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Personal Statement

Throughout my career, I have progressed through the technical ranks as a junior programmer, senior programmer, technical lead, chief architect, director of engineering, and founder and CEO of my own company that created wireless handheld point-of-sale systems for the restaurant industry. For five years while in graduate school, I taught undergraduate Computer Science courses at California State University, Los Angeles, earning the Professor of the Year award for the CS department in 2002. After receiving my Ph.D. in Computer Science in 2007 from the University of Southern California, I became an Assistant Professor in the Computer Systems Engineering program at the University of Alaska Anchorage (UAA) from August 2007-June 2011. I was promoted to Associate Professor and tenured at UAA beginning in the 2011/2012 academic year. From February 2011-November 2011, I was the Chair of the Bachelor of Science in Engineering department at UAA, which offered degrees in Computer, Electrical, and Mechanical Engineering with 13 tenure-track and 5 adjunct faculty. I am currently an Associate Professor of Engineering Practices in the Computer Science department at the University of Southern California, focusing on teaching undergraduate and graduate computer science courses and improving teaching in the field.

While at UAA, I authored and achieved University approval for introductory programming, object-oriented programming, systems administration, digital circuits, computer networking, operating systems, FPGA, and VLSI classes for engineering students focused on applied applications in various engineering disciplines. I also was the Program Chair for the Computer Systems Engineering department in preparing ABET documents to ultimately achieve full accreditation in 2008, 2010, and again in 2012. In the 2012/2013 academic year, the Computer Science and Computer Systems Engineering programs were merged, and I have been involved in streamlining the curricula for both programs to reduce duplication and provide an improved education for students in both programs.

I have also been successful in securing over \$1,000,000 as a PI or Co-PI in research funding since 2008 for projects concerning Intelligent Transportation Systems (ITS) networks and architectures. Single architectures are not always suitable for an application, so I focus on combining different network and system architectures to suit the needs of a specific application. In a mobile environment, combining centralized and distributed architectures into a single system allow wireless devices to behave as thin and thick clients. With ITS architectures, V2V (Vehicle-to-Vehicle), V2I (Vehicle-to-Infrastructure), and the hybrid V2V2I (Vehicle-to-Vehicle-to-Infrastructure) architectures provide a means for vehicles to transmit information to a central repository and other vehicles. One of the grants I have received focuses on installing tracking devices in 85 vehicles that communicate over the cellular network speed, location, and additional information available through a vehicle's on-board diagnostic (OBD) port. This data is combined with the data retrieved from other means, such as inductor loops, video cameras, driver reports, air tubes, and other vehicles equipped with GPS transmitters and receivers. From this data, a map of the roadways is provided showing the speed of select vehicles, average speed on arterial roadways, locations of congestion, fastest paths, and other information as requested by the stakeholders.

In addition, I organized and led the UAA School of Engineering K12 Summer Camps from 2010-2013. Starting with around 100 students in 2010, the camps grew to over 800 interested students in 2013. Initially funded by the School of Engineering through outreach activities, BP funded the summer camps in 2011, 2012, and 2013 at \$80k each year. The IEEE Foundation also funded \$20k in 2013. The camps were provided at no cost to the attendees, and topics included robotics, alternative energy, rapid prototyping, GPS tracking, FM radio setup, and structure destruction.

Within the IEEE, I have been quite active, being the General Chair for the IEEE 69th Vehicular Technology Conference in fall 2009 in Anchorage, the IEEE 15th Intelligent Transportation Systems Conference in fall 2012 in Anchorage, and the IEEE 77th Vehicular Technology Conference in fall 2013 in Las Vegas. I have also been a Program Co-Chair and Technical Program Chair for the IEEE 73rd Vehicular Technology Conference in fall 2011. I was on the IEEE Intelligent Transportation Systems Society Board of Governors for the term from January 2009-December 2011 and was elected as Vice President for Administrative Activities in the same society from January 2011-December 2012. I was also on the IEEE Vehicular Technology Society Board of Governors for the term from September 2011-December 2013. From October 2011-December 2013, I was the Editor-in-Chief of the

IEEE ITS Magazine. Within the ITSS, I am an Associate Editor for the IEEE Transactions on Intelligent Transportation Systems since 2010. In 2010, I was the treasurer for the Alaska section of the IEEE and was the chair of the section from January 2011-December 2011. During my time as chair of the IEEE Alaska Section, the section won the 2011 Outstanding Section Award for the Region 6 Northwest Area. In addition to being a member of the Intelligent Transportation Society of Alaska, I was also the president from January 2010-December 2011. I have been involved in other conferences as well, being the program co-chair, publicity co-chair, local arrangements chair, volunteer coordinator chair, technical program committee member, session chair, special session organizer, and reviewer. Within ACM, I am a member and was the faculty advisor for the student chapter of the ACM at the University of Alaska Anchorage.

