

Mario A. Garcia, Ph.D.

EDUCATION

- **University of Maryland University College**, Postdoc - Information Assurance. 2007
- **Texas A&M University**, Ph.D. Computer Science. - Dissertation Title: "*Intelligent Agents Applied to Software Management*" **Major** Artificial Intelligence. 1997
- **Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM)**, Master of Science in Computer Science. Thesis Title: "*Methodology to Diagnose Alarms Using a Real Time Expert System*" **Major** Artificial Intelligence. 1991
- **Instituto Tecnológico de la Laguna**, Master of Science in Electrical Engineering. 1980. Major Control Thesis Title: "*Set Theoretical Control*" December 1980.
- **Instituto Tecnológico de Saltillo**, Bachelor of Science in Electrical Engineering. Thesis Title: "*Using Sparse Matrix for the Analysis of Electrical Circuits*" 1979.
- **Purdue University**, Certificate - Information Assurance. 2004
- **Carnegie Mellon University (CMU)**, Certificate - Information Assurance. 2003

PROFESSIONAL EXPERIENCE (Selected accomplishments)

Texas A&M University-Corpus Christi (TAMU-CC) 2016-present

Associate Dean for Academics, College of Science and Engineering:

Texas A&M University-Corpus Christi is a Hispanic Serving Institution that is part of the Texas A&M System. The university offers 33 undergraduate majors, 25 graduate programs, and five doctoral programs. through five colleges. The college of science and engineering offers 12 undergraduate and 5 graduate degrees. The student enrollment is 12,174. Texas A&M Corpus Christi ranked 261 in the World by normalized impact of publications. According to the Ranking Web of Universities, TAMU-CC ranks 402 in the United States and 1732 in the world.

Selective Leadership Accomplishments:

- Reviewed an updated the college handbook and provided leadership for the college approval.
- Provided leadership to produce the college academic curriculum catalog for the School of Engineering and Computing Sciences; Department of Mathematics; Department of Life Sciences, and Department of Physical Sciences.
- Provided leadership to conduct the college academic assessment catalog for the School of Engineering and Computing Sciences; Department of Mathematics; Department of Life Sciences, and Department of Physical Sciences.
- Established and directed the yearly new faculty orientation program – Information for new faculty regarding college administrative issues, teaching and scholarship expectations.
- Provided leadership for the creation fast-track five-years Bachelor of Science and Master of Science in Biology, Computer Science, Environmental Science, Geology, and Mathematics.
- Provided leadership and planning for the creation of the Bachelor of Science in Integrated Science. (this effort was tried before my tenure several times and never succeeded)
- Provided leadership including the design for the review and upgrade of the college web site.
<http://sci.tamucc.edu>
- Provided leadership and enhanced the procedure for the designation and assignment of Teaching Assistants for the college.
- Provided leadership for the collaboration between TAMU-CC and the Corpus Christy Coast Guard.
- Provided leadership for external program review for the Bachelor of Science in Biology, Chemistry, Environmental Sciences, Marine Biology, and Computer Science.
- Member of the University Emergency Response Plan (leadership level 2) – People in this level provides leadership for all university faculty in case of natural disaster.

OTHER PROFESSIONAL EXPERIENCE: ACADEMIA

- University of Maryland University College, Adjunct Professor (online): 2009-2015
- Texas A&M University Corpus Christi, Professor of Computer Science: 2009-Present
- Texas A&M University Corpus Christi, Associate Professor of Computer Science: 2004-2009
- Texas A&M University Corpus Christi, Assistant Professor of Computer Science: 1999-2004
- Monterrey Institute of Technology (ITESM), Assistant Professor of Computer Science: 1998-1999
- Texas A&M University, Lecturer Computer Science: 1996-1997
- Texas A&M University, Research Assistant: 1993-1996
- National System of Technological Institutes, Assistant Professor: 1979-1982

OTHER PROFESSIONAL EXPERIENCE: VISITING SCIENTIST (Summer)

- Lawrence Livermore National Laboratory: 2013-2015
- Naval Undersea Warfare Center Newport: 2011-2012
- University of California at Berkeley: 2010
- Monterrey Institute of Technology (ITESM): 2008
- Stanford University – 2006
- Carnegie Mellon University CERT/SEI: 2005

CONTINUE EDUCATION (Selected)

