Mailing Address: 1 LMU Drive, MS 8145, Los Angeles, CA 90045, USA
Phone/Fax: +1 310 338-5761 / +1 310 338-2782
E-mail: gvejaran@lmu.edu
URL: http://gvejaran.intemnets.lmu.build

Curriculum Vitae
Last update: September 21, 2023

Gustavo Vejarano

Associate Professor and Graduate Program Director
Department of Electrical Engineering and Computer Science
Frank R. Seaver College of Science and Engineering
Loyola Marymount University

Research Interests

Wireless Multihop Networks (WMN), Cyber-Physical Systems: Adaptation Mechanisms for WMNs to Human Activity and Behavior, Self-Organized Communication Networks, Cognitive Networking, Wireless Sensor Networks, Multimedia Communications, Cross-Layer Design

Education

2009 - 2011 • Ph.D., Electrical and Computer Engineering, University of Florida (Gainesville, FL, USA), Advisor: Janise McNair, Dissertation: Stability-Based Topology Control in Wireless Multihop Networks with Reservation-Based Distributed-Scheduling Policies

2006 - 2009 • M.S., Electrical and Computer Engineering, University of Florida (Gainesville, FL, USA), Advisor: Janise McNair

1999 - 2005 • B.S., Electrical Engineering, Universidad del Valle (Cali, Valle, Colombia), Advisor: Fabio Guerrero, Capstone Project: Matlab Implementation of the Physical Layer of the Mobile Communication Technology cdma2000 1X

Experience

Associate Professor, Department of Electrical Engineering and Computer Science, Loyola Marymount University (Los Angeles, CA, USA)

2017 - present • Courses:

EECE-5140 Computer Architecture with VHDL: Spring 2023, Summer 2022, Fall 2021

EECE-5270 Wireless Networks: Fall 2022

EECE-5210 Random Processes: Fall 2023, Fall 2022

EECE-4110 Analog and Digital Communication Systems: Fall 2023, Fall 2022

EECE-3200 Junior Lab II: Spring 2023

ELEC-698 Radio Propagation: Summer 2018

ELEC-680 Wireless Sensor Networks: Fall 2019

ELEC-673 Wireless Networks: Fall 2020

ELEC-621 Information Theory and Coding: Spring 2018

ELEC-601 Graduate Seminar: Spring 2019

ELEC-584 Introduction to Microprocessors II: Spring 2020

ELEC-424 Communications II: Spring 2022, 2020, 2019, 2018

ELEC-423 Communications I: Fall 2021, 2020, 2019, 2018

ELEC-361 Electromagnetics: Fall 2019

ELEC-302 Junior Lab II: Spring 2021, 2020, 2019, 2018

Experience (continued)

ELEC-210 Electric Circuit Analysis: Fall 2018

HNRS-2200 On the Nature of Science, Mathematics, and Technology: Fall 2019, 2018

SYEG-695 Preparation for Capstone Project: Spring 2023, Fall 2022, Summer 2022, Spring 2022, Fall 2021, Summer 2021

Sabbatical: Fall 2017

- Research:

  Director of the Intelligent and Embedded Networks and Systems (Intemnets) Laboratory

  http://intemnets.lmu.build

  Supervised MS Theses: Anders Frankenberger, Mohammed Alrabeeah, William Bjorndhal, Catherine Hu, Yuanji Huang, Roberto Ventura, Dhruvil Darji

  Supervised Undergraduate Research: Jordan Shiu, Pedro Sales

Graduate Program Director, Master of Science in Electrical Engineering (MSEE), Loyola Marymount University (Los Angeles, CA, USA)

2016 - 2023

- Served as academic advisor for students in the MSEE program
- Coordinated activities for the promotion and recruitment for the MSEE program
- Coordinated activities for assessing and updating the MSEE program's curriculum
- Managed the budget of the MSEE program for the acquisition of lab equipment, student travel, publications, recruitment