Research Statement

My research focuses on the software and network architectures and algorithms used in mobile and wireless communication. Single architectures are not always suitable for an application, so I also focus on combining architectures to suit the needs of a specific application. The application area I use in my research is Intelligent Transportation Systems (ITS). Pure Vehicle-to-Vehicle (V2V) and Vehicle-to-Infrastructure (V2I) architectures have been proposed, and V2I communication is currently used by many ITS applications (such as automated toll booths, vehicle tracking, etc.). As more vehicles begin to use V2I communication for transmitting data to a central repository, different architectures or much creative utilization of bandwidth will be necessary. Hybrid architectures (such as the Vehicle-to-Vehicle-to-Infrastructure (V2V2I)) will be needed so that the data transmitted will not overwhelm the central systems.

In addition to the architecture, efficient algorithms are also necessary for analyzing the large amount of data that will be received. The data may be granular enough to determine the location of an accident or object in the roadway, the average speed on many different arterial roads for determining fastest paths, or for determining the impact of construction or a new building to the current traffic congestion, among many other potential applications. Making this data available in an efficient manner and performing real-time calculations on this data to produce usable results have been difficult challenges. The algorithms used need to be application-specific so they can be optimized for the utmost in efficiency.

One of the grants I have received is from the Alaska University Transportation Center, in conjunction with the Alaska Department of Transportation. The project has installed tracking devices in 65 vehicles in the city of Anchorage. The tracking devices are connected through the vehicle's on-board diagnostic (OBD) port, and the speed, location, and additional data from the vehicle's computer system are transmitted through the cellular network to a central server. This data is combined with the data retrieved from other means, such as inductor loops, video cameras, driver reports, air tubes, and other vehicles equipped with GPS transmitters and receivers. From this data, a map of the roadways is provided showing the speed of select vehicles, average speed on arterial roadways, locations of congestion, fastest paths, and other information as requested by the stakeholders. Some information, such as fastest paths or locations of congestion, are also returned to drivers as requested via text messages. With the devices strategically placed in 75 vehicles that traverse the main arterials of the city on a daily basis, the results have been quite promising. Probe vehicles are proving to be a very effective way of determining flow of traffic on main arterials, coupled with additional vehicle data from other means. The data is fed into a real-time simulator I created called FreeSim (<http://www.freewaysimulator.com>), which now utilizes Google Maps for its display. The data is also exposed over the Internet for other researchers to exploit and test their own algorithms given a live set of distributed data gathered via a V2I architecture at <http://www.alaskatraffic.net>.

With the popularity of driverless vehicles, there are many ethical issues that must be considered and resolved before selling one to a consumer. Typical questions I address are concerned with the situation of a driverless vehicle being involved in a collision. There are some situations where a collision is unavoidable, and liability will need to be determined to aid in how a driverless vehicle should be programmed. With more thought-out decisions concerning how to respond in specific situations, the law will be interpreted and developed differently than when drivers make decisions when put into a no-win situation. The potential number of applications and the questions are endless, and researchers from different departments will add invaluable to the project.

Teaching Statement

While working on my Ph.D. in Computer Science at the University of Southern California, I was teaching as an Adjunct Professor in the Computer Science department at California State University, Los Angeles. From 2002-2007, I taught many undergraduate Computer Science courses, including Introduction to Web Site Development (CS120), Introduction to SQL and Databases (CS122), Introduction to Programming (CS201), Introduction to Object-Oriented Programming (CS202), Programming with Data Structures (CS203), C Programming (CS242), Computer Ethics in the Information Age (CS301), Algorithm Design and Analysis (CS312), Web and Internet

Programming (CS320), Introduction to Automata Theory (CS386), Java for C++ Programmers (CS454 – Special Topics), Enterprise Architecture (CS454 – Special Topics, now CS420), Compilers (CS488), and Undergraduate Computer Science Wrap-Up Course (CS490). I also led a team of students in a directed study (CS499) to create a project to be used as the basis for the undergraduate compiler course. In 2002, I was voted Professor of the Year by the students in the Computer Science department, which was the first time ever a part-time lecturer had received that award. While there, I also authored the CS420 course on enterprise architecture, covering distributed computing, RMI, CORBA, Web Services, and MVC architectures (including Spring and Struts).

