2005, pp. 108 -114.
- L. Chung and N. Subramanian, "Reconfirming Change in Secure Software Systems: An Adaptable Security Approach", *Proceedings of the International Conference on Security and Management*, Las Vegas, June, 2005, pp. 320 - 326.
- N. Subramanian and L. Chung, "Relationship Between the Whole of Software Architecture and its Parts: An NFR Perspective", *Proceedings of the 6th ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing (SNPD 2005)*, IEEE Computer Society Press, May, 2005, pp. 164-169.
- N. Subramanian and L. Chung, "Process-Oriented Metrics for Software Architecture Changeability", *Proceedings of the International Conference on Software Engineering Research and Practice (SERP'04)*, June 2004, Las Vegas, pp. 83 - 89.
- N. Subramanian and L. Chung, "Process-Oriented Metrics for Software Architecture Evolvability", *Proceedings of the International Workshop on Principles of Software Evolution*, IEEE Computer Society, Helsinki, Finland, September, 2003, pp. 65 -70.
- N. Subramanian and L. Chung, "Intelligent Support for Developing Adaptable Software Architectures: A Knowledge-Based Approach", *Proceedings of the Workshop on Intelligent Technologies for Software Engineering*, Helsinki, Finland, September, 2003, pp. 13-19.
- N. Subramanian and L. Chung, "Semi-Automatic Generation of Adaptable Architectures", *Proceedings of the International Conference on Software Engineering Research and Practice (SERP'03)*, June 2003, Las Vegas.
- N. Subramanian and L. Chung, "SAAA - A Tool for Developing Adaptable Software Architectures", *Proceedings of the International Conference on Software Engineering Research and Practice (SERP'02)*, June 2002, Las Vegas, pp. 63-69.
- N. Subramanian and L. Chung, "Tool Support for Engineering Adaptability into Software Architecture", *Proceedings of the 5th International Workshop on Principles of Software Evolution (IWPSE 2002)*, ACM Press, May 2002, Orlando, pp. 86-96.
- L. Chung and N. Subramanian, "Architecture-Based Semantic Evolution: A Study of Remotely Controlled Embedded Systems", *Proceedings of the International Conference on Software Maintenance*, IEEE Computer Press, Florence, Italy, November, 2001, pp. 663-666.
- N. Subramanian and L. Chung, "Software Architecture Adaptability - An NFR Approach", *Proceedings of the International Workshop on Principles of Software Evolution (IWPSE 2001)*, ACM Press, Vienna, September, 2001, ACM Press, pp. 52-61.
- L. Chung and N. Subramanian, "Process-Oriented Metrics for Software Architecture Adaptability", *Proceedings of the International Symposium on Requirements Engineering*, IEEE Computer Press, Aug-Sep. 2001, pp. 310-311.

N. Subramanian and L. Chung, "Metrics for Software Adaptability", *Software Quality Management IX- Pathways to Software Quality, Proceedings of Software Quality Management*, April, 2001, Loughborough, UK, British Computer Society, pp. 95-108.

N. Subramanian and L. Chung, "Architecture-Driven Embedded Systems Adaptation for Supporting Vocabulary Evolution", *Proceedings of the International Symposium on Principles of Software Evolution*, IEEE Computer Press, November 2000, Kanazawa, Japan, pp. 144-153.

Conference Proceedings (Unreviewed):

N. Subramanian, "Checklist for Successful Team-Based IT Service-Learning Projects", 50th Annual Conference, *Association for Computer Educators in Texas*, San Antonio, October, 2014.

J. Zalewski, B. Czejdo, F. Gonzalez, A. Kornecki, N. Subramanian, and D. Trawczynski, "Curriculum Development for Embedded Systems Security," *2014 ASEE Annual Conference*, Indianapolis, June, 2014.

L. Chung, T. Hill, and N. Subramanian, "Silverlining: A Cloud Forecaster Using Benchmarking and Simulation", *26th Annual IEEE Software Technology Conference*, Long Beach, California, March-April, 2014.

J. Zalewski, B. Czejdo, F. Gonzalez, A. Kornecki, N. Subramanian, and D. Trawczynski, "Web-based Modules for Cyberphysical Systems Security", *26th Annual IEEE Software Technology Conference*, Long Beach, California, March-April, 2014.

N. Subramanian, S. Drager, and W. McKeever, "Identifying Trustworthiness Deficit in Legacy Systems Using the NFR Approach", *Software Technology Conference*, Salt Lake City, Utah, April, 2013.