Graduate Program Director, Master of Science in Systems Engineering (MSSE), Loyola Marymount University (Los Angeles, CA, USA)

2021 - 2023

- Served as academic advisor for students in the MSSE program
- Coordinated activities for the promotion and recruitment for the MSSE program
- Coordinated activities for assessing and updating the MSSE program's curriculum
- Managed the budget of the MSCS program for the acquisition of lab equipment, student travel, publications, recruitment

Graduate Program Director, Master of Science in Computer Science (MSCS), Loyola Marymount University (Los Angeles, CA, USA)

2019 - 2021

- Served as academic advisor for students in the MSCS program
- Coordinated activities for the promotion and recruitment for the MSCS program
- Coordinated activities for assessing and updating the MSCS program's curriculum
- Managed the budget of the MSCS program for the acquisition of lab equipment, student travel, publications, recruitment

Assistant Professor, Department of Electrical Engineering and Computer Science, Loyola Marymount University (Los Angeles, CA, USA)

2011 - 2017

- Courses:

  ELEC-699 Wireless Network Applications (Independent Studies): Summer 2017, Fall 2015, Summer 2014, Spring 2013

  ELEC-698 SS: Wireless Sensor Networks: Fall 2016, Spring 2016, 2015, 2013

  ELEC-621 Information Theory and Coding: Spring 2017, 2014

  ELEC-598 SS:Wireless Networks: Fall 2016, 2015, 2014, 2013, 2012

  ELEC-584 Introduction to Microprocessors II: Fall 2016, 2014, 2013, 2012, 2011

  ELEC-424 Communications II: Spring 2017, 2016, 2015, 2014, 2013, 2012

Experience (continued)

ELEC-423 Communications I: Fall 2016, 2015, 2014

ELEC-402 Senior Project: Spring 2013 (co-taught with Jerry Lockenour)

ELEC-371 Linear Systems: Spring 2012

ELEC-302 Junior Lab II: Spring 2017, 2016, 2015, 2014, 2013

ELEC-213 Electric Circuits Analysis Lab: Fall 2011

ELEC-210 Electric Circuit Analysis: Fall 2013

- Research:

  Director of the Intelligent and Embedded Networks and Systems (Intemnets) Laboratory

  http://intemnets.lmu.build

  Supervised MS Theses: Garrett Newell, Dai Meng

  Supervised Undergraduate Research: Sylvana Santos, Pedro Carvalho, Owen Dominguez, Leonard Turcios, Lucia Ramirez

Research Assistant, Department of Electrical and Computer Engineering, University of Florida (Gainesville, FL, USA)

2008 - 2011

- Designed a distributed topology-control algorithm for increasing the transport capacity in wireless multihop networks.
- Designed a reservation-based distributed scheduling algorithm with QoS guarantees for IEEE 802.16 wireless mesh networks.
- Designed an OPNET simulation model for the evaluation of distributed scheduling algorithms in IEEE 802.16 wireless mesh networks.
- Collaborated in the proposal preparation for a Small-Tree-Communications and US-Army grant.
- Lead a team of 4 graduate students in the design, implementation, and performance evaluation of the Tactical Bandwidth Booster, a Voice-over-IP (VoIP) and video-communication system for hybrid wireless networks (Sponsors: Small Tree Communications, US Army).
- Built a testbed for the demonstration of the Tactical Bandwidth Booster, and participated in the demonstration at Fort Monmouth (US Army), NJ.
- Co-designed and implemented a packet loss concealment, a packet loss recovery, and a jitter control algorithm for VoIP and video applications.

Teaching Assistant, Department of Electrical and Computer Engineering, University of Florida (Gainesville, FL, USA)

2006 - 2007

- Taught and graded the lab sessions of the undergraduate-level course EEL3111 Circuits 1.

Post-Sales Engineer, ZTE Corporation (Cali, Valle, Colombia)

2006

- Performed site-surveys for the commissioning of 16 base stations, 1 station controller, and 1 mobile switching center for a GSM mobile communication network.