After completing my Ph.D. in spring 2007, I accepted a position as an Assistant Professor in the Computer Systems Engineering department at the University of Alaska Anchorage, with a workload of teaching three classes a semester (60%-20%-20% teaching-research-service workload). As the department was only three years old, I was given the ability to author many courses, including Introduction to Computer Systems (CSE 102), Introduction to C Programming for Engineers (CSE 205/294A), Object-Oriented C++ Programming for Engineers (CSE 215/294B), Assembly Language Programming (CSE 225), Operating Systems Engineering (CSE 335), Digital Circuits Design (CSE 342), Computer Networking for Engineers (CSE 355), Engineering Systems Administration (CSE 394B), Engineering of Computer Systems – Capstone Course (CSE438), VLSI Circuit Design (CSE 442), and Network Security (CSE 465). I have taught all of the above courses during my time at UAA, as well as a circuits class entitled Elements of Electrical Engineering (ES 309). I have also been the advisor for independent study courses (CSE 497) our undergraduate senior design course (CSE 438), in which groups of students develop a project from conception through implementation that encompasses the knowledge they have gained during the course of their degree. I have also been actively involved in forming the curriculum based on ABET criteria, and in 2008, 2010, and 2012, I led the Computer Systems Engineering department through successful accreditation. I was promoted to Associate Professor with tenure in summer 2011.

As for my student evaluations for the past 11 years of teaching, on a scale of 1 to 5, with 1 being the best, my average score for teaching ability is 1.62 from 1215 students in 66 classes. While at Cal State LA, the scores from the student evaluations were the top in the Computer Science department. I like to mix traditional and non-traditional teaching methods to provide students with a unique educational experience. Powerpoint slides provide a basis for many of my lectures, but I incorporate much student participation, discussions on the whiteboard, programming with an overhead projector, and diverting from the lecture notes to emphasize the topics of interest to the students. I believe that the most exciting projects for students are the ones in which they have interest, so I allow students to provide input for the projects, and in most classes I have a final project that is decided by the students (with my approval). I have had much positive feedback from that approach, as the students have chosen projects based on their own interests.

I have also had experience creating course material and curricula for many traditional and online universities. The material has included Powerpoint presentations, lecture notes for instructors, assignments, exams, multimedia presentations, and interactive lab assignments. I have also taught online classes with the American Public University System since 2009, which included developing course material and facilitating the instruction in the class. Those classes revolve around discussion boards, assignments, exams, and email. Students have a textbook and presentations that they read on their own, and then they must post to a discussion board each week, complete an assignment, and take a quiz. A lot of interaction occurs among the students, and the feedback provided by me is instrumental to the success of the online education. Without the in-person interaction that takes place in traditional brick and mortar universities, online education needs to have an open line of communication between the student and the instructor, regardless of the medium. One improvement that I think should be added to many online courses is having recorded presentations from an instructor rather than merely requiring the students to read and learn on their own. This would make the course more similar to distance education rather than online education, especially if frequent interaction with the instructor was available.

While in Alaska, I ran K12 summer camps in robotics, while overseeing summer camps being run in a number of engineering fields. The camps grew from 100 students in the first year to over 500 students in the fourth year, though that was a limitation based on funding. There were over 1500 students who wanted to attend the camps. At USC, during summer 2015, I will be running robotics and programming summer camps for K12 students.

I believe that education needs to occur inside and outside of the classroom. The interaction with students during office hours and discussions after class all lead to a rich understanding of material related to the class as well as unrelated material. Some of the best student interaction I have had occurred outside of the classroom, typically during office hours or in the lab. Just as technology needs to be adapted to changing conditions, I believe that the traditional teaching paradigm should be adjusted based on the class and effectiveness of different methods of information dissemination. The goal of teaching is for students to learn, and if that occurs without formal lectures

using slides, I think an instructor is still successful. I post all of my notes, slides, assignments, and syllabi online, and you can see more about my courses taught at <http://www.sigmacoding.com> under Teaching.

Although I enjoy teaching a wide array of courses, I feel most comfortable in teaching courses involved in networking, algorithms, general programming, compilers, software systems and engineering, and databases. I feel I am the most knowledgeable in those areas because of my research focus being in those fields as well as my professional experience, though I have a genuine passion for teaching, and I enjoy the interaction with students regardless of the course (as can be seen by the wide array of courses I have taught). Although I enjoy the research I have done, I am very interested in teaching and passing along the knowledge I have gained to future generations of computer scientists and engineers.

