

Young J. Lee, Ph.D.

The Department of Computational, Engineering, and Mathematical Sciences
College of Arts and Sciences, Texas A&M University-San Antonio
ylee@tamusa.edu, 210-784-2376

EDUCATION:

Ph.D., Computer Science and Software Engineering, Auburn University, 2007

M.S., Computer Science, Hallym University, South Korea, 1991

B.S., Computer Science, Hallym University, South Korea, 1989

EMPLOYMENT:

- 2023-present **Associate Professor**
Department of Computing, Engineering, and Mathematical Sciences,
College of Arts and Sciences, Texas A&M University-San Antonio
- 2018-2023 **Associate Professor & Graduate Coordinator (2018-2020)**
Department of Computing and Cyber Security,
College of Business, Texas A&M University-San Antonio
- 2014-2018 **Associate Professor & Graduate Coordinator**
Department of Electrical Engineering and Computer Science,
Frank H. Dotterweich College of Engineering,
Texas A&M University-Kingsville
- 2007-2014 **Assistant Professor & Graduate Coordinator**
Visiting Assistant Professor (2007)
Department of Electrical Engineering and Computer Science,
Frank H. Dotterweich College of Engineering,
Texas A&M University-Kingsville
- 2006-2007 **Visiting Assistant Professor**
Department of Computer and Software Engineering
Embry Riddle Aeronautical University
- 2002-2006 **Assistant Professor**
Department of Computer Science, Western Illinois University
- 1998-2002 **Research Assistant & Teaching Assistant**
Department of Computer Science and Software Engineering
Samuel Ginn College of Engineering, Auburn University

1991-1998 **Research Engineer**
C³I (Command, Control, Computer and Intelligence) EW (Electronic Warfare) Division, Agency for Defense Development (ADD), South Korea
Responsible for designing and developing a security architecture of Command, Control, Communications and Intelligence (C³I) system and a real-time secure Jamming Management Software of Electronic Warfare (EW) system for warships.

FUNDED EXTERNAL GRANTS:

- 10/1/2023- **Recommended, 08/02/2023**
9/30/2025 **Co-PI, \$385,475 + \$14,516 Google Cloud credits**
Source: **National Science Foundation (NSF), Award #2334243**
Title: CAP: AI-Ready Institution Transforming Tomorrow’s Research and Education with AI Focused on Health and Security (Jag-AI)
With PI: Yang & Co-PIs: Cao & Liang
- 10/1/2021- **Co-PI, \$299,897 + \$12,000 Google Cloud credits**
9/30/2024 Source: **National Science Foundation (NSF), Award #2131193**
Title: CISE-MSI: RCBP-RF: S&CC: Building a Smart Mobility Network for the San Antonio Transit to Improve Transit Service and Social Impact
With PI: Yang & Co-PIs: Alsmadi, Abdel-Rahman, Delgado, & Cao (SP)
- 10/1/2014- **PI, \$1,199,73**
9/30/2021 Source: **National Science Foundation (NSF), Award # 1439861**
Title: Phase I Robert Noyce Teacher Scholarship Program: Future STEM Teachers in South Texas (F(ST)²), With Co-PIs: Park, Wong-Ratcliff, Ahangar, & Castro, Yang (SP), relinquished PI to Park (2018)
- 7/1/2016- **PI-TAMUK, \$48,642, Total Amount: \$447,763 for collaborative research.**
9/30/2018 Source: **National Science Foundation (NSF), Award # 1557278**
Title: Collaborative Research: Understanding Robert Noyce Teacher Scholarship Outcomes in Texas. With lead PI-C. Horn at University of Houston. Other Collaborative Universities: Stephen F. Austin University, University of Houston - Clear Lake, University of Houston, University of Houston - Downtown, University of Texas at Austin, University of Texas at Arlington, Texas State University, Texas A&M University-Kingsville

9/1/2012- **PI, \$775,775**
2/28/2015 Source: **Health Resource and Services Administration (HRSA), Award# H9CRH2288,**
Title: HINSTX (Health Information Network of South Texas) Rural HIT Network Program
With Co-PI: V. Bartelt

10/1/2012- **PI, \$291,352**
9/30/2015 Source: **National Science Foundation (NSF), Award # 1239993**
Title: Robert Noyce Teacher Scholarship Program Capacity Building: Future STEM Teachers in South Texas (F(ST)²)
With Co-PIs: Park, Wong-Ratcliff, Nijim, & Ahangar

1/1/2014- **PI, \$8,000**
1/31/2014 Source: Corpus Christi Diabetes Community Coalition
Title: DCCDatabase - Diabetes Database Management System for Coastal Bend Diabetes Community Coalition

11/1/2011- **PI, \$7,483**
10/30/2012 Source: Kiewit Offshore Services, Ltd.
Title: Construction Scheduling with Primavera P6 for Kiewit Olympus TLP

9/1/2008- **PI, \$2,400**
8/31/2009 Source: National Science Foundation (NSF)
Title: Center for the Advancement of Scholarship on Engineering Education (CASEE) with support

PROPOSAL UNDER REVIEW

2024-2029 **Co-PI, \$2,996,384, Submitted, currently pending**
Source: **U.S. Department of State**, Office to Monitor and Combat Trafficking in Persons, International Programs to Combat Human Trafficking Notice of Funding Opportunity–Stage 1: Statement of Interest.
Title: Bimodal Inquiry of Human Trafficking in East Asia and the Pacific: Criminological Analysis of Perpetrators and Use of Artificial Intelligence in Detecting Employment, Romance, and Financial Scams in Philippines
With PI: C. Braaten, A&M-SA & Co-PIs: D. Braaten, A&M-SA & N. Reye, Sonoma State University

FUNDED INTERNAL GRANTS:

7/2016-6/2017 **Co-PI, \$10,000, With PI - Monica Wong-Ratcliff**
Title: NSF Noyce Summer Internship Program
Source: TAMUK Support of Service-Learning Courses or Programs