N. Subramanian, S. Drager, and W. McKeever, "Engineering a Trustworthy Software System Using the NFR Approach", *Systems and Software Technology Conference*, Salt Lake City, Utah, April, 2012.

N. Subramanian, J. Zalewski, S. Drager, and W. McKeever, "Integrating Automation Systems and Enterprise IT in the Cloud", *Systems and Software Technology Conference*, Salt Lake City, Utah, April, 2012.

N. Subramanian, "Designing Adaptable and Secure SCADA Systems Using the NFR Approach", *International Society of Automation's Automation Week*, Mobile, Alabama, October, 2011.

N. Subramanian, J. Zalewski, S. Drager, and W. McKeever, "Safe and Secure Integration of Automation Systems and Enterprise IT Infrastructure Using Cloud", *Cloud Computing Workshop*, Air Force Research Lab, Rome, NY, July, 2011

A. C. Yarlagadda, N. Subramanian, and A. Azghani, "Artificial Neural Network-Based Estimation for Pseudomonas Aeruginosa Experiments", *Proceedings of IEEE Region 5 Technical Conference*, April 2007, pp. 133-137.

P. Sachar, N. Subramanian, and A. Azghani, "A Knowledge Base for Biological Experiments", *Proceedings of IEEE Sixth Annual Emerging Information Technology Conference (EITC 2006)*, Dallas, August 2006.

- V. Chunduru and N. Subramanian, "A View-Based Approach to Improve Reliability of Home Appliance Control Systems", *Proceedings of IEEE Region 5 Conference*, San Antonio, May, 2006, pp. 47 - 56.
- N. Subramanian, "A Novel Approach to System Design: Out-In Methodology", *Proceedings of the Wireless Symposium/Portable by Design Conference*, San Jose, Feb. 2000 (On CD).
- N. Subramanian, "Instrument Firmware Testing Using LabWindows™/CVI and LabVIEW™ - a Comparative Study", *Proceedings of NIWEEK*, Austin, TX, August, 1999.

Editorials:

- L. Chung, M. Noguera, N. Subramanian, and J. L. Garrido, "Novel Approaches in the Design and Implementation of System/Software Architectures", Editorial, *Journal of Systems and Software*, Volume 85, No. 3, March 2012, pp. 459- 462.
- L. Chung, M. Noguera, N. Subramanian, and J. L. Garrido, "IWSSA 2009 PC Co-Chairs' Message", *Lecture Notes in Computer Science No. 5872*, November 2009, pp. 292-293, Proceedings of On The Move 2009 Conference, Editors: R. Meersman, P. Herrero, and T. Dillon.
- L. Chung and N. Subramanian, "Bridging the Gap between Enterprise Architectures and Software Architectures", Editorial, *Journal of Science of Computer Programming*, Special Issue on the 5th International Workshop on System/Software Architectures (IWSSA'06), Volume 66, Issue 1, 15th April 2007, pp. 1-3.
- L. Chung and N. Subramanian, "System and Software Architectures", Editorial, special issue of the *Journal of Science of Computer Programming* on System and Software Architectures, Vol. 57, No. 1, July 2005, pp. 1 -4.
- L. Chung and N. Subramanian, "Adaptable System/Software Architectures", Editorial, special issue of the *Journal of System Architectures* on Adaptable Software Architectures, Vol. 50, No. 7, July 2004, pp. 365-366.
- N. Subramanian and L. Chung, "Towards Standardization of Adaptable Software Architectures", Editorial, *Journal of Computer Standards and Interfaces*, Vol. 25, No. 3, June 2003, pp. 211-213.

Significant Reports:

- L. Chung and N. Subramanian, "Testable and Adaptable Architectures for Embedded Systems", *University of Texas at Dallas Technical Report No. UTDCS-22-01*, November, 2001.

Other Scholarly Publication:

- N. Subramanian, "Service-Oriented Architecture-Based SCADA for Improved Addressing of Security-Related Business Concerns for Oil Pipeline", *Journal of Homeland Security*, January 2010, <http://www.homelandsecurity.org/journal/BrowseArticles.aspx?catid=1>.
- N. Subramanian and L. Chung, "Representing and Reasoning about Agreements ... More Agreeably", *Ius Gentium Journal*, Published by University of Baltimore School of Law, Volume 12, Spring 2006, pp. 205-258.

V. Chunduru and N. Subramanian, "Performance Analysis of Home Security Systems", *Proceedings of the IEEE Emerging Technology Conference*, Richardson, Texas, September 15, 2006 (On CD).