Education

- **Ph.D. in Computer Science, May 2007**
University of Southern California
 - Successfully defended dissertation on April 27, 2007, with topic “Algorithms and Data Structures for the Real-Time Processing of Traffic Data” under the advisement of Professor Ellis Horowitz, Professor Petros Ioannou, and Professor Ming-Deh Huang
- **Master of Science in Computer Science, December 2002**
University of Southern California
 - Emphasis in Systems and Software Engineering
- **Bachelor of Science in Computer Engineering and Computer Science, May 2002**
University of Southern California
 - Graduated cum laude

Professional Affiliations

- IEEE – member since 2002, Senior Member since 2015
- ACM – member since 2002
- ACM Special Interest Group on Computer Science Education (SIGCSE) – member since 2014
- IEEE Education Society – member since 2014
- IEEE Communications Society – member 2002-2013
- IEEE Computer Society – member since 2002
- IEEE Intelligent Transportation Systems Society – member since 2006
- IEEE Vehicular Technology Society – member 2009-2013
- IEEE Intelligent Transportation Systems Society Board of Governors – January 2009-December 2012
- IEEE Intelligent Transportation Systems Society VP Admin Activities – January 2011-December 2012
- IEEE Intelligent Transportation Systems Society Best Ph.D. Dissertation Committee – 2011, 2012, 2013
- IEEE Vehicular Technology Society Board of Governors – September 2011-December 2013
- IEEE Vehicular Technology Society Conference Committee – January 2011-December 2013
- Intelligent Transportation Society of Alaska President – January 2010-December 2011
- IEEE Alaska Section Chair – January 2011-December 2011
- IEEE Alaska Section Treasurer – January 2010-December 2010
- IEEE Region 6 Northwest Area Awards Chair – January 2012-December 2013
- IEEE-USA’s Career and Workforce Policy Committee – January 2011-December 2013
- IEEE-USA’s Committee on Transportation and Aerospace Policy – April 2011-December 2013
- Intelligent Transportation Society of Alaska – member June 2009-December 2013
- University of Alaska, Anchorage ACM Student Chapter Faculty Advisor – 2008-2011
- Municipality of Anchorage (MOA) Anchorage Metropolitan Area Transportation Solutions (AMATS) Freight Advisory Committee – 2010-2013
- Municipality of Anchorage (MOA) Anchorage Metropolitan Area Transportation Solutions (AMATS) Intelligent Transportation Systems Advisory Committee – January 2013-December 2013

Editor-in-Chief

- *IEEE Intelligent Transportation Systems Magazine, January 2012-December 2013*

Associate Editor

- *IEEE Transactions on Intelligent Transportation Systems, January 2010-present*
- *IEEE Intelligent Transportation Systems Magazine Guest Editor – Traffic Simulators, fall 2010*
- *IEEE Intelligent Transportation Systems Magazine, January 2009-December 2011*

Editorial Board

- *IEEE Intelligent Transportation Systems Society Monthly Podcast, January 2013-present*

Grant Reviewer

- *NSF Panel, 2011 (twice)*

Ph.D. Dissertation External Committee Member

- *Mohammad Hoque, University of Alabama. Defended dissertation successfully on April 25, 2012.*

Promotion and Tenure External Committee Member

- *Prof. Nicholas Kirsch, University of New Hampshire. Standing for promotion to associate professor with tenure, 2014-2015.*

Patents Held

- Timothy Menard, Jeffrey Miller, John Lund. “Real-Time Snow Plow Tracking.” Provisional Patent Application 61/709,264, filed October 3, 2012.

Awards

- *IEEE Vehicular Technology Society Conference Chair Award, Vehicular Technology Conference-fall 2011, San Francisco, California, USA. Presented in Seoul, Korea. May 20, 2014.*
- *Alaska Engineer of the Year nominee, 2014. Nominated by IEEE Alaska Section.*
- *IEEE Alaska Engineer of the Year, 2014.*
- *IEEE Alaska Section 2013 Outstanding Leadership and Professional Service Award, IEEE Alaska Section, 2013.*
- *University of Alaska Anchorage Office of Undergraduate Research and Scholarship Faculty Mentor Award, based on being the Faculty Mentor to a student who won an Undergraduate Research and Scholarship Award for Research, April 2012.*
- *IEEE Region 6 Northwest Area Outstanding Section Award 2011, IEEE Alaska Section while I was the chair of the section in 2011.*
- *University of Alaska Anchorage School of Engineering Spring 2011 Engineering Competition Faculty Advisor, based on being the Faculty Advisor to a student whose project won the Engineering Competition, April 2011.*
- *University of Alaska Anchorage Office of Undergraduate Research and Scholarship Faculty Mentor Award, based on being the Faculty Mentor to a student who won an Undergraduate Research and Scholarship Award for Research, April 2011.*
- *Anchorage Convention and Visitors Bureau Seymour Award Winner 2011, based on being the Annual Meeting Champion from 2010.*
- *University of Alaska Anchorage School of Engineering Fall 2010 Engineering Competition Faculty Advisor, based on being the Faculty Advisor to a student whose project won the Engineering Competition, December 2010.*
- *Anchorage Convention and Visitors Bureau Meeting Champion, October 2010, based on the conferences I have aided in bringing to Anchorage having an economic impact of \$3,157,341.94.*
- *Poster Honorable Mention (given to top 5 out of 250 posters), “Determining Time to Traverse Road Sections based on Mapping Discrete GPS Vehicle Data to Continuous Flows.” IEEE 6th Intelligent Vehicles Symposium, La Jolla, California, USA, June 2010.*

- *Professor of the Year of Computer Science* at California State University, Los Angeles in 2002 based on student votes. I was the first lecturer ever to be given this award.