- 1/2015-6/2015 **Co-PI, \$10,000**, With PI - Monica Wong-Ratcliff
 Title: NSF Noyce Summer Internship Program
 Source: TAMUK Support of Service-Learning Courses or Programs
- 1/2015-7/2015 **Co-PI, \$4,500**, With PI- Jeong Yang
 Title: One-to-One Virtual Mentoring System (VMS) for Enhancing Student Programmer’s Programming Skill and Logical Thinking
 Source: TAMUK Council for Undergraduate Research (TCUR)
- 11/20/2012-12/31/2013 **Co-PI, \$11,907, With** PI - Joon-Yeoul Oh, Co-PI - Richard A. Aukerman
 Title: Development of Air Pollution Alert System: Integrating Air Quality Forecasting Models and Location-aware Mobile Devices
 Source: University Research Award
- 1/1/20212-6/1/2013 **Co-PI, \$14,997, With** PI - Nuri Yilmazer, Co-PI - Kuo-Jen Liao
 Title: Development of Air Pollution Alert System: Integrating Air Quality Forecasting Models and Location-aware Mobile Devices
 Source: University Research Award
- 1/2011-12/2011 **PI, \$16,980 with** PI – Robert Diersing
 Title: Mobile Device Programming Laboratory in Support of Graduate Education and Economic Development
 Source: University College/Office of Title V Program/PPOHA Internal Equipment Grant
- 10/1/2010-12/31/2011 **PI, \$12,300, With** Co-PI – Wei-Da Hao
 Title: Categorizing Object-Oriented Software Architecture
 Source: University Research Award

PUBLICATIONS: PEER-REVIEWED JOURNALS (* indicates student)

- **Y. Lee**, J. Yang, & M. Abdel-Rahman, D. Delgado, “SmartSAT: A Customizable Mobile-Web App for Enhancing San Antonio Public Transit Efficiency and Equity,” SoftwareX Journal, 2023, under review.
- M. Abdel-Rahman, J. Yang, **Y. Lee**, & D. Delgado, “Enhancing Sustainable Urban Mobility: Leveraging Data Analytics to Optimize Bus Schedule Adherence within the San Antonio Transit System”, Information Systems Frontiers, 2023, under review.
- M. Ansari*, **Y. Lee**, & J. Yang, “Enhancing Python Code Vulnerability Detection: A Combined Approach Using Static Analysis and Code Property Graph”, Journal of Cybersecurity Education, Research and Practice, 2023, in preparation for submission.
- Yang, J., Kim, Y. R., Lee, Y., & Earwood, B. “Assessing cyber security problem-solving skills of engineering students through model-eliciting activities”, IEEE Access, 2023, in preparation for submission.

- T. Kim, J Ochoa, T Faika, A Mantooth, J Di, Q Li, **Y Lee**, "An Overview of Cyber-Physical Security of Battery Management Systems and Adoption of Blockchain Technology," *2022 IEEE Journal of Emerging and Selected Topics in Power Electronics*. doi: 10.1109/JESTPE.2020.2968490. <https://ieeexplore.ieee.org/document/8964396>.
- J. Yang, **Y. Lee**, A. Hernandez, & J. Sanchez*, "Evaluating and Securing Text-Based Java Code through Static Code Analysis," *Journal of Cybersecurity Education, Research and Practice*, Vol. 2020: No. 1, Article 3. <https://digitalcommons.kennesaw.edu/jcerp/vol2020/iss1/3/>
- Kim, T.; Makwana, D.; Adhikaree, A.; Vagdoda, J.S.; **Lee, Y.** Cloud-Based Battery Condition Monitoring and Fault Diagnosis Platform for Large-Scale Lithium-Ion Battery Energy Storage Systems. *Energies* 2018, 11, 125. <https://doi.org/10.3390/en11010125>.
- J. Yang, **Y. Lee**, and Kai H. Chang, "Evaluations of JaguarCode: A Web-Based Object-Oriented Programming Environment with Static and Dynamic Visualization," *The Journal of Systems and Software* (2018), DOI: 10.1016/j.jss.2018.07.037. <https://www.sciencedirect.com/science/article/abs/pii/S016412121830147X>
- **Y. Lee**, M. D. Bhargavan*, & J. Yang, "Teaching Test-Driven Development Using Dojo ", *Journal of Computing Sciences in Colleges*, Volume 32 Issue 4, ACM Digital Library, April 2017. <https://dl.acm.org/doi/abs/10.5555/3055338.3079049>
- M. N. Rahman*, M. N. Hossain*, & **Y. Lee**, "Collapsible Tabular Visualization of Aspects in Object Oriented Programming", *GSTF Journal on Computing*, Vol.5 No.3, 2017. <http://dl6.globalstf.org/index.php/joc/article/view/1877/2301>
- A. Ghosh* & **Y. Lee**, "An Empirical Study of a Hybrid code clone detection approach on Java byte code", *Journal on computing*, *GSTF Journal on Computing*, Vol.5 No.2, 2017. <http://dl6.globalstf.org/index.php/joc/article/view/1781/2309>
- K. Shah*, J. Yang, & **Y. Lee**, "Enhancing Engineering Education Using Virtual Lab Technology", *Transactions on Techniques in STEM Education*, Vol. 1 No. 4, 2016.
- J. Yang, **Y. Lee**, S. Park, M. Ratcliff, and R. Ahangar, "Discovering the Needs Assessment of Qualified STEM Teachers for the High-Need Schools in South Texas", *Journal of STEM Education*, Vol 16., Issue 4, 2015. <https://www.jstem.org/jstem/index.php/JSTEM/article/view/1948/1699>
- P. Koyya*, **Y. Lee**, and J. Yang, "Feedback for Programming Assignments Using Software-Metrics and Reference Code," *International Scholarly Research Notices (ISRN) Software Engineering*, Vol. 2013, Article ID 805963, 2013. doi:10.1155/2013/805963.
- Hyung J. Yoo*, **Y. Lee**, "Use of Cell Block as an Indent Space in Python", *International Journal of Software Engineering*, Vol 4., No. 1, pp. 33-43, 2013.