Teaching Assistant, School of Electrical and Electronics Engineering, Universidad del Valle (Cali, Valle, Colombia)

2003

- Taught and graded the lab sessions of the undergraduate-level course Electronic Circuits 3.
- Designed experiments with AC/DC and DC/DC converters for student experimentation during the lab sessions.

2002

- Taught and graded the lab sessions of the undergraduate-level course Digital Systems 2.
- Designed a sequential circuit for programming read-only-memories for student experimentation during the lab sessions.

Professional Service

Member of the Following:

- Institute of Electrical and Electronics Engineers (IEEE) - Senior Member, IEEE Communications Society, and IEEE Computer Society
- Association for Computing Machinery (ACM)
- Society of Hispanic Professional Engineers (SHPE)
- Council on Undergraduate Research (CUR)
- Heterodox Academy (HxA)

Reviewer of the Following:

- Journals: IEEE Transactions on Wireless Communications, IEEE Transactions on Parallel and Distributed Systems (TPDS), IEEE Wireless Communication Letters, IEEE Journal on Selected Areas in Communication (JSAC), Wireless Networks (Springer), ACM Transactions on Modeling and Computer Simulation, IEEE Network, Elsevier Ad Hoc Networks, Elsevier Performance Evaluation, The Journal of Mobile Communication, Computation, and Information - Springer, Mobile Information Systems Hindawi
- Conferences: WINCOM 2018 INFOCOM 2016, 2015, 2014, IEEE ICC 2016, IEEE PIMRC 2013, Med-Hoc-Net 2013, IEEE Globecom 2016, 2012, 2011, 2010, 2009, MILCOM 2012, 2011, 2010, WCNC 2011, IEEE MASS 2009
- Book Proposals: John Wiley and Sons

IEEE Coastal Los Angeles Section (CLAS)

2022 - present • Chair

2020 - 2022 • Treasurer

2019 - 2020 • Awards Chair

CUR Councilor

2014 - present • Secretary of the CUR Division of Engineering

- Goldwater Faculty Mentor Award Committee 2018

Faculty Advisor Cubesat Project at Loyola Marymount University

2021 - present • Guided research of graduate and undergraduate students of Seaver College for the design, implementation, and testing of the LMU Cubesat

- Coordinated the acquisition of hardware and software for the LMU Cubesat Lab
- Coordinated meetings with technical staff of Aerospace Corporation

Faculty Advisor IEEE Student Chapter at Loyola Marymount University

2022 - present • Provided career guidance and research opportunities for the students of the chapter

Faculty Advisor SHPE Student Chapter at Loyola Marymount University

2013 - present • Provided career guidance and research opportunities for the students of the chapter

Mentor for Students of the Following Programs

2013 • The McNair Scholars Program, U.S. Department of Education (McNair Scholars)

- Alliance/Merck Ciencia (Science) Hispanic Scholars Program, National Alliance for Hispanic Health and Merck Company Foundation

2010 • NSF South East Alliance for Graduate Education and The Professiorate, National Science Foundation (NSF-SEAGEP)

Professional Service (continued)

2009 - 2010
- Motivating Undergraduates in Science and Technology, National Aeronautics and Space Administration (NASA-MUST)

Honors and Awards

2023
- Foundational Research in Robotics, National Science Foundation, Project Title: "ERI: Fault-Tolerant Monitoring of Moving Clusters of Targets using Collaborative Unmanned Aerial Vehicles," Award Amount: $196,993, URL: https://www.nsf.gov/awardsearch/showAward?AWD_ID=2301707

2022
- Summer Opportunities for Advanced Research Award, LMU Seaver College of Science and Engineering, Project Title: "Configuration of the CubeSat I^2C Bus," Award Amount: $2,000

2021
- Continuing Faculty Grant, LMU Seaver College of Science and Engineering, Project Title: "Wireless Networking for Collaborative Drones," Award Amount: $5,000

2017
- Institute of Electrical and Electronics Engineers (IEEE): IEEE Senior Member

2008
- Electrical and Computer Engineering Honor Society: Eta Kappa Nu Member - Epsilon Sigma Chapter

2006
- Graduate Student Fellowship from the Department of Electrical and Computer Engineering, University of Florida

2005
- Highest GPA (3.8/4.0) among the undergraduate class of May 2005 (1500 students approx.) at Universidad del Valle (Cali, Colombia)

2003
- Acknowledgment from the Ministry of Education of Colombia for obtaining the 9^{th} highest score on the national exam ECAES Electronics Engineering taken by 3949 undergraduate students.