Expert Witness Service

- *Ford Motor Company and Ford Global Technologies v ThermoAnalytics, Inc.*, 2015-present
Representing: ThermoAnalytics, Inc. (defendant)
Role: I was retained as the expert witness for ThermoAnalytics in a lawsuit from Ford based on a contract between the two companies on software produced by ThermoAnalytics.
Status: The case has not yet settled and is pending.
- *Sherman & Zarrabian LLP v Aderant North America, Inc., Aderant Case Management LLC, Aderant Legal Holdings, Inc., Aderant Holdings, Inc., LAHC-CPMG Inc., Client Profiles Inc., LAHC-CPFS Inc., Client Profiles Financial Systems Corporation, and DOES 1 through 25*, 2014
Representing: Client Profiles Inc. (defendant)
Role: I reviewed the complaints and developed case studies, primarily in SQL, for determining the usability of the Client Profiles software by Sherman & Zarrabian.
Status: The case has not yet settled and is pending.
- *Magna Electronics Inc. v TRW Automotive Holdings Corp.; TRW Automotive US LLC; and TRW Vehicle Safety Systems Inc.*, 2013-present
Representing: TRW (defendant)
Role: I prepared expert reports for 12 patents Magna Electronics was claiming TRW infringed. The case was submitted for Inter Partes Review (IPR) with expert declarations and then proceeded to federal court for the civil lawsuit. The patents involved primarily concerned vision-based systems used as sensors for intelligent vehicular operations.
Status: The case has not yet settled and is pending.
- *RIAA, MPAA et al vs Kazaa, Morpheus, Grokster*, fall 2003
Representing: RIAA, MPAA et al (plaintiff)
Role: I aided Prof. Ellis Horowitz in preparing as an expert witness. The case involved an examination of the source code of Kazaa, written in C/C++, and Morpheus, written in Java, in an attempt to determine the extent to which the software remained in contact with the distributor (i.e. Kazaa, Morpheus). The contention being that the connection was maintained and hence Kazaa and Morpheus were in a position to restrict the downloading of copyrighted material. Prof. Horowitz filed a declaration and was deposed.
Status: The case was settled for Kazaa, et al, reaffirmed on appeal, but decided in favor of the RIAA et al by the Supreme Court in June 2005.
- *NAVCanada vs Adacel and CAE*, fall 2007
Representing: NAVCanada (plaintiff)
Role: I aided Prof. Ellis Horowitz in preparing as an expert witness. NAVCanada had developed an air traffic control system for flights across the North Atlantic. They accused Adacel and CAE of copyright infringement. Prof. Horowitz's task was to determine the extent to which the Adacel/CAE software was derivative from the NAVCanada software. The software was written using C++ and Pascal.
Status: Prof. Horowitz filed a report in the case, and the case was settled.

Journal Publication Reviewer

- *IEEE Transactions on Intelligent Transportation Systems*, 2014
- *IEEE Transactions on Intelligent Transportation Systems*, 2013
- *MDPI Algorithms Journal*, 2013
- *ACM Transactions on Interactive Intelligent Systems*, 2012
- *IEEE Transactions on Intelligent Transportation Systems*, 2012
- *IEEE Transactions on Vehicular Technology*, 2012
- *Elsevier Simulation Modeling Practice and Theory*, 2012
- *IEEE Vehicular Technology Magazine*, 2011
- *IEEE Intelligent Transportation Systems Magazine*, 2011
- *IEEE Transactions on Intelligent Transportation Systems*, 2011
- *IEEE Intelligent Transportation Systems Magazine*, 2010
- *IEEE Transactions on Intelligent Transportation Systems*, 2010

- *EURASIP Journal on Advances in Signal Processing*, 2009
- *IEEE Transactions on Intelligent Transportation Systems*, 2009
- *IEEE Communications Magazine*, 2009
- *IEEE Transactions on Intelligent Transportation Systems*, 2008
- *IEEE Communications Magazine*, 2008
- *IEEE Transactions on Intelligent Transportation Systems*, 2007
- *IEEE Communications Magazine*, 2007