- N. Yilmazer, Kuo-Jen Liao, **Y. Lee**, J. Mora*, William Webb*, Remzi Seker, "A New Generation Air Pollution Alert System: Integrating Air Quality Models and Location-Aware Mobile Devices", *International Journal of Environmental Monitoring and Analysis*. Vol. 1, No. 1, pp. 21-26, 2013.
- T. H. Kang*, **Y. Lee**, and M. Nijim, "Task-Based Visualization using Merged View", *Journal of Communication and Computer*, Vol 9. pp. 665-668, 2012.
- **Y. Lee**, V. C. Rajasekar* and P. R. Kasula*, "Accessibility of Website for Visually Challenged: Combined Tree Structure and XML Metadata", *GSTF Journal on Computing*, Vol.2 No.1. pp. 7-10, 2012.
- **Y. Lee** and J. Yang, "Locating Reusable Classes Using Dependency in Object-Oriented Software", *GSTF Journal on Computing*, Vol.2 No.1. pp.134-139, 2012.
- M. Nijim, **Y. Lee**, N. Yilmazer, and R. Seker, "A data mining algorithm for multi-level prefetching in storage systems", *Ubiquitous Computing and Communication Journal*, pp. 10-19, 2011.
- R., V.C.S., **Lee, Y.**, Schreur, B. (2010). Accessing Web Based Multimedia Contents for the Visually Challenged: Combined Tree Structure and XML Metadata. In: Sobh, T. *Innovations and Advances in Computer Sciences and Engineering*. Springer, Dordrecht. https://doi.org/10.1007/978-90-481-3658-2_80.
- **Lee, Y.**, Yang, J., Chang, K.H. (2010). Identifying Connected Classes for Software Reuse and Maintenance. In: Sobh, T. *Innovations and Advances in Computer Sciences and Engineering*. Springer, https://doi.org/10.1007/978-90-481-3658-2_68.
- K., S., J., O., **Lee, Y.** (2010). Mobile Application for Healthcare System - Location Based. In: Sobh, T. (eds) *Innovations and Advances in Computer Sciences and Engineering*. Springer, Dordrecht. https://doi.org/10.1007/978-90-481-3658-2_51.

PUBLICATIONS: PEER-REVIEWED BOOK CHAPTERS (* indicates student)

- **Lee, Y.**, "Visualizing Static Analysis Warnings by Dynamic Trace". Springer Nature Book: *Transactions on Computational Science & Computational Intelligence-Advances in Security, Networks, and Internet of Things*, (in press).
- Tang, C.*, & **Lee, Y.** "Applying Equivalent Mutant to Refactoring the Security Vulnerabilities". Springer Nature Book: *Transactions on Computational Science & Computational Intelligence-Advances in Security, Networks, and Internet of Things*, (in press).
- Yang J., **Lee Y.**, McDonald A.P*. (2021) *SolarWinds Software Supply Chain Security: Better Protection with Enforced Policies and Technologies*. In: Lee R. (eds) *Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed*

Computing. SNPD 2021. Studies in Computational Intelligence, vol 1012. Springer, Cham. https://doi.org/10.1007/978-3-030-92317-4_4

- **Y. Lee & J. Yang.** (2020). Analysis of Bug Types of Textbook Code with Open-Source Projects. Springer Nature Book: Transactions on Computational Science & Computational Intelligence-Advances in Software Engineering, Education, and e-Learning, https://link.springer.com/chapter/10.1007/978-3-030-70873-3_44
- Shah, K.B*, **Lee, Y.** (2014). Automatic Sensor Configuration for Creating Customized Sensor Network. In: Silhavy, R., Senkerik, R., Oplatkova, Z., Silhavy, P., Prokopova, Z. (eds) Modern Trends and Techniques in Computer Science. Advances in Intelligent Systems and Computing, vol 285. Springer, Cham. https://doi.org/10.1007/978-3-319-06740-7_28.

PUBLICATIONS: PEER-REVIEWED CONFERENCE PAPERS (* indicates student.
All papers were presented at the international level conference.)

- **Y. Lee, J. Yang, & Y. R. Kim,** “Adopting Model-Eliciting Activities in an Undergraduate Software Engineering Course through Real-World Projects,” IEEE Frontiers in Education Conference (FIE), 2023.
- **Y. Lee, A. McDonald*, & J. Yang,** “Identifying Code Tampering Using A Bytecode Comparison Analysis Tool,” 2023 IEEE/ACIS International Conference on Software Engineering Research, Management and Applications (SERA 2023).
- **J. Yang, Y. Lee, W. Noonan*, and A. Abraham*.** 2022. Demo Abstract: SmartSAT - A Customizable Secure App for San Antonio Transit Pilot Project. In Proceedings of the 20th ACM International Symposium on Mobility Management and Wireless Access (MobiWac '2022). <https://doi.org/10.1145/3551660.3560910>.
Selected ACM Research Showcase on Kudos:
<https://www.growkudos.com/publications/10.1145%25252F3551660.3560910/reader>
- **M. Abdel-Rahman, I. Alsmadi, D. Delgado, & Y. Lee,** Prediction and Analysis of Bus Adherence to Scheduled Times: San Antonio Transit System, 2022 Annual Americas Conference on Information Systems (AMCIS).
https://aisel.aisnet.org/amcis2022/sig_dsa/sig_dsa/9/
- **Y. Lee & J. Yang,** “Visualization of Context Sensitive Data Flow for Secure Object-Oriented Programming,” International Conference on Software Engineering Research and Practice (SERP), July 2019.
<https://www.kriso.ee/software-engineering-research-practice-db-9781601325105.html>
- **Lee, Y., & Yang, J.** (2019, April), *Reverse Engineering Environment for Teaching Secure Coding in Java* Paper presented at 2018 ASEE Gulf Southwest Section Conference, AT&T Executive Education and Conference Center. <https://peer.asee.org/31596>.