N. Subramanian and L. Chung, "Measuring Evolvability of Legal Personality" *Ius Gentium Journal*, Published by University of Baltimore School of Law, Volume 11, Spring 2005, pp. 79 - 133.

Presentations:

N. Subramanian, "Cyber Security", Well Site Automation Conference, Houston, TX, in January 2015.

N. Subramanian and C. Marzilli, "Best Practices in Service Learning", UT Tyler Impact Week, November 12, 2014.

N. Subramanian and C. Marzilli, "Service Learning at UT Tyler", New Faculty Orientation, August 2014.

N. Subramanian and C. Marzilli, "Introducing Service Learning at UT Tyler", Center for Teaching Excellence and Innovation, April 30, 2014.

"IP Issues in Technology Projects", Teaching Moments, Center for Teaching Excellence and Innovation, UT Tyler, April 9th, 2014.

"Computer Security – Current and Future Trends", presented at Ernst & Young, Mumbai, India, July, 2012.

N. Subramanian, S. Drager, and W. McKeever, "Evaluating Trustworthiness Using the NFR Approach" poster presented at the Cyber and Information Challenges Conference in June 2012, organized by Armed Forces Communications and Electronics Association, in Utica, NY.

"Engineering a Trustworthy Software System Using the NFR Approach", presented to Faculty of the Department of Information Systems, University of Granada, Granada, Spain, May 2012.

"Embedded Systems Development Using SysML", presented to Graduate Students, at University of Granada, Granada, Spain, May 2012.

"Can Proactive Cyber Forensics Improve Security of SCADA Systems?" presented at Indian Institute of Science, Bangalore, January, 2012.

N. Subramanian and J. Zalewski, poster presentation, "Addressing Safety and Security in Airborne Networks", at Airborne Network Technology Review Days, Utica, NY, July 2011.

N. Subramanian and J. Zalewski, poster presentation, "Safe and Secure Integration of Automation Systems and Enterprise IT Infrastructure Using Cloud", at Cloud Computing Workshop, Air Force Research Lab, Rome, NY, July 2011.

Panelist, "Industrial Security after Stuxnet and Future Path Forward to Make our Industrial Control Systems More Secure" at International Society of Automation's Safety & Security Symposium held at Houston on April 14, 2011.

"Impact of SCADA on Research Projects at the Center for Petroleum Security at the University of Texas at Tyler", NACMAST Workshop, SMU, Dallas, on November 4, 2010.

"Non-functional Requirements in Software Engineering" presented at Indian Institute of Information Technology, Pune, India, in August 2010.

"Securing the Digital World" presented at Indian Institute of Technology, Gandhinagar, India, in August 2010.

"Visualizing Safety Score for the Digital Home" presented at UT Tyler Faculty Research Day, Dec. 2009.

"Integrating SCADA into CIS Curriculum" presented at the Symposium of Association of Computer Educators in Texas, Austin, Texas, October 2008.

"Representing and Reasoning about Agreements ...More Agreeably" presented at the European American Consortium on Legal Education, Ghent, Belgium, May 2005.

"Measuring Quality of Software Systems", presented to high-school students in Long Island, as part of a special summer program at Hofstra University, July 2004.

"Measuring Evolvability of Legal Personality" presented at European American Consortium for Legal Education Symposium at Hofstra Law School, May, 2004.

"Software Architecture Adaptability", poster presentation at the University of Texas at Dallas, February 2004.

Honors and Awards:

Certificate of Achievement, Robert R. Muntz Library, UT Tyler, February 2015.

Certificate of Appreciation, Association for Computer Educators in Texas, October, 2014.

Academic Excellence, Center for Teaching Excellence and Innovation, UT Tyler, April, 2014.

Inaugural Faculty Fellow, Service Learning, Center for Teaching Excellence and Innovation, University of Texas at Tyler, 2014.

Member of the Order of the Engineer, April 2010.

Certificate of Appreciation, Association for Computer Educators in Texas, for the presentation "Integrating SCADA into CIS Curriculum", October 2008.

Outstanding Professor of the Year, 2008, Department of Computer Science.

Achievement Award from World Academy of Sciences, 2004, for organizing a successful workshop at the International MultiConference in Computer Science, June, 2004.

Achievement Award from World Academy of Sciences, 2003, for organizing a successful workshop at the 2003 International MultiConference in Computer Science, June, 2003.

Achievement Award from World Academy of Sciences, 2002, for organizing a major session at the 2002 International MultiConference in Computer Science, June, 2002.