Conference Proceedings Reviewer

- *IEEE 18th Intelligent Transportation Systems Conference*, Canary Islands, Spain, September 2015.
- *IEEE 17th Intelligent Transportation Systems Conference*, Qingdao, China, October 2014.
- *IEEE 16th Intelligent Transportation Systems Conference*, the Hague, the Netherlands, October 2013.
- *IEEE 78th Vehicular Technology Conference*, Las Vegas, Nevada, USA, September 2013.
- *IEEE 9th Intelligent Vehicles Symposium*, Gold Coast, Australia, June 2013.
- *IEEE International Conference on Industrial Technology*, Cape Town, South Africa, February 2013.
- *IEEE 15th Intelligent Transportation Systems Conference*, Anchorage, Alaska, USA, September 2012.
- *IEEE 76th Vehicular Technology Conference*, Quebec City, Quebec, Canada, September 2012.
- *IEEE 8th Intelligent Vehicles Symposium*, Alcala de Henares, Spain, June 2012.
- *IEEE 8th International Conference on Information, Communications, and Signal Processing*, Shangri-La, Singapore, December 2011.
- *IEEE 2011 Systems, Man, and Cybernetics Conference*, Anchorage, Alaska, USA, October 2011.
- *IEEE 74th Vehicular Technology Conference*, San Francisco, California, USA, September 2011.
- *IFAC 18th World Congress*, Milano, Italy, August 2011.
- *IEEE 7th Intelligent Vehicles Symposium*, Baden-Baden, Germany, June 2011.
- *IEEE 1st Forum on Integrated and Sustainable Transportation Systems*, Vienna, Austria, June 2011.
- *IEEE 73rd Vehicular Technology Conference*, Budapest, Hungary, May 2011.
- *IEEE 13th Intelligent Transportation Systems Conference*, Madeira, Portugal, September 2010.
- *IEEE Workshop on Vehicular Networking and Applications*, co-located with *IEEE International Conference on Communication*, Cape Town, South Africa, May 2010.
- *IEEE 13th International Multitopic Conference*, Islamabad, Pakistan, December 2009.
- *IEEE 7th International Conference on Information, Communications, and Signal Processing*, Macau, China, December 2009.
- *IEEE 12th Intelligent Transportation Systems Conference*, St. Louis, Missouri, USA, October 2009.
- *IEEE 1st Vehicular Networking Conference*, Tokyo, Japan, October 2009.
- *IEEE 70th Vehicular Technology Conference*, Anchorage, Alaska, USA, September 2009.
- *IEEE 69th Vehicular Technology Conference*, Barcelona, Spain, April 2009.
- *IEEE 3rd Workshop on Automotive Networking and Applications*, co-located with *IEEE Global Communication Conference 2008*, New Orleans, Louisiana, USA, December 2008.
- *IEEE 11th Intelligent Transportation Systems Conference*, Beijing, China, October 2008.
- *3rd International Symposium of Transport Simulation*, Queensland, Australia, August 2008.
- *IEEE 4th Vehicle-to-Vehicle Communications Workshop*, in conjunction with *IEEE 4th Intelligent Vehicles Symposium*, Eindhoven, The Netherlands, June 2008.
- *IEEE 4th Intelligent Vehicles Symposium*, Eindhoven, The Netherlands, June 2008.
- *IEEE 10th Intelligent Transportation Systems Conference*, Seattle, Washington, USA, October 2007.
- *IEEE 3rd Vehicle-to-Vehicle Communications workshop*, in conjunction with *IEEE 3rd Intelligent Vehicles Symposium*, Istanbul, Turkey, June 2007.

Conference General Chair

- *IEEE 78th Vehicular Technology Conference*, Las Vegas, Nevada, USA, September 2013.
- *IEEE 15th Intelligent Transportation Systems Conference*, Anchorage, Alaska, USA, September 2012.
- *IEEE 70th Vehicular Technology Conference*, Anchorage, Alaska, USA, September 2009.

Conference Technical Program Chair

- *IEEE 74th Vehicular Technology Conference*, San Francisco, California, USA, September 2011.

Conference Technical Program Co-Chair

- *IEEE 18th Intelligent Transportation Systems Conference*, Canary Islands, Spain, September 2015.
- *IEEE 7th Intelligent Vehicles Symposium*, Baden-Baden, Germany, June 2011.
- *IEEE 1st Forum on Integrated and Sustainable Transportation Systems*, Vienna, Austria, June 2011.