- J. Yang, A. Lodgher, and **Y. Lee**, "Secure Software Engineering Modules for Undergraduate Software Engineering Courses", 2018 IEEE Frontiers in Education (FIE): Fostering Innovation Through Diversity. <https://ieeexplore.ieee.org/document/8658433>
- S. S. Kumbhar*, **Y. Lee** and J. Yang, "Hybrid Encryption for Securing SharedPreferences of Android Applications," *2018 1st International Conference on Data Intelligence and Security (ICDIS)*, 2018, pp. 246-249, doi: 10.1109/ICDIS.2018.00047. <https://ieeexplore.ieee.org/document/8367771>
- S. Kumbhar, T. Faika, D. Makwana, T. Kim and **Y. Lee**, "Cybersecurity for Battery Management Systems in Cyber-Physical Environments," *2018 IEEE Transportation Electrification Conference and Expo (ITEC)*, 2018, pp. 934-938, doi: 10.1109/ITEC.2018.8450159. <https://ieeexplore.ieee.org/document/8450159>
- A. Adhikaree, T. Kim, J. Vagdoda, A. Ochoa, P. J. Hernandez and **Y. Lee**, "Cloud-based battery condition monitoring platform for large-scale lithium-ion battery energy storage systems using internet-of-things (IoT)," *2017 IEEE Energy Conversion Congress and Exposition (ECCE)*, 2017, pp. 1004-1009, doi: 10.1109/ECCE.2017.8095896. <https://ieeexplore.ieee.org/document/8095896>
- J. Yang, **Y. Lee** and K. H. Chang, "Initial Evaluation of JaguarCode: A Web-Based Object-Oriented Programming Environment with Static and Dynamic Visualization," *2017 IEEE 30th Conference on Software Engineering Education and Training (CSEE&T)*, 2017, pp. 152-161, doi: 10.1109/CSEET.2017.32. <https://ieeexplore.ieee.org/document/8166696>
- J. Yang, **Y. Lee**, D. Gandhi* and S. G. Valli*, "Synchronized UML diagrams for object-oriented program comprehension," *2017 12th International Conference on Computer Science and Education (ICCSE)*, 2017, pp. 12-17, doi: 10.1109/ICCSE.2017.8085455. <https://ieeexplore.ieee.org/document/8085455/similar#similar>
- Oh, J.; **Lee, Y.**; Gharehgozli, Amir Hossein (2016). Developing Early Risk Detection and Preparedness System with Risk Analysis and Contingency Plan. Mary Kay O'Connor Process Safety Center; Texas &M University. Libraries. Available electronically from <https://oaktrust.library.tamu.edu/handle/1969.1/193647>
- J. Yang, **Y. Lee**, and D. Hicks "Synchronized Static and Dynamic Visualization in a Web-Based Programming Environment," *IEEE International Conference on Program Comprehension (ICPC)*, 2016, doi: 10.1109/ICPC.2016.7503733. <https://ieeexplore.ieee.org/document/7503733>
- M. Srinivasan*, J. Yang and **Y. Lee**, "Case studies of optimized sequence diagram for program comprehension," *2016 IEEE 24th International Conference on Program*

Comprehension (ICPC), 2016, pp. 1-4, doi: 10.1109/ICPC.2016.7503734.

12 Google citations. <https://ieeexplore.ieee.org/document/7503734>

- B. Earwood*, J. Yang and **Y. Lee**, "Impact of static and dynamic visualization in improving object-oriented programming concepts," *2016 IEEE Frontiers in Education Conference (FIE)*, 2016, pp. 1-5, doi: 10.1109/FIE.2016.7757639. <https://ieeexplore.ieee.org/document/7757639>
- M. Srinivasan*, **Y. Lee** and J. Yang, "Enhancing Object-Oriented Programming Comprehension Using Optimized Sequence Diagram," *2016 IEEE 29th International Conference on Software Engineering Education and Training (CSEET)*, 2016, pp. 81-85, doi: 10.1109/CSEET.2016.37. <https://ieeexplore.ieee.org/document/7474469?reload=true>
- J. Yang, **Y. Lee**, D. Hicks and K. H. Chang, "Enhancing object-oriented programming education using static and dynamic visualization," *2015 IEEE Frontiers in Education Conference (FIE)*, 2015, pp. 1-5, doi: 10.1109/FIE.2015.7344152. <https://ieeexplore.ieee.org/document/7344152>
- J. Oh, **Y. Lee**, N. Yilmazer, K. Raman, & L. Peel, "Risk Mitigation in Mass Evacuation with Evacuation Routing Aid and Procedure", *4th International Conference on Disaster Management and Human Health: Reducing Risk, Improving Outcomes*, 20 - 22 May 2015, Istanbul, Turkey.
- J. Oh, **Y. Lee**, N. Yilmazer and K. Raman, "Decision Making in Evacuation From Disaster" *Proceedings of the International Association for Computer Information Systems (IACIS)*, 2014. <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.567.7220&rep=rep1&type=pdf>
- K. Shah*, A. Ghosh*, Md Naim Hossein*, **Y. Lee**, "Enhancing Engineering Educational Using Virtual Lab Technology," *Zone 1 Conference of the American Society for Engineering Education (ASEE)*, Bridgeport, Connecticut, 2014. <https://monolith.asee.org/documents/zones/zone1/2014/Student/PDFs/180.pdf>
- **Y. Lee**, J. Oh, N. Yilmazer, A. Ghosh*, Md Naim Hossein*, "An Integrated Emergency Evacuation System for Real-Time Operations - A Case Study of the Eagle Ford Shale Gas Area, South Texas," *Shale Energy Engineering*, pp. 502-511, 2014. <https://ascelibrary.org/doi/10.1061/9780784413654.053>
- J. Oh, **Y. Lee**, & N. Yilmazer, "Realtime Mobile Evacuation Routing Systems", *IACIS 2013 International Conference*, San Juan, Puerto Rico, 2013.
- N. Mantrawadi*, M. Nijim, & **Y. Lee**, "Object identification and classification in a high resolution satellite data using data mining techniques for knowledge extraction", *Proceeding pp.750-755, IEEE International Systems Conference (SYSCON)*, 2013.