2000 - 2001
- Scholarships for semesters 3, 4, and 5, given to Electronics Engineering students with the top five GPAs at Universidad del Valle (Cali, Colombia)

Presentations

2018
- "Assessment of the BS program in Electrical Engineering for ABET Accreditation," Workshop on the Basics of Learning Assessment, Loyola Marymount University, Los Angeles, CA, USA

2017
- "Experiencias con Redes Inalambricas sobre Sistemas Fisicos Moviles: Cuerpo Humano y Drones," Aniversario 25 Programas Academicos de Ingenieria de Sistemas y Electronica, Universidad del Valle, Cali, Colombia

2016
- "Prediction of Received Signal Strength from Human Joint Angles in Body Area Networks," Conference: 2016 International Conference on Computing, Networking and Communications (ICNC'16), Kauai, HI, USA

2013
- "Coordination and Collaboration of Wireless Multi-Hop Networks for Human-Machine Interaction," Guest Lecture, Graduate-Level Course: CMSI-698 SS: Human-Agent-Robot Teams, Department of Electrical Engineering and Computer Science, Loyola Marymount University, Los Angeles, CA, USA

2010
- "Queue-Stability-Based Transmission Power Control in Wireless Multihop Networks," Conference: IEEE Global Communications Conference 2010 (GLOBECOM'10), Miami, FL, USA
- "WiMAX-RBDS-Sim: An OPNET Simulation Framework for Reservation-Based Distributed Scheduling Policies in IEEE 802.16 Mesh Networks," Conference: The 3^{rd} International Conference on Simulation Tools and Techniques (SIMUTools'10), Torremolinos, Malaga, Spain
- "Link Scheduling and Topology Control for Self-Organized Wireless Networks," Guest Lecture, Graduate-Level Course: EEL6935 Wireless Ad Hoc Networks, Department of Electrical and Computer Engineering, University of Florida, Gainesville, FL, USA

Presentations (continued)

2009
- "Reservation-Based Distributed Scheduling in Wireless Networks," Future Faculty Career Exploration Program 2009 (FFCEP'09): Computer Engineering Department, Rochester Institute of Technology, Rochester, NY, USA
- "Tactical Bandwidth Booster for VoIP Applications in Hybrid Wireless Networks," US Army's Communications-Electronics Research, Development, and Engineering Center, Fort Monmouth, NJ, USA
- "Distributed Scheduling in Wireless Networks," Guest Lecture, Graduate-Level Course: EEL6591 Wireless Networks, Department of Electrical and Computer Engineering, University of Florida, Gainesville, FL, USA

2007
- "An Intelligent Wireless Mesh Network Backbone," Conference: The 3rd Annual International Wireless Internet Conference (WICON'07), University of Texas at Austin, TX, USA

List of Publications

Journal Papers

2023
- Dhruvil Darji and **Gustavo Vejarano**, "Point Set Registration for Target Localization using Unmanned Aerial Vehicles," *ACM Transactions on Spatial Algorithms and Systems*, vol. 9, no. 3, pp. 1-29, Sep. 2023. URL: https://doi.org/10.1145/3586575

2020
- Garrett Newell and **Gustavo Vejarano**, "Motion Based Routing and Transmission Power Control in Wireless Body Area Networks," *IEEE Open Journal of the Communications Society*, vol. 1, pp. 444-461, Apr. 2020. URL: https://doi.org/10.1109/OJCOMS.2020.2986396