Conference Technical Program Committee Member

- *IEEE 16th Intelligent Transportation Systems Conference*, The Hague, The Netherlands, September 2013.
- *16th Portuguese Conference on Artificial Intelligence, Artificial Intelligence in Transportation Systems Track*, Azores, Portugal, September 2013.
- *IEEE 8th International Conference on Emerging Technologies*, Islamabad, Pakistan, October 2012.
- *IEEE 15th Intelligent Transportation Systems Conference*, Anchorage, Alaska, USA, September 2012.
- *IEEE 76th Vehicular Technology Conference*, Quebec City, Quebec, Canada, September 2012.
- *IEEE 14th Intelligent Transportation Systems Conference*, Washington DC, USA, October 2011.
- *IEEE 2nd Vehicular Networking Conference*, Jersey City, New Jersey, USA, December 2010.
- *IEEE International Conference on Communications, Vehicular Mobility Workshop*, Cape Town, South Africa, May 2010.
- *IEEE International Conference on Communications Vehicular Connectivity Workshop*, Cape Town, South Africa, May 2010.
- *IEEE 1st Vehicular Networking Conference*, Tokyo, Japan, October 2009.
- *IEEE 69th Vehicular Technology Conference*, Barcelona, Spain, April 2009.
- *IEEE 4th Intelligent Vehicles Symposium Vehicle-to-Vehicle Communications Workshop*, Eindhoven, The Netherlands, June 2008.

Conference Publicity Co-Chair

- *IEEE 13th Intelligent Transportation Systems Conference*, Madeira Island, Portugal, September 2010.

Conference Local Arrangements Chair

- *IEEE Systems, Man, and Cybernetics Conference 2011*, Anchorage, Alaska, USA, October 2011.
- *IEEE International Conference on Robotics and Automation*, Anchorage, Alaska, USA, May 2010.

Conference Awards Committee Member

- *IEEE 16th Intelligent Transportation Systems Conference Best Paper Committee Member*, The Hague, The Netherlands, September 2013.
- *IEEE 6th Intelligent Vehicles Symposium*, La Jolla, California, USA, June 2010.

Conference Session Chair

- *IEEE 16th Intelligent Transportation Systems Conference*, The Hague, The Netherlands, September 2013.
- *IEEE 9th Intelligent Vehicles Symposium*, Gold Coast, Australia, June 2013.
- *IEEE Systems, Man, and Cybernetics Conference 2011*, Anchorage, Alaska, USA, October 2011.
- *IEEE 14th Intelligent Transportation Systems Conference*, Washington DC, USA, October 2011.
- *IEEE 7th Intelligent Vehicles Symposium*, Baden-Baden, Germany, June 2011.
- *IEEE 2nd Vehicular Networking Conference*, Jersey City, New Jersey, USA, December 2010.
- *IEEE 12th Intelligent Transportation Systems Conference*, St. Louis, Missouri, USA, October 2009.
- *IFAC 12th Symposium on Control in Transportation Systems*, Redondo Beach, California, USA, September 2009.
- *IEEE 5th Intelligent Vehicles Symposium*, Xi'an, China, June 2009.
- *IEEE 11th Intelligent Transportation Systems Conference*, Beijing, China, October 2008.
- *IEEE 10th Intelligent Transportation Systems Conference*, Seattle, Washington, USA, October 2007.

Special Session Organizer

- "Intelligent Vehicular Applications, Simulations, and Implementations." *IEEE Systems, Man, and Cybernetics Conference 2011*, Anchorage, Alaska, USA, October 2011.

Workshop Organizer

- “Education in Intelligent Transportation Systems.” *IEEE 18th Intelligent Transportation Systems Conference*, Las Palmas, Gran Canaria, Spain, September 2015.
- “Information Fusion for Intelligent Transportation Systems.” *IEEE 15th Intelligent Transportation Systems Conference*, Anchorage, Alaska, USA, September 2012. (jointly organized with Javier Sanchez Medina of the University of Las Palmas de Gran Canaria, Spain)