1. Texas Academic Leadership Academy. Texas Women University. Dallas TX January 9-1. 2019
2. Texas Academic Leadership Academy. Sam Houston State University. July 20-July 22 2018
3. Council of College of Arts and Sciences Deans Meeting. Chicago Il. November 14-17, 2018.
4. Council of College of Arts and Sciences Deans Meeting. Denver Col. November 1-4, 2017
5. Council of College of Arts and Sciences. New Deans Seminar. Nashville TN, July 9-12, 2017.
6. Council of Colleges of Arts and Sciences Deans Meeting – San Diego Cal. November 2016.
7. Parallel Computing TotalView Debugger. 7/19/2013. Lawrence Livermore National Laboratory
8. The Great Courses. My Favorite Universe. 12 Lectures. Professor Neil deGrasse Tyson 2018
9. The Great Courses Experiencing Hubble: Understanding the Greatest Images of the Universe. Professor David M. Mayer 12 Lectures. 2018
10. The Great Courses. Understanding the Universe: An Introduction to Astronomy. Professor Alex Pilipenko. Ph.D. University of Berkeley. 18 out of 96 Lectures. 2018
11. The Great Courses. The Inexplicable Universe: Unsolved Mysteries. 6 Lectures Neil de Grasse Tyson.
12. The Great Courses. Understanding the Brain. Professor Jeanette Norden Ph.D. 36 Lectures. 2018
13. The Great Courses. 12 Essential Scientific Concepts. Professor Indre Viskontas, Ph.D. 24 Lectures. 2018
14. The Great Courses. Brain Myths Exploded: Lessons from Neuroscience Professor Indre Viskontas, Ph.D. 24 Lectures. 2018

JOURNAL PUBLICATIONS (Selected)

1. Pham M. L., Garcia M., and Mehrubeoglu R. “Real Time Control Web-based Hyperspectral Imaging System” *IEEE Transaction on Computers*. Accepted for publication January 31, 2012.
2. -World Applications for Students.” *Computer in Education Journal*. Vol. XIV NO. 2 April – June 2004.

CONFERENCE PROCEEDINGS

1. Garcia M. and Mohammed I. A. Protection of Web Applications from SQL Injection and Cross-Site Script Attacks Using Pattern Matching and Hashing. 15th International Conference on Information Technology & Computer Science, 20-23 May 2019, Athens, Greece. (Accepted for publication and presentation)
2. Garcia M and Johnston K. Assessing the Performance of Web Scanners using OWASP top 10 Vulnerabilities”. Computing Conference 2019. July 16-17 London, United Kingdom. Accepted for Publication.
3. Tung Q. Trinh and Garcia M. Detecting Simulated Attacks in Computer Networks using Resilient Propagation Artificial Neural Networks” E-Leader Warsaw International Conference. June 4-6 2018

4. Bongiri S. and Garcia M. Using Pattern Filtering to Detect Cross-Site (XSS) Attacks. *International Conference on Security and Management (SAM 17)*. Las Vegas Nevada July 17-20 2017. pp. 182-187.
5. Jonson K, and Garcia M. Using OWASP Vulnerabilities to Evaluate Open Source Web Scanners. *The 2016 International Conference on Security and Management (SAM 16)*. Las Vegas Nevada. July 25-28, 2106.
6. Malware Alert System for Online Social Networks Using Twitter. Saikumar Reddy Katkoori and Mario A Garcia. E-Leader, Conference, Singapore 2016.
7. Garcia M and Mallepally R. "Applications to Improve iPhone Forensics" *28th International Conference on Computer and Their Applications CATA 2013*. Honolulu Hawaii. March 4 – 6 2013.