Outstanding Achievement Award from Anritsu Company, Richardson, TX, October, 1998, for completing a significant commercial project ahead of schedule.

Sponsored Research:

SME, SBIR Grant from Air Force, in collaboration with Praeses LLC, Shreveport, LA, Fall 2014, for project titled "Logistics Error Management and Reporting System", for \$20,000.

PI, Air Force Research Lab Information Directorate, Rome, NY, Fall 2012, for project entitled "Natural Language Processing-Enabled Evaluation of Trustworthiness in Software Systems" for \$9,000.

PI, Air Force Research Lab Information Directorate, Rome, NY, Summer 2012, for project entitled "Evaluating Trust Deficit in Legacy Systems Using the NFR Approach", for \$15,000.

PI, Air Force Research Lab Information Directorate, Rome, NY, Fall 2011, for project entitled "Natural Language Processing-Based Automation of the NFR Approach for Re-engineering Trustworthy Embedded Systems" for \$10,000.

PI, Air Force Research Lab Information Directorate, Rome, NY, Summer 2011, for project entitled "Developing Trustworthy Systems Using the NFR Approach", for \$15,000.

Co-PI for the Department of Justice grant for 2010-11 entitled "FY2010 Congressionally Selected Awards Program" for \$529,000 which includes faculty buyout, summer support, student wages, and conference travel. A portion of these funds were used to establish the Center for Petroleum Security Research at UT Tyler (www.uttyler.edu/cpsr) where I serve as the Director.

University of Texas at Tyler President's Faculty Summer Research Grant for summer 2006 for project entitled "Improving Security of Home Control Systems" - the grant included \$5000 in equipment and faculty stipend support and \$1570 in student support.

Academic Year Research Award of \$7560 for 2007-08 from the Office of Sponsored Research for project entitled "Interface Standardization for the Digital Home Using Service-Oriented Architectures". This grant was advertised on UT Tyler website as well in Tyler Morning Telegraph. This grant included \$3500 for equipment, \$1500 for travel, \$1600 for a graduate student, and \$960 for an undergraduate student.

Graduate Student Advising:

Kolan Vishala, "Reverse Engineering Class Diagrams from Java Code", Graduated May 2012.

Rohit V. Tangellamudi, "Estimating Network Bandwidth Employing Equations of Motion in a Kalman Filter", Graduated May 2012.

Vaibhav Sen Reddy Godala, "Process of Establishing SCADA System Simulator in a Research Lab", Graduated May 2012.

Bhavana Mahakala, "Comparing the Efficiency of NLP Tools Using Feasibility Analysis", Graduated May 2012.

Tejaswi Gaddam, "SCADA Safety Security Spreadsheet (S4)", Graduated December 2011.

Rohith Mandala, "A Digital Forensic Analysis of File Systems Using Freeware Tools", Graduated December 2011.

Shantan Polepally, "Study of Security Threats in Oil and Gas Industry", Graduated May 2011.

Monica Reddy Lakkadi, "Software Design for Sixth Sense Devices," Graduated May 2010.

Kishore Rao Durshanapally, "Microsoft's Identity Metasystem - Pros and Cons," Graduated May 2010.

Venkata Haranath Yakkali, "Efficient Design of SCADA Systems Using Minimum Spanning Trees and the NFR Framework," Graduated May 2010.

Vineeth Kuruchetti, "Relationship Between Values of Business Processes and Need for Supervisory Control and Data Acquisition (SCADA) Systems in Oil Refineries," Graduated May 2010.

Lakshmi Teja Attaluri, "Analysis of Requirements Ambiguity During Software Development," Graduated December 2009.

Deepthi Ravilla, "Evaluation of Security of Water Pipeline SCADA Systems Using NFR Approach," Graduated December 2009.

Anisha Vemulapalli, "Efficient and Consistent Transformation of UML Functional Requirements into BPEL Specifications for SOA-Based Systems," Graduated December 2009.

Venkata Sarat Aluri, "Vulnerability Measurement of a Web-Based System using CVSS," Graduated December 2009.

Haritha Mallidi, "Simulation and Emulation of Security Scenarios for Oil Pipeline SCADA Systems," Graduated May 2009.

Srikanth Narra, "Proposed Architecture for Improving Reliability for Oil Pipeline SCADA Systems," Graduated December 2008.

Venkata Vishnu C. Jyothula, "Comparative Study of Image and Audio Steganography," Graduated December 2008.