- N. Yilmazer, K. Liao, **Y. Lee**, J. Mora*, and W. Webb*, "Development of A Real-Time Air Pollution Alert System Using Smart Phones", Proceedings of the International Conference on Distributed Multimedia Systems (DMS), pp. 39-41, 2012.
- M. Nijim, **Y. Lee**, and K. Bellam, "HyBuM: Hybrid Energy Efficient Architecture for Mobile Storage Systems", Proceedings of IEEE International Conference on Information Technology : New Generations (ITNG), pp. 214-220, 2012
- **Y. Lee** and J. Yang, "Identifying Architectural Changes Using Software Metrics", Proceedings of the International Conference on Software Engineering Research and Practice (SERP), pp. 370-375, 2010.
- H. Yoo* and **Y. Lee**, "Software Visualization: Replacing Tab in Python Programming with Cell Block in Spreadsheet", Proceedings of the International Conference on Software Engineering Research and Practice (SERP), pp. 76-79, 2010.
- T. Kang*, **Y. Lee**, and Wei-Dao, "Task-Based Visualization for Software Maintenance", Proceedings of the International Conference on Software Engineering Research and Practice (SERP), pp. 563-567, 2009.
- **Y. Lee** and J. Yang, "Visualization of Software Evolution ", Proceedings of the International Conference on Software Engineering Research and Practice (SERP), pp. 343-348, 2008.
- J. Oh, **Y. Lee**, and R. A. Aukerman, "Decision Support Systems in Highway Traffic Control", Proceedings of the International Association for Computer Information Systems (IACIS), 2008.
- **Y. Lee**, J. Yang and K. H. Chang, "Metrics and Evolution in Open Source Software," *IEEE Seventh International Conference on Quality Software (QSIC 2007)*, 2007, pp. 191-197, doi: 10.1109/QSIC.2007.4385495.
- **Y. Lee** and Kai H, Chang, "Reusability and maintainability metrics for object-oriented software," *ACM-SE 38: Proceedings of the 38th annual on Southeast regional conference*, 2000, <https://doi.org/10.1145/1127716.1127737>.

COURSES TAUGHT (G: Graduate level):

At Texas A&M University-San Antonio

- (G) CSCI 5353 Secure Software Development
- (G) CSCI 5366 Software Quality Assurance
- (G) CSCI 5362 Operating Systems
- (G) CSCI 5316 Software Engineering
- (G) CSCI 5304 Database Systems
- CSCI 4335 Mobile App Development II (iOS)
- CSCI 4317 Software Engineering II

- CSCI 4316 Software Engineering I
- CSEC 3385 Secure Software Engineering
- CSCI 3362 Operating Systems
- CSCI 3354 Web Application Development
- CSCI 3306 Programming Languages
- CSCI 3304 Database Systems
- CSCI 2322 Discrete Structures-Computing
- CSCI 1436 Programming Fundamentals I & Lab

At Texas A&M University-Kingsville

- (G) CSEN5401 Advanced Topics in CS
- (G) CSEN5325 Software Engineering
- (G) CSEN5322 Operating Systems
- (G) CSEN5306 Thesis
- (G) CSEN5305 Graduate Research Project
- (G) CSEN5303 Object-Oriented Analysis and Design
- (G) CSEN5303 Mobile Application Programming (Android and iOS)
- (G) CSEN5303 Web Programming
- (G) CSEN5303 T: Studies on Current Research
- CSEN4362 Operating Systems
- CSEN4336 Special Problems (iOS Swift Programming)
- CSEN4335 Mobile Application Programming
- CSEN4317 Software Engineering II
- CSEN4316 Software Engineering I
- CSEN3331 iOS Mobile App Development
- CSEN2310 Object-Oriented Software Engineering

At Embry Riddle Aeronautical University

- (G) CS550 Current Trends in Software Engineering
- (G) CS420 Software Quality Assurance
- SE300 Software Engineering Practice
- CS211 Principles of Computer Science
- CS118 Fundamentals of Computer Programming (Python)

At Western Illinois University

- (G) CS585 Topics of Software Engineering
- CS491 Software Engineering I
- CS492 Software Engineering II
- CS484 Network and Data Communication Concepts
- CS483 Microcomputer Systems with Database Applications
- CS410 System Programming
- CS371 UNIX

- CS310 Computer Organization
- CS301 Advanced Microcomputer Systems with Spreadsheet Applications
- CS212 Java Programming

M.S. THESIS ADVISOR:

- (Committee) Anoop Abraham, "Analyzing the System Features, Usability, and Performance of a Containerized Application on Cloud Computing Systems," graduated in August 2023.
- (Committee) Arlen McDonald, "Investigating Security Standards and Technologies Related to SolarWinds Breach," graduated in December 2021
- Sushanth Manakhari, "Automated Test Case Generation to overcome 'Pesticide Paradox' for Integrated Testing in Object Oriented Programming", May 2016
- Marepalli Dhanunjaya Bhargavan, "Evaluation of Learning Test Driven Development Using DOJO in a University Environment", Dec 2015
- Md. Nahid Rahman, "Collapsible Tabular Visualization of Aspects in Object Oriented Programming," Dec 2015
- Aritra Ghosh, "Enhancing Quality of Code Detecting on java Byte Code," Dec 2015
- Md. Naim Hossain, "Tabular Visualization of Aspects in Object Oriented Programming", August 2015
- Nadipineni Narendranadh, "Automation of Plagiarism Detection Tool", May 2015
- Sasikanth Dale, "Analyzing Novice Programmer's Activity Using Face Expression", May 2014
- Ramya Gujja, "Metrics and Software Evolution", May 2014
- Prajjwal Gupta, "Authorship in Pair Programming using version control and face recognition", May 2014
- Pardha Koyya, "Automation of Programming Assignment Grading: Using Software-metrics and Reference Code", December 2013
- Govind Gupta, "Mobile Map API Wrapper for Evacuation Routing", December 2013
- Pranay Kumar Sevela (Awarded outstanding graduate student of COE), "Determining the Barriers Faced by Novice Programmers", May 2013
- Sireesha Maddhela, "A Prototype Query-by-Humming Database System for Indian Classical Music", December 2011
- HyungJun Yoo, "Programming in spreadsheet use of cell block as an indent space in python", July 2010
- Arun Bakshi, "Secured wireless routing protocol for mobile ad hoc network," December 2010

- Avinash Saxena, "Performance testing of cloud based deployed GIS system", December 2010
- TaegHyun Kang, "Task-Based Visualization for Software Maintenance" August 2009
- Victoria Christy Sathya Rajasekar, "Integrated Multimedia Interface for the Visually Challenged" August 2009

STUDENT PROJECT ADVISOR:

- 2023: Faculty Sponsor, Student Research Symposium: Mohammed T. U. Ansari, "Hybrid taint analysis to identify Python Vulnerabilities," Master Oral Presentation.
- 2022, Faculty Sponsor, Student Research Symposium: Chunyang Tang, "Better system for detecting, revising and confirming Java program security bugs", Master Oral Presentation.
- 2015: Faculty Sponsor, Texas A&M University System Annual Pathways Student Research Symposium, Master presentation
 - Swetha Murthy and Sai Kiran, "Web-Based Interactive Programming Environment using Static and Dynamic Visualization."
 - Dhanunjaya Bhargavan Marepalli, "Evaluating Test-Driven Development Through Object-Oriented Metrics"
 - Md. Nahid Rahman, "Collapsible Visualization of Aspects in Object-Oriented Programming"
- 2014-2015: College of Engineering Graduate poster competition (Awarded) Swetha Murthy, Sai Kiran Bramahadandi, Young Lee, "Web IDE for Noyce Programmers.
- 2013-2014: College of Engineering Graduate poster competition
 - Sasikanth Dale, Young Lee, "A Study of Detecting the Adversities faced by the Novice Programmers in java Language using Face Recording"
 - Ketul Shah, Aritra Ghosh, Md. naim Hossain, Young Lee, "Virtual Lab technology for enhancing engineering education"
 - Aritra Ghosh, Wei-Da Hao, Mais Nijim, Young Lee, "Virtual Reality for pipeline safety Training"
- 2013-2014: Undergraduate senior design project team advised, Gaylon Taylor, Jaleal Butler, "Retina Image for Diabetes"

- 2013: Sasikanth Dale, “A study of Detecting the adversities Faced by the Novice Programmers in Java Language using Facial Expression”, 11th Pathways, Master’s Poster Presentation.
- 2010: Daniel Clancy, “Design and Construction of a Robust Public Access Computer System”, Javelina Research Symposium
- 2010: (**Awarded First place at Master Students**), Keyur Jadhav and Preethi Lodha, “Schematizing Maps”, Texas A&M Pathway
- 2019: Hyung-Joon Yoo, “Unified indent style with colored blocks for Python using Spreadsheet”, Texas A&M Pathways Research Symposium
- 2009: Joseph Brysch, “Simple Java”, Texas A&M Pathway Research Symposium
- 2008: Taeg-Hyun Kang, “Task-Based Visualization for Software Maintenance”, Texas A&M Pathways Research Symposium
- 2008: Sarin Kizhakkepuravil, Texas A&M Pathway, “Healthcare Mobile Network Application”, Texas A&M Pathways Research Symposium
- 2008: (**Awarded First Place at Master Students**) Victoria Christy Sathya Rajasekar, “Integrated Multimedia Interface for the Visually Challenged”, Texas A&M Pathways Research Symposium

SCHOLARSHIPS, ACADEMIC TRAINING & PROFESSIONAL DEVELOPMENT:

July 17 – 28, 2017: DeepSpec, Summer School of Verified Systems, University of Pennsylvania, Philadelphia, PA: DeepSpec is an Expedition in Computing that focuses on the formal specification and verification of full functional correctness of secure software and hardware. Funded by National Science Foundation (NSF).

June 15 - 27, 2015: OPLSS (Oregon Programming Languages Summer School) - Types, Logic, Semantics, and Verification, University of Oregon, Eugene, OR: OPLSS is the mix or interplay of theory and practice in program verification that presents a range of material, from foundational work on semantics and type theory to advanced program verification techniques. Ideas are applied to yield proved-correct software by software verification using the proof assistant Coq in order to provide machine-checked proofs of program correctness and security. Funded by NSF, ACM, Microsoft Research, and Facebook.

Jan 28 – Mar 11, 2022: Complete the Google Cloud Platform Training Courses,

- From Data to Insights with Google Cloud Platform
- Machine Learning On Google Cloud
- Google Cloud Fundamentals: Big Data and Machine Learning
- Machine Learning on Google Cloud

As the result of a partnership between the NSF and Google and NSF award 21-533, I received instructor-led Google Cloud training sessions to train myself all the skills you need to use Google Cloud in NSF SmartSAT project. I completed all 4 sessions, instructor-led sessions conducted over video alongside faculty from other institutions and their team members awarded through NSF 21-533 who are using Google Cloud.

January 28th - Google Cloud Fundamentals: Big Data and Machine Learning (1 day)
 February 9-11 - Machine Learning on Google Cloud (3 day)
 February 23-25 - From Data to Insights with Google Cloud Platform (3 day)
 March 9-11 - Teaching Google Cloud Foundations (3 day)

Mar 23, 2022: Attended, NASEM and Department of Defense UARC Town Hall, Empathetic Leadership Online Session, professional trainer, Julie Burch, discussed "Advanced Leadership Skills: Accountability, Empowerment and Values Based Decisions."

Aug 2022 – Fall 2023: Association of College and University Educators (ACUE) Effective June 2022: Teaching Practices course, the ACUE Effective Teaching Certification. Attended, The Texas A&M System Council for Academic Technology and Innovative Education (CATIE), the 2022 Texas A&M Chancellor’s Conference on Academic Technology, June 27-28, 2022.

June 7, June 21 2022: Participated, Minority Serving Institutional Readiness for Federal Grant Preparation Workshop (MSI-RFP), Research Infrastructure Assessment Tool (RIAT), Received a stipend of \$1,800

July 22 2022: Attended "New IUSE:HSI Program Solicitation Information Session," NSF
 Sep 27, 2022: Attended, The U.S. National Science Foundation (NSF) webinar, NSF’s Directorate for Technology, Innovation, and Partnerships (TIP)

Mar 21, 2022: Attended, Security Summits
 May 2022: Attended Security Week’s Threat Intelligence Summit
 Mar 2022: Attended Security Week’s Supply Chain Security Summit,
 Attended, Connecting with Hispanic-Serving Institutions on a Proposed New NSF Directorate,
 Feb 25, 2022

GRADUATE COORDINATOR EXPERIENCE:

I had been a Graduate Coordinator for the M.S. program in Computer Science at Texas A&M University-Kingsville from 2008 - 2018. As shown below, I processed a big number of applications (a total of 7660 applications from 2012-FA to 2017-FA) and contributed to the MS-CS program in great success.