STUDENT PAPERS/POSTERS

1. David Russell and Mario Garcia. Denial of Service and Internet of Things Devices. Poster December 2018
2. Farha Pulukool and Mario Garcia. Password Security Vulnerabilities and Enhancing Mechanisms. Poster December 2018.
3. Sai Medavaparuru and Mario A Garcia. Securing IoT using Machine Learning. Poster December 2018.
4. Samuel Allred and Mario A Garcia. An Analysis of WiFi-based UAV Security and Types of Attacks. Poster December 2018.
5. Koushik A, Raviteja S. Garcia M. An Overview on SQL Injection and its Detection Techniques. Student Poster May 3, 2018
6. Dwyer L, Odusanya K, Wynn D, Zheng Y, and Garcia M. Little Computers in all the Things. Student Poster. May 3, 2018.
7. Khurana S, Khade P, Dadoch A, and Garcia M. A Critique on Crypto-Currency Systems. Student Poster. May 3, 2018
8. Lingam C, Annapureddy P, Neela R, Vaibhav S, Polishty S, and Garcia M. Named Data Networks: An Overview of its Security and Attacks on it. Student Poster. May 3, 2018
9. Allred S, Metha U. and Garcia M. Security Aspects of IoT and Proposed Solutions. Student Poster. May 3, 2018.
10. Yerramsetti R, Pendyala N. Pulipati C, Gurralla A. and Garcia M. Securing Autonomous Swarm Communications in MANET's using Blockchain Technology. Student Poster. May 3, 2018
11. Iker Okan Aker and Mario A. Garcia. Visualization in Computer Forensics. 18th Annual Student Conference for Research & Creative Arts. Houston TX, April 25 -26, 2012
12. Pradeep Pottnak and Mario A. Garcia. Apple Forensics on Third Party Applications. 18th Annual Student Conference for Research & Creative Arts. Houston TX, April 25 -26, 2012
13. Farath Fatima and Mario a. Garcia. Achieving Critical Infrastructure Protection through the Interaction of Computer Security and Network Forensics. 18th Annual Student Conference for Research & Creative Arts. Houston TX, April 25 -26, 2012
14. Akshara Upaluri and Mario A. Garcia Improvement in Digital Forensics with the basis of Reusability. 18th Annual Student Conference for Research & Creative Arts. Houston TX, April 25 -26, 2012
15. Maria A. Basani and Mario A. Garcia. Improving Kerberos Security Protocol using Various Logics. 18th Annual Student Conference for Research & Creative Arts. Houston TX. April 25 -26, 2012
16. Srikanth Padakanti and Mario A. Garcia. **Session Based Tunnelling in VPN using IPSec protocol.** 18th Annual Student Conference for Research & Creative Arts. Houston TX, April 25 -26, 2012
17. Aditya Cheruvu and Mario A. Garcia Identification and analysis of wormhole attacks in wireless networks. 18th Annual Student Conference for Research & Creative Arts. Houston TX, April 25 -26, 2012
18. Chandupatla Druha Druthi and Mario A. Garcia Detection Techniques for Vulnerabilities in Web Services. 18th Annual Student Conference for Research & Creative Arts. Houston TX, April 25 -26, 2012

GRADUATE PROJECTS/THESIS COMMITTEE CHAIR (136 Completed)

1. Naveen Kumar Kolli – Implementation of a Secure Payment Transaction using AES Encryption with extended Visual Cryptography. Summer 2017
2. Suliman Alrumaih – Prototype Expert System to Estimate the Risk level of a Computer Application. Spring 2017
3. Venkata Manthana – Design and Implementation of Heuristic-based Phishing Detection System Using Address, Abnormal Domain, and HTML Java Scripts. December 2016