2017
- Todd C. Shoepe, **Gustavo Vejarano**, Nathan P. Reyes, Nicole M. Gobreial, Jeanette M. Ricci, "Volume Estimations for Combined Free-Weight and Rubber-Band Resistance Exercise," *Kinesiology*, vol. 49, no. 2, pp. 169-177, Oct. 2017. URL: https://hrcak.srce.hr/file/276511

2016
- Dai Meng, Todd Shoepe, and **Gustavo Vejarano**, "Accuracy Improvement on the Measurement of Human Joint Angles," *IEEE Journal of Biomedical and Health Informatics*, vol. 20, no. 2, pp. 498-507, Mar. 2016, URL: https://doi.org/10.1109/JBHI.2015.2394467

2014
- **Gustavo Vejarano**, Dexiang Wang, Ritwik Dubey, and Janise McNair, "Distributed Throughput Maximization in Wireless Networks using the Stability Region," *IEEE Transactions on Parallel and Distributed Systems*, vol. 25, no. 7, pp. 1713-1723, Jul. 2014, URL: https://doi.org/10.1109/TPDS.2013.202

2012
- **Gustavo Vejarano** and Janise McNair, "Stability Analysis of Reservation-Based Scheduling Policies in Wireless Networks," *IEEE Transactions on Parallel and Distributed Systems*, vol. 23, no. 4, pp. 760-767, Apr. 2012, URL: https://doi.org/10.1109/TPDS.2011.201

2011
- **Gustavo Vejarano**, Dexiang Wang, and Janise McNair, "Stability Region Adaptation using Transmission Power Control for Transport Capacity Optimization in IEEE 802.16 Wireless Mesh Networks," *Elsevier Computer Networks Journal*, vol. 55, no. 16, pp. 3694-3703, Nov. 2011, URL: https://doi.org/10.1016/j.comnet.2011.03.021

2008
- **Gustavo Vejarano** and Fabio Guerrero, "A Constructivist Simulation-Based Methodology for Teaching Mobile Communications," *IEEE Transactions on Education*, vol. 51, no. 4, pp. 468-475, Nov. 2008, URL: https://doi.org/10.1109/TE.2007.914941

2005
- Fabio Guerrero, Javier Parra, and **Gustavo Vejarano**, "Introducción a los Sistemas de Comunicaciones Móviles Modernos," *Energía y Computación*, vol. 12, no. 22, pp. 9-14, Jan. 2005, URL: http://bibliotecadigital.univalle.edu.co/handle/10893/1423

Conference Papers

2023
- Roberto Ventura, William Bjorndahl, and **Gustavo Vejarano**, "Targeted Broadcast in Vehicular Ad-Hoc Networks," in *IEEE Latin-American Conference on Communications*, Panama City, Panama, Nov. 2023

List of Publications (continued)

2022 • Ashit Patel, Lei Huang, and **Gustavo Vejarano**, "Pothole Detection from Dash Camera Images using YOLOv5," in *26th International Conference on Image Processing, Computer Vision, and Pattern Recognition (IPCV'22)*, Las Vegas, NV, USA, July 2022

2019 • Rommel Fernandes, Lei Huang, and **Gustavo Vejarano**, "Non-Audible Speech Classification Using Deep Learning Approaches," in *6th Annual Conference on Computational Science and Computational Intelligence (CSCI'19)*, Las Vegas, NV, USA, Dec. 2019, URL: https://doi.org/10.1109/CSCI49370.2019.00118

2018 • Dhruvil Darji and **Gustavo Vejarano**, "Counting Static Targets using an Unmanned Aerial Vehicle On-The-Fly and Autonomously," in *2018 Computer and Robot Vision (CRV 2018)*, Toronto, ON, Canada, May 2018, URL: https://doi.org/10.1109/CRV.2018.00037