John Richardson Yanadi, "An Expert System for Analyzing Exit Surveys for Human Resources at UT Tyler," Graduated May 2008.

Abhinav Yarlagadda, "Analysis, Simulation, and Modeling of Signal Transduction Pathways in Pseudomonas Aeruginosa Human Cell Interaction," Graduated December 2007.

Vishnu Chunduru, "A Reliable, High Performance, and Secure Integrated Web-based Controller for the Digital Home," Graduated May 2007.

Sunil Reddy Koya, "An Automated Tool for Software Team Selection," Graduated May 2007.

Rajesh K. Uppalapati, "Psychological Assessment of the Effectiveness of UML in Communicating with Customers for Software Requirements Elicitation," December 2006.

Srikanth Konduru, "Automated Testing of JSP Based Web Applications," Graduated December 2006.

Narendra Roy Mannam, "Analysis of Software Architecture Changeability Metrics," Graduated December 2006.

Ram Bhupal Kesireddy, "Evaluation of Software Requirements Reliability," Graduated December 2006.

Harish K. Garapati, "Comparative Evaluation of Software Architecture Modifiability," Graduated May 2006.

Srikanth R. Akuthota, "A Method to Analyze Software Project Failability," Graduated May 2006.

Pooja Sachar, "A Knowledge Base for Biological Experiments," Graduated May 2006

Undergraduate Student Advising:

David Morman, "Simulations for Computer Security Education", NSF-LSAMP Program, Summer, 2014.

Michael Clarke, "Evaluation of Comparative Performance of Smartphone Platforms", NSF-LSAMP Program, Summer, 2011.

Courses Taught: (The University of Texas at Tyler)

ENGR 1200, Engineering Methods (only the Computer Science part), Fall 2007, Fall '08, Spring '10, Fall '10

COSC 1436 Programming Fundamentals, Fall 2015

COSC 3331, E-Commerce Programming, Spring 2006, Spring 2008, Fall 2009, Spring 2010

COSC 3375, Analysis and Logical Design, Fall 2007

COSC 4309, Design of Modern Information Systems, Fall 2006, Fall 2009, Fall 2011, Fall 2012, F 2013

COSC 4325, Data Communications and Computer Networks, Fall 2006, 2007, 2008

COSC 4336, Software Development, Fall 2005

COSC 4361, Software Security Management, Spring 2013, 2014, 2015

COSC 4362, Computer Security, Fall 2011, 2012, 2013, 2014

COSC 4375, Information Systems Design Project, Fall '05, '07, '08, '09, '10, '11, '12, '13, '14 Spring '10, '11, '12, '13, '14

COSC 4395, Capstone Project, Spring '06, '07, '08, '09, '10, '11, '12, '13, '14, Fall '10, '11, '12, '13, '14

COSC 5341, Computer Security, Fall 2011, 2012, 2013, 2014

COSC 5342, Computer Security Management, Spring 2013, 2014, 2015

COSC 5350, Data Communications and Networks, Spring 2014

COSC 5370, Software Engineering, Fall 2006, Fall 2008, Fall 2010, Spring 2013

COSC 5374, Software Architecture, Spring 2007, Spring 2009, Spring 2011

COSC4370 Internship Students Supervised:

Chase Rice, Fall 2011

Matt Stewart, Spring 2012

Kevin Watts, Fall 2012

Josh Hildebrandt, Spring 2013

Zach Hill, Spring 2014

EmmaLee Fulcher, Fall 2014

Terry Cawthon, Fall 2014

Nary Subramanian

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Zahra Touray, Spring 2015

Jacob Perkins, Fall 2015

Courses Taught: (Hofstra University)

ENGG 32A, Logical Design and Digital Circuits, Spring 2004

ENGG 32B, Digital Circuits Laboratory, Fall 2004

ENGG 36, Microprocessor Systems, Fall 2003, 2004

ENGG 62, Environmental Unit Operations Laboratory, Spring 2005

ENGG 101, Numerical Methods, Fall 2003, Spring 2004, Spring 2005

ENGG 153, Advanced Computer Architecture, Fall 2004

ENGG 154, Advanced Computer Architecture Laboratory, Spring 2005

ENGG 176, Network Analysis, Fall 2003

CSC 15, Introduction to Object-Oriented Programming, Summer 2004

CSC 190, Software Engineering: Theory and Practice, Fall 2004

Industry Collaboration: (The University of Texas at Tyler)

Bell Helicopter, Fort Worth, Texas

City of Tyler, Tyler, Texas

Dialect Dialogue, Tyler, Texas

Genesis, Tyler, Texas

Leadership Tyler, Tyler, Texas

NASA Columbia Scientific Balloon Facility, Palestine, Texas

PersonalWeb, Tyler, Texas

Praeses Inc, Shreveport, Louisiana

Solocron, Tyler, Texas

Texas Computer Educators Association, Austin, Texas

Trane Company, Tyler, Texas

Trinity Mother Frances Health System, Tyler, Texas

Tyler Independent School District, Tyler, Texas

Courses Taken

“DoD Information Assurance Awareness”, Air Education and Training Command, USAF, June 2011, 4 hours.