4. Ismail Aamir Mohammed – Implementation of a Prototype to Secure Web Applications from SQL Injection and Cross Site Scripting Attacks Using an Intelligent Pattern Matching Approach. December 2016.
5. Navuduri Suryakanthi – Analysis Design and Implementation of a Class Scheduling System for Texas A&M University-Corpus Christi. December 2016.
6. Akhil Bukka – analysis, design and Implementation of a Methodology to Detect Clickjacking Attacks. Spring 2016.
7. Samrat Bongiri. Using Pattern Filtering to Detect and Prevent Persistent Cross-Site Scripting (XSS) Attacks. Spring 2016
8. Sai Lakshmi Chigurupati. Detecting SQL Injections Using String Matching Methods. Spring 2016.
9. Jagadeeswara Reddy Gajjala. A Simulation to Demonstrate the use of Synchronizer Token Pattern Approach to Help Prevent Cross-Site Request Forgery (CSRF) Attacks. Spring 2016.
10. Ashweeza Vavilala. An Android Application for Location-Based Permission Control. Spring 2016.
11. Bala Sindhusha Boyapati. Detecting Phishing attacks through URL comparison in a Search Engine. Fall 2015
12. Joshi-Nirosha Boyapati. Spatio-Temporal Sentiment Analysis of Twitter Data and 311 Civil Complaints. Fall 2015
13. Sameera Chalamalasetty. Detecting Malicious PDFs Using Support Vector Machine (SVM) Active Learning. Fall 2015
14. Ravali Kundor. Analysis and Detection of Web Application Vulnerabilities. Fall 2015.
15. Sai Santosh Kiram Lagisetty – Application of Genetic Algorithms and Markov Model to detect Fraud in Credit Card Use. Fall 2015.
16. Sohini Reddy Ravi – Expert System for Health care Advising and Decision Support for Flu and Fever. Fall 2015.
17. Sai Krishna Vudepu – Accurate Detection of Packet Dropping Attacks in Wireless Ad-Hoc Networks Using the Auditing Technique. Fall 2015.
18. Bhagyasree Todupunuri. Detection of Misbehavior in Efficient Trust Establishment for Delay Tolerant Networks. Summer 2015
19. Anvesh Gunturu – Topology Refresh Data Protocol for Multihop Wireless Networks. Summer 2015.
20. Murali Jagdev Koney. Malware Detection in JAR files and Online Applets using Bounded Feature Space Behavior Modeling. Spring 2015
21. Pratyusha Katepally. Security Scheme Implementation in Mobile Information-Centric Network. Spring 2015
22. Anusha Sher. Implementation of a Prototype Intrusion Detection System in Wireless Sensor Networks using the Network Simulator 2 (NS2) Spring 2015
23. Dheeraj Matte. Implementation of a prototype network alarm system applying defense in depth in Network Simulator II (NS2). Spring 2015
24. Qazi Khaja Nizamuddin Shajji. Implementation of a Prototype to Enhance the Security in Social Networks using Privacy Policy. Spring 2015
25. Avinash Pallagani. Implementation of a Prototype for Automated Timeline Reconstruction in Computer Forensics. Spring 2015
26. Saikumar Reddy Katkoori. Malware Alert System for Online Social Networks- Case Study selected in Twitter. Spring 2015
27. Madhav Vishva Prattipati. A Web Application to Perform Searches on Encrypted Data. Spring 2015
28. Sneha Reddy Gunukula. Implementing a Prototype for Detecting Cross-site Script Vulnerabilities by Using a Contact-Sensitive Approach. Spring 2015
29. Rahul Potuganti. Restful Services and Privacy Enhanced Proxy for Healthcare Servers. Spring 2015
30. Murali Jagdev Koney: Malware Detection Through Bounded feature Space Behavior Modeling (BOFM) Spring 2015
31. Divya Paramjyoti Andolu. Implementation of Botcatch for Identifying Bot Infected Hosts. Spring 2015
32. Avinash Royal Thammineni. Implementing Cooperative MAC Protocol with Network Coding in Wireless Ad Hoc Networks to Improve Network Performance Spring 2015
33. Hima Lahari Marneni. A Web Application for Detecting Users Desired Points of Interest Protecting their Privacy. Spring 2015
34. Keerthi Reddy Muthyala. Implementation of a Prototype for Real-time Monitoring, detecting, and Alarming System to Enhance Security in Computer Networks. Spring 2015