	No. of Completed Applicants	No. of Accepted Applicants	No. of Enrolled Admits		No. of Completed Applicants	No. of Accepted Applicants	No. of Enrolled Admits
2017-FA	453	340	74	2015-SP	598	362	108
2017-SU	31	17	3	2014-FA	1124	818	253
2017-SP	470	317	50	2014-SU	138	99	44
2016-FA	964	642	126	2014-SP	737	591	146
2016-SU	85	44	11	2013-FA	597	486	133

2016-SP	678	440	142	2013-SU	61	56	16
2015-FA	1039	628	192	2013-SP	315	256	52
2015-SU	77	40	15	2012-FA	293	240	41
Total	3797	2468	613		3863	2908	793

ABET EXPERIENCE:

I have been an ABET Committee member for Computer Science in the department of Computing and Cyber Security Department at A&M-SA since 2018.

I developed the rubrics for all courses required for the BS in Computer Science at Texas A&M University-Kingsville: CSEN 2304, CSEN 2306, CSEN 2310, CSEN 2328, CSEN 3314, CSEN 3315, CSEN 3316, CSEN 4201, CSEN 4202, CSEN 4317, CSEN 4320, CSEN 4340, CSEN 4362, CSEN 4366. The rubrics have been used for assessing student learning outcomes for the ABET accreditation including Fall 2013 ABET visit and Fall 2015 ABET Focus visit.

I was an active faculty member in preparing ABET reports, assessment reports, and relevant documents and attending advisory board meetings. I was also a member of SACS and IEP Advisory Committee at TAMUK.

SERVICE TO UNIVERSITY:

- 2021-present Graduate Council Member, representing computing graduate programs, Since Fall 2021 and in 2022, I have served on the Graduate Council for the university. The Council works hard to shape graduate studies at the university. As a member, I have worked with other members on establishing strategic goals, procedures, and policies that outline graduate study's focus areas. The Council is formed with two representatives from each college and the faculty senate.
- 2022-present Steering member, Proyecto Exito for graduate programs
- 2023 Search Committee Member, Dean of Graduate Studies
- 2023 Search Committee Member, Assistant Director of International Affairs
- 2019-2022 Quantitative Reasoning Advisory Committee Member: Implementation of Quality Enhancement Plan (QEP)
- 2020-2022 Freshman students' mentor, University Faculty Advising Program, Mentor for TAMUSA CS/CIS/COB freshman students. Advised Freshmen Students as a Mentor
Faculty Students Training Experience Learning Group Discussion (Sep 3, 2022)
- 2021-2022 Student Research Symposium Faculty Sponsor
- 2020-2021 Search Committee Member, Dean of College of Business
- 2020-2021 Faculty Grievance Panel

2019-2022	University Faculty Advisory
2019-2021	University Curriculum Committee Member on undergraduate curriculum proposals from three Colleges
2010-2018	University Technology Advisory Committee (UTAC), representing College of Engineering, TAMUK
2016	Distinguished Student Award committee, College of Engineering representative select Distinguished Graduate & Undergraduate students
2016	MSSE committee, preparing a new M.S. degree in Software Eng. (SW)
2015	Advisor, ACM Student Organization
2015	Judge, 6th annual Javelina Research Symposium
2015	Judge, Senior Design Conference
2012	Presenter, CS programs at Javelina Preview Day
2012	Presenter, High School Recruitment fair (South Texas Career Expo) for recruitment with post presentation in J. K. Northway Expo Center
2011	Presenter, EECS booth at 2011 Annual Engineering Student Design and Research Conference, Hoggie Day
2011-2016	Faculty Advisor, "Computer Science Association (CSA)" student organization, Attended CCDC competition, Texas A&M College Station, March 10-12, 2012; Attended CCDC competition, Online, February 2013; CSA received "Because You Care Award" sponsored by Keep Kingsville Beautiful (KKB), October 8, 2012

PROFESSIONAL SERVICE:

2023	NSF Panelist/Reviewer, Regional Innovation Engines Type-2
2023	Journal Reviewer, SN (Springer Nature) Computer Science Journal
2023	Journal Reviewer, IEEE Access Journal
2023, 2022	Reviewer, CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing Conference, Doctoral Consortium
2014-present	Reviewer, IEEE Frontiers in Education (FIE) Conference: Fostering Innovation Through Diversity
2018-present	A&M-SA representative, Computing Alliance of Hispanic-Serving Institutions (CAHSI)
2022	Journal Guest Editor, Topical Issue 'Advances in Computational Intelligence for Artificial Intelligence, Machine Learning, Internet of Things and Data Analytics', Springer Nature Computer Science Journal.
2022	Journal Reviewer, IEEE Access

- How Do Organizations Seek Cyber Assurance? Investigations on the Adoption of the Common Criteria and Beyond, May 23, 2022
- 2022 Reviewer, Tapia 2022 Doctoral Consortium, May 11 - May 29, 2022
<https://tapiaconference.cmd-it.org/>
- 2022, 2021 Poster Reviewer, CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing Conference
- 2022 Technical Program Committee Chair, International Conference on Analytics and Learning in Computational Systems (ICALCS – 2022) at GSSS Institute of Engineering and Technology for Women, Mysuru, India
<https://geethashishu.in/icalcs/>
The conference has been hosted in December 2022 in association with Elsevier, focusing on analytics learning in the fields of AI, Machine Learning, Computational Analytics, Evolutionary Computing, Cloud Computing, Data Analytics, Data Mining Applications, etc.
- 2022 Review, ELSEVIER IST, INFOSOF-D-19-00614 entitled Fixing Design Inconsistencies of Polymorphic Methods using Sequence Models for Information and Software Technology
- 2021 Journal Reviewer, Journal of Frontiers in Artificial Intelligence
- 2021 Editorial Board of AI in Business as Review Editor, Journal of Frontiers in Artificial Intelligence
- 2021 Journal Reviewer, Engineering Reports Journal
- 2021, 2020, 2016 NSF Panelist/Reviewer, Robert Noyce Teacher Scholarship Program
- 2021 Committee/Task Force, Computing Alliance of Hispanic-Serving Institutions (CAHSI) (Regional)
- 2020 Journal Reviewer, Information and Software Technology Journal
- 2020, 2018, 2014 Editorial Board Member, Journal of Biometrics and its Applications
- 2020 Committee, KASTE (Korean American Society for Technology Entrepreneurship)
- 2020 -2015 Reviewer, ACM SIGCSE, paper and tool demo review
- 2020, 2018 Journal Guest Editor, Asian Journal of Research in Computer Science
- 2019 Technical Program Committee Chair, 'International Conference on Adaptive Computational Intelligence (ICACI- 2022)' at GSSS Institute of Engineering and Technology for Women, Mysuru, India
- 2019 Journal Reviewer, Wiley Engineering Reports Journal
- 2019 Judge, FBLA-PBL National Leadership Conference (NLC),
- 2019 Panelist, Research guideline of Broadening Participation in k-12 STEM Education Research, invited by the Center for Gender Equity in Science and Technology (CGEST) AZ
- 2019 Committee Chair, International Conference on Computational Intelligence and Internet of Everything (ICCIIoE (International)