“Introduction to SCADA Security”, Colloquium on Information Systems Security Education, Dayton, Ohio, June 2011, 8 hours.

ExCEED Workshop on Teaching Engineers, January 2010, UT Tyler, 16 hours.

University and Public Service:

Introductory Cyber-Forensics (The University of Texas at Tyler):

Responsibility: A week-long introductory cyber-forensics course to Texas law enforcement

Date: March 26 – March 30, 2012

Participants: 5

Professional Engineering Review Course (Hofstra University):

Title: Digital Circuits and Systems

Responsibility: Prepared and presented two 4-hour sessions on digital circuits and systems

Date: February 2005

Participants: 15

Department Committee Service (The University of Texas at Tyler):

Member, MS Committee, Spring 2015

Member, Chair Selection Committee, Fall 2014

Member, Faculty Selection Committee, Fall – Spring 2014

Member, Chair Selection Committee, Spring 2013

Member, CIS Curriculum Committee, Fall 2011 - Present

College Committee Service (The University of Texas at Tyler):

Member, Assurance of Learning Committee, College of Business and Technology, Fall 2014.

CECS Representative, Faculty Senate, 2010-2013.

Member, College Awards Committee, 2010-2011, 2012-2013.

Chair, College of Engineering and Computer Science Commencement Committee, 2007-2010.

Member, College of Engineering and Computer Science Commencement Committee, 2006-2007.

University Committee Service (The University of Texas at Tyler):

Fellow of Service Learning, Center for Teaching Excellence and Innovation, Fall 2013 – Present.

Chair, University Faculty Awards Committee, 2011-2012.

Chair, Regents' Outstanding Teaching Award Subcommittee, 2010 – 2011.

Chair-Elect, Faculty Awards Committee, 2010–2011.

Member, Service Learning Organization and Governance Subcommittee, 2013-14.

Member, Service Learning Professional Development Group Subcommittee, 2013-14.

Member, University Service Learning Committee, 2012 – 14

Member, Faculty Awards Committee, 2012–2013.

Member, University HOP Committee, 2012-2014.

Member, University Academic Affairs Committee, 2007 – 2010.

Nary Subramanian

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Member, University Freshman Orientation Advisory Committee, 2007 – 2008

Member, University Under-Graduate Curriculum Committee, 2005-2006

Other Service:

Judge, VEX Robotics Competition for Middle and High Schools, UT Tyler, February, 2014.

Participated in the CAE Community Meeting, held on Sep. 16, 2013, at Gaithersburg, MD, to understand the changes to CAE program – trip funded by NSA.

Participated in the Teacher Mentor Pilot Program, Fall 2012 – mentored Dr. Luis Gautier, Assistant Professor Economics

External reviewer of Tenure and Promotion portfolio of Dr. Lirong Dai, Department of Computer Science and Software Engineering, Seattle University, September 2012.

Judge, FIRST Technical Challenge Robotics Competition, UT Tyler, Spring 2011, 2012.

Member of Board of Examiners for Ph.D. candidate Ms. Kamatchi, Mother Teresa Women's University, Kodaikanal, India, Spring 2011.

Guest lecture to high school students at Brook Hill School, Bullard, Texas, March 2010.

Faculty Advisor to the Student Chapter of ACM at University of Texas at Tyler, 2006 – 2008.

Faculty Advisor to the Indian Students Association at University of Texas at Tyler, 2006 – 2011.

Judge for ACM High School Programming Contest, March 2006, March 2007.

Judge for TCEA High School Programming Contest, 2007 - 2010.

Lead Judge for TCEA Robotics Inventions contest for Middle Schools, 2008, 2009, 2011.

Judge at VEX Robotics Competition for High Schools, 2010.

Judge for Computer Science Projects for Allen High School, Allen, TX, 2007-2010.

Judge for Long Island High School Science Fair Projects, Spring 2005.

September 16, 2015.