35. Shivani Nuguru. Automated Packet Generation to detect problems in computer networks. Spring 2015
36. Mohammed Shahid Sultan. Monitor HTTP based Command and Control Botnets in Spring 2015 Network Traffic using Bot-Sniffer. February 3, 2015.
37. Shivani Reddy Atigada. A Collaborative Filtering Recommendation Algorithm based on User Clustering and Item Clustering. November 12, 2014.
38. Ranjith Kumar Bodla. Implementation of a Prototype for Secure Online Payment System Using Discrete Cosine Transformation and Permutative Stradding. November 12, 2014
39. Srilaxmi Gandra. Cyber Card Detection and Prevention System for Ecommerce. November 2014.
40. Ricardo A. Garcia. Computer Forensics: Password Recovery Tool using Odroid-XU Implementation. November 24, 2014
41. Yellu Sirisha. A secure Payment Model Using representational State Transfer (REST) Web Service, quick response (QR) Code and Hash-based Message Authentication Code (HMAC). December 2014.
42. Goddam Bharath Simha Reddy . Securly Sharing Multimedia Files Over Internet Using Cryptography and Partial Steganography. December 1, 2014.
43. Haritha Devulapally. Implementation of an Android Application to help users Recover and Secure a Lost Phone. July 2014
44. Anurag Reddy Muppidi. An Android Application to Integrate and Secure Social Networks and Emails. July 2014.
45. Pratyusha Adasumalli. Implementation of an Android Application to Retrieve Information from a Lost Android Device. Spring 2014.
46. Naga Sandeep Thatipally. Implementation of an Application Using Third Party Auditor for Secure Cloud Storage. Spring 2014
47. Pavithra Roscillini Bandela. Implementation of an Android application to enhance security in Social Networks. Spring 2014
48. Sumanth Minnakanti. Hiding information in Audio, video, and Images Using Steganography. Spring 2014
49. Swetha Davana. Implementation of an Application to Secure Personal data Using Enhanced Data Encryption Standard. Spring 2014.
50. Sachin Samrat Medavarapu. Improving The Efficiency of Packet Marking Using Modulo Operation. July 2013. Thesis
51. Tingh Trun Applying Back-Propagation Artificial Neural Networks to detect Attacks in Computer Networks. April 9, 2013 – Thesis
52. Aditya Cheruvu “Email Spam Detector: A Tool to Monitor and Detect Spam Attacks” December 2012.
53. Santosh Kumar Reddy Yerramorusu “Secure Calls and SMS Logs” December 2012
54. Anuudeep R. Kandi “Design and Implementation of a tool to help Computer Forensics Instructors to Demonstrate Common Data Hidden Techniques” December 2012
55. Ashwini M. Achar. Design and Implementation of Software Tool to Detect and Prevent Access to Malicious Users attacked by Cross-Site Scripting Attack. August 6, 2012
56. Vamshi Krishna Eranti Implementation of Hop-based Packet Marking for IP Traceback. August 2, 2012.
57. Nithisha Repaka. Tool for Implementation of Strategies to detect Botnet Attacks August 2012.
58. Deepthi Jambula. Implementation of a Prototype to Detect Network Attacks by Analyzing Irregular User Behavior. August 2012.
59. Stephen Smith. Tightening the Net: Examining and Demonstrating Commonly Available Network Security tools. April 2012.
60. Ramchander Mudu. Design and Implementation of a Visualization System to Prevent Cheating in Online Tests. April 24, 2012.
61. Ankush Vee. Evaluation of Cloud Security Using Firewalls. April 24, 2012.
62. Kartik Konnaraju. Data Security in Cloud Computing Using Encryption. April 25, 2012.
63. Rahul Guija. An Attacker Agent Identification Tool in Data Distributed Systems. April 25, 2012.
64. Santosh Kumar Birkur. Link Failure Detector and Simulation of Metrics in Distributed Network. April 26, 2012.
65. Maria Anurag Basani. APuzzle-based Authentication Method with Serer Monitoring. April 26, 2012.
66. Pradeep Kumar Pothnak. Secure and Invulnerable Coding in C and C++. April 27, 2012.
67. Arun Kumar Ankam. Implementation of a Tool o Conduct Live Forensics Acquisition in Windows Systems. April 2012.
68. Kamalendar Kotha. Visual Cryptography Tool For Embedded Halftone Shares. May 2012.
69. Sudheer Chennuri. Integrated Forensics Tool for Web Browser Analysis. May 2012.

70. Srikanth Padakanti. Rootkits Detection Using Inline Hooking. May 2012.
71. Kalyani Suram. Analysis, design and implementation of a password cracking tool May 2012.
72. Divya Tara Puvvula. Implementation of a tool for Detecting and filtering Spam. May 2012.
73. Sai Saran Tockachichu. Virtual Environment based training material for Computer Forensic Investigations May 2012.

GRADUATE PROJECTS/THESIS COMMITTEE CHAIR (38 Completed)

1. Himavarsha Surabi. Hybrid Model for Intrusion Detection using Data Mining Spring 2014.
2. Rakesh Kumar Srirangam. A Novel Steganographic Tool for Multilevel Protection

EDITORSHIP (Book Chapters)

1. Security, Trust, and Regulatory Aspects of Cloud Computing in Business. Cloud Computing Forensics. IGI Global 2014.

PRESENTATIONS (invited talks)

1. Kali Linux Forensics – Lawrence Livermore National Laboratory July 2015.
2. Analysis of Web Vulnerabilities using the OWASP. Lawrence Livermore National Laboratory July 2015.
3. Evaluation of Open Source Forensics Tools. Lawrence Livermore National Laboratory July 2014
4. Analysis and Investigation of SCAP tools (July 13) Naval Undersea Warfare Center, Newport RI. July13, 2012.
5. Defense in Depth – Applications of Artificial Intelligence Techniques to Intrusion Prevention. Naval Undersea Warfare Center, Newport RI. July17, 2012.

GRANT REVIEWER (Selected)

1. NSF graduate Research Fellowship February 2014 and February 2015 Online
2. NSF-Scholarship for Service – SFS. May 5-7, 2014
3. NSF Graduate Research Fellowship Evaluation. Washington DC. January 2013
4. NSF NDSEG and SMART. Washington DC January 2013
5. DoD – ASEE Graduate Research Fellowship Evaluation. Washington DC. February 2012