- 2018 Committee chair, Conference on Information & Computer Technology
- 2018 Program committee and reviewer, 31th IEEE International Conference on Software Engineering Education and Training (CSEE&T)
- 2018 Reviewer, International Journal on Software & Systems Modeling
- 2018, 2014 Reviewer, International Journal of Interactive Mobile Technologies (IJIM)
- 2017-2013 Chair, Technology work group of HINSTX (Health Information Network of South Texas)
- 2017 Journal Reviewer, Ocean Engineering Journal
- 2017 Reviewer, International Association of Computer Investigative Specialists)
- 2018,2016,2015 Reviewer, IEEE International Conference on Info. Science & Applications
- 2016 External Reviewer of Tenure and Promotion, Penn State Univ. Harrisburg
- 2015 Facilitator, Monday noon Seminar, "What If a Student Asks a Question I Can't Answer?", Center for Teaching Effectiveness (CTE)
- 2014 Judge, Science Academy, EDD presentation
- 2014 Journal Reviewer, IEEE Transactions on Reliability
- 2014 Journal Reviewer, Journal of Scientific Research and Reports
- 2013 Book Reviewer, "Overcoming Challenges in Software Engineering Education: Delivering Non-Technical Knowledge and Skills"
- 2013 Program Committee and Reviewer, International Conference on IT Converge and Security (ICITCS)
- 2012 External Referee, Discovery Grants competition, National Sciences and Engineering Research Council of Canada (NSERC)

SERVICE TO COLLEGE:

- 2018-2023 Tenure and Promotion/Faculty Evaluation Committee Member: Evaluation of Tenure & Promotion Portfolios and Annual Reports
I have served on the College Promotion and Tenure (P/T) Committee. The P/T committee is elected by the college faculty members with one representative from each department and one 'at large' alternative. As a P/T committee member, I am involved in reviewing promotion and/or tenure applications and preparing recommendations for the Dean. I also involve reviewing and preparing annual evaluations for all tenured and tenure track faculty members in the college.
- 2020-2021 CIS Curriculum Task Force Member
- 2020-2023 Member, Capstone Lab and Ethics Learning Outcome Task Force
I have served on the Capstone Lab and Ethics Learning Outcome Task Force for the college. The task force recommended curriculum changes to transition from BUAD 4170 to BUAD 4070 and supported deleting BUAD 4170 from the catalog and suggested for the college programs include a curriculum to achieve Ethics learning outcomes.

2019-2022 Chair, College Curriculum Committee
 2019-2021 AACSB Strategic Planning Committee Member
 2019-2020 Presenter, Graduate Studies Orientation for MS-CS program
 2018-2019 College Curriculum Committee Member
 2010-2018 Graduate Committee Member, College of Engineering, TAMUK
 2017-2018 Associate Dean Search Committee, College of Engineering, TAMUK
 2014 Judge, College of Engineering poster competition, TAMUK
 2014 Judge, College of Engineering Senior Presentation, TAMUK
 2011-2013 Instructor, FE (Professional Engineer) Review for Computer Science
 2011 Strategic Planning Committee, TAMUK
 2011 Texas Nuclear Workforce Initiative Scholarship Committee, TAMUK
 2008-2009 Advisor, SWE, Society of Women Engineers, support with External Fund (EEES Project)
 2008 Extension Agent for Engineering Equity Extension Service (EEES)
 2008-2018 Attendee, ABET Retreat, College of Engineering, TAMUK

SERVICE TO DEPARTMENT:

2022-2023 Student Research Symposium Faculty Sponsor
 2021 Organizer, Plagiarism-Ethics seminar to MS-CS graduate students
 2018-present ABET-CS Committee Member
 2019-2020 Chair, Faculty Search Committee for three positions

- Tenure-track assistant professor in Computer Science
- Tenure-track assistant professor in Computer Information Systems
- Full-time Lecturer in Computer Science

 2019-2020 Chair, Department Curriculum Committee
 2018-2022 Graduate Coordinator, MS-CS program
 2018-2019 Presenter, recruitment activities for CCS programs at JaguarDay
 2019-2022 Faculty Mentor, assigned CS/CIS/IT students
 2008-2018 Graduate Coordinator, MS-CS program, TAMUK
 2015 Tenure & Promotion Committee, EECS (Electrical Engineering & Computer Science), TAMUK
 2017 EECS Faculty Search Committee, TAMUK
 2016 MS-Software Engineering (SW) Committee, preparing a new M.S. in SW

- Prepared new graduate courses (Two of five core courses required for M.S. in SW), Software Maintenance and Reengineering, Software Architecture and Design: proposal will be submitted in 2016

 2012 EECS Scholarship Committee Member

2012-2016	Secretary, EECS Graduate Curriculum Committee
2012-2016	CS ABET, SACS and IEP Advisory Committee
2010	Tenure-Track Faculty Search Committee
2010	Revise CS undergraduate curriculum for preparing ABET
2008	Program Administrator, MSDN Academic Alliance Software Center
2008	Webmaster, EECS Department
2014-2018	EECS graduate curriculum Committee Member
2015-2017	CS-ABET Preparation: Actively engaged in preparing ABET accreditation for CS undergraduate program, Assisted ABET coordinator(s) to prepare reports, relevant documents, and advisory board meetings

MEMBERSHIP IN PROFESSIONAL SOCIETY:

- Member, Institute of Electrical and Electronics Engineers (IEEE) Computer Society
- Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, Association for Computing Machinery (ACM) Special Interest Group on Software Engineering (SIGSOFT)
- Member, Korean American Scientists and Engineers Association (KSEA)
- Member, Korean Computer Scientists and Engineers Association in America (KOCSEA)
- Founding member, KASTE (Korean American Society for Technology Entrepreneurship)