2016 • Garrett Newell and **Gustavo Vejarano**, "Human-Motion Based Transmission Power Control in Wireless Body Area Networks," in *2016 IEEE 3rd World Forum on Internet of Things (WF-IoT 2016)*, Reston, VA, USA, Dec. 2016, URL: https://doi.org/10.1109/WF-IoT.2016.7845404

• Thang Tran and **Gustavo Vejarano**, "Prediction of Received Signal Strength from Human Joint Angles in Body Area Networks," in *2016 International Conference on Computing, Networking and Communications (ICNC'16)*, Kauai, HI, USA, Feb. 2016, URL: https://doi.org/10.1109/ICCNC.2016.7440700

2013 • Dai Meng and **Gustavo Vejarano**, "Development of a Wireless Sensor Network for the Measurement of Human Joint Angles," in *IEEE International Conference on Connected Vehicles and Expo (ICCVE'13)*, Las Vegas, NV, USA, Dec. 2013, URL: https://doi.org/10.1109/ICCVE.2013.6799820

2010 • **Gustavo Vejarano** and Janise McNair, "Queue-Stability-Based Transmission Power Control in Wireless Multihop Networks," in *IEEE Global Communications Conference, Exhibition and Industry Forum 2010 (GLOBECOM'10)*, Miami, FL, USA, Dec. 2010, URL: https://doi.org/10.1109/GLOCOM.2010.5683854

• **Gustavo Vejarano** and Janise McNair, "Reservation-Based Distributed Scheduling in Wireless Networks," in *Proc. 11th IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM'10)*, Montreal, QC, Canada, Jun. 2010, URL: https://doi.org/10.1109/WOWMOM.2010.5534904

• **Gustavo Vejarano** and Janise McNair, "WiMAX-RBDS-Sim: An OPNET Simulation Framework for Reservation-Based Distributed Scheduling Policies in IEEE 802.16 Mesh Networks," in *Proc. 3rd International ICST Conference on Simulation Tools and Techniques (SIMUTools'10)*, Torremolinos, Malaga, Spain, Mar. 2010, URL: https://dl.acm.org/citation.cfm?id=1808178

2007 • **Gustavo Vejarano** and Janise McNair, "An Intelligent Wireless Mesh Network Backbone," in *Proc. 3rd International Conference on Wireless Internet (WICON'07)*, Austin, TX, USA, Oct. 2007, URL: http://dl.acm.org/citation.cfm?id=1460047.1460052

2003 • Mario Vera, **Gustavo Vejarano**, and Jaime Velasco, "Diseño de Funciones DSP usando VHDL, CPLDs y FPGAs," in *Proc. Taller IBERCHIP 2003 (IWS'03)*, La Habana, Cuba, Mar. 2003, URL: http://www.iberchip.net/IX/Articles/POST-082.pdf

2002 • Mario Vera, **Gustavo Vejarano** and Jaime Velasco, "Diseño de un Filtro FIR Programable con VHDL y PLDs," in *Proc. Simposio de Tratamiento de Señales, Imágenes y Visión Artificial 2002 (STSIVA'02)*, Bucaramanga, Colombia, Nov. 2002, URL: http://stsiva.org/

Posters

2022 • Jordan Shiu and **Gustavo Vejarano**, "Configuration of the LMU Cubesat I2C Bus," in *Seaver Summer Research Community Poster Session, Loyola Marymount University*, Los Angeles, CA, USA, June 2022.

2019 • Roberto Ventura and **Gustavo Vejarano**, "Target-Search Algorithm for Collaborative Drones," in 11^{th} *Undergraduate Research Symposium, Loyola Marymount University*, Los Angeles, CA, USA, Mar. 2019.

List of Publications (continued)

2016 • Sylvana Santos, Pedro Iago Carvalho Martin, Jean Carlo Johansen de Alburqueque, Francisco Lemuel Ferreira Lima, and **Gustavo Vejarano**, "Diagnosing Pronation and Supination using Wireless Body Networks for Electromyography and Motion Capture," in *2016 Annual Biomedical Research Conference for Minority Students (ABRCMS'16)*, Tampa, FL, USA, Nov. 2016.

2014 • Lucia Ramirez and **Gustavo Vejarano**, "Diminishing Patient Noncompliance in Physical Therapy using Motion Capture Technologies," in *SHPE 2014 Undergraduate Student Technical Poster Competition*, Detroit, MI, USA, Nov. 2014.

• Nicole Gobreial, Jeanette Ricci, Nathan Reyes, **Gustavo Vejarano**, and Todd Shoepe "Movement and Work Quantification in Elastic Variable Resistance Exercise," in *Southwest Chapter Meeting of the American College of Sports Medicine*, Costa Mesa, CA, USA, Oct. 2014.

2013 • Lizbeth Rojas and **Gustavo Vejarano**, "Development of a Wireless Motion-Capture (Mocap) System for the Human Leg," in *25th Anniversary HENAAC Conference Great Minds in STEM*, New Orleans, LA, USA, Oct. 2013.

• Owen Dominguez and **Gustavo Vejarano**, "Packet Loss Prediction for a Motion-Capture (MoCap) System," in *SACNAS National Conference 2013 (SACNAS'13)*, San Antonio, TX, USA, Oct. 2013.

• Dai Meng and **Gustavo Vejarano**, " Motion Capture of the Human Elbow using the Earth's Magnetic Field and Gravity," in *Graduate Research Symposium, Loyola Marymount University*, Los Angeles, CA, USA, Apr. 2013.

• Leonard Turcios, Andrew Petersen, and **Gustavo Vejarano**, "Upper-Limb Motion-Capture (MoCap) Testbed," in *Undergraduate Research Symposium, Loyola Marymount University*, Los Angeles, CA, USA, Mar. 2013.

2012 • Jay Lee and **Gustavo Vejarano**, "Motion-Capture (MoCap) Musical System," in *Graduate Research Symposium, Loyola Marymount University*, Los Angeles, CA, USA, Apr. 2012.

Book Chapters

2012 • **Gustavo Vejarano**, "Stability-Based Topology Control in Wireless Mesh Networks," *Wireless Mesh Networks*, ISBN 979-953-307-833-4, InTech, 2012, URL: https://doi.org/10.5772/48576

Technical Reports

2010 • **Gustavo Vejarano**, Joseph Makar, Ritwik Dubey, and Janise McNair, "Tactical Bandwidth Booster for Seamless Communication in Hybrid Networks: PSNR Guarantees for Video Communication," *technical report for US Army*, Nov. 2010.

2009 • **Gustavo Vejarano** and Janise McNair, "OPNET Modeling and Evaluation of IEEE 802.16 Wireless Mesh Networks with Distributed Scheduling," *technical report for OPNET University Program*, May 2009, URL: http://plaza.ufl.edu/gavafj/WiMAX_RBDS_Sim.pdf

• **Gustavo Vejarano**, Dexaing Wang, Xiaoyuan Li, and Janise McNair, "PESQ and MED Guarantees for Voice Communications over Hybrid Wireless Networks," *technical report for US Army*, May 2009.

• **Gustavo Vejarano**, Dexiang Wang, Xiaoyuan Li, and Janise McNair, "Tactical Bandwidth Booster for VoIP in Hybrid Wireless Networks," *technical report for US Army*, May 2009.

• Dexiang Wang, **Gustavo Vejarano**, Xiaoyuan Li, and Janise McNair, "Design, Evaluation, and Performance Evaluation of an Adaptive Delay-Jitter-Algorithm for Real-Time Traffic over Heterogeneous Networks," *technical report for US Army*, May 2009.

Doctoral Dissertation

2011 • **Gustavo Vejarano**, "Stability-Based Topology Control in Wireless Multihop Networks with Reservation-Based Distributed-Scheduling Policies," *Doctoral Dissertation*, Advisor: Dr. Janise McNair, University of Florida, May 2011, URL: http://purl.fcla.edu/fcla/etd/UFE0042896