Publicity and Articles Including Quotations from Me

66. “Driverless Car Technology: An Expert Describes The Distant Future Of Autonomous Vehicles.” Andrew Whalen, November 19, 2015, *iDigitalTimes*. <http://www.idigitaltimes.com/driverless-car-technology-expert-describes-distant-future-autonomous-vehicles-491724>
65. “Driverless Car Technology: Impressed By Google Car? Just Wait For The Auto App Explosion.” Andrew Whalen, November 10, 2015, *iDigitalTimes*. <http://www.idigitaltimes.com/driverless-car-technology-impressed-google-car-just-wait-auto-app-explosion-488364>
64. Recorded Video Interview, “Current and Future State of Autonomous Vehicles.” Greg Vilorio, November 8, 2015, *Nerd Stalker*. <http://www.nerdstalker.com/2015/11/current-and-future-state-of-autonomous.html>
63. “The federal government doesn’t know how to regulate Tesla’s autopilot software.” Andrew J. Hawkins, November 4, 2015, *The Verge*. <http://www.theverge.com/2015/11/4/9670744/tesla-self-driving-autonomous-cars-regulation-oversight>
62. “Key questions for the connected car ecosystem.” Kelly Hill, October 31, 2015, *RCR Wireless*. <http://www.rcrwireless.com/20151031/featured/key-questions-for-the-connected-car-ecosystem-tag6>
61. “12 Steps of Recovery from Self-Driving Car Hype.” Junko Yoshida, October 29, 2015, *EE Times*. http://www.eetimes.com/document.asp?doc_id=1328149
60. “IEEE Survey Indicates When it Comes to Driverless Cars – You Can Take Me, but not My Kids.” *PR Newswire*, October 15, 2015. http://www.prnewswire.com/news-releases/ieee-survey-indicates-when-it-comes-to-driverless-cars---you-can-take-me-but-not-my-kids-300160517.html?tc=eml_cleartime
59. “VAST Updates” Memorandum, Maja Mataric, Vice Dean of Research, USC Viterbi School of Engineering. September 2, 2015. Cited the CS@SC Summer Camps from 2015 as providing K-12 outreach in computer programming.
58. “Autonomous Car Podcast: Expert Discusses the Road Ahead for Self-Driving Cars.” Hosted by Roberto Cruz, *AAA Today*. September 1, 2015. <http://blog.ny.aaa.com/autonomous-car-podcast-expert-discusses-road-ahead/>
57. IEEE Panel Discussion on Driverless Vehicles with Wei-Bin Zhang (UC Berkeley), Bernard Soriano (California DMV), Bryant Walker Smith (University of South Carolina), and hosted by Justin Pritchard (Associated Press). Hosted at the University of Southern California, August 28, 2015. <http://transmitter.ieee.org/ieee-driverless-car-roundtable/>
56. “Driverless cars will change the world, but how exactly? USC experts look to the future.” Andrew Good and Tanya Abrams. *USC News*. August 20, 2015. <http://news.usc.edu/85249/ask-the-experts-whats-next-for-driverless-cars/>
55. Radio Interview for KFI-AM in Los Angeles, *The Bill Handel Show* hosted by Bill Handel, June 18, 2015. <http://www.kfiam640.com/onair/bill-handel-30603/>
54. “How safe are driverless cars?” Ben Tracy, May 12, 2015. *CBS News This Morning*. <http://www.cbsnews.com/news/self-driving-car-tests-reveal-collisions-delphi-automotive-google-vehicles/>
53. “Santa Rosa company pioneers new generation of smartcars.” Robert Digitale, April 19, 2015. *The Press Democrat*. <http://www.pressdemocrat.com/business/3812465-181/santa-rosa-company-pioneers-new?page=1>
52. Radio Interview for BBC Radio 5 Live, *Up All Night* hosted by Dotun Adebayo, April 4, 2015. <http://www.bbc.co.uk/programmes/b05pktv6>
51. Radio Interview based on “Autonomous Car Ride from San Francisco to New York Hits a Few Road Bumps Along the Way.” *KCBS, CBS News Radio San Francisco, 740 AM, 106.9 FM*, April 4, 2015. In response to article <http://sanfrancisco.cbslocal.com/2015/04/03/autonomous-car-ride-from-sf-ny-hits-a-few-road-bumps-along-the-way/>

50. "This is Big: A Robo-Car Just Drove Across the Country." Alex Davies, April 3, 2015. *Wired.com*. <http://www.wired.com/2015/04/delphi-autonomous-car-cross-country/>
49. "Could Apple really be about to make cars?" Jack Stewart, February 20, 2015. *BBC Future*. <http://www.bbc.com/future/story/20150220-could-apple-really-make-cars>
48. "Driver's Ed: Ethics for Driverless Car Software." *Transportation Communications Newsletter*, February 13, 2015, ISSN 1529-1057.
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45. "Gaming out ethical dilemmas of self-driving cars and car crashes." November 20, 2014. *Airtalk with Larry Mantle, KPCC 89.3*. Radio Interview with me. <http://www.scpr.org/programs/airtalk/2014/11/20/40444/gaming-out-ethical-dilemmas-of-self-driving-cars-a/>
44. "In the future, will no driver = no morals?" November 20, 2014. *The Sun Chronicle* courtesy of Associated Press. http://www.thesunchronicle.com/features/stories/in-the-future-will-no-driver-no-morals/article_0cd16da6-f425-5864-a1ea-1052966d142c.html
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41. "Self-driving cars: safer, but what of their morals." Justin Pritchard, November 19, 2014. *Associate Press – The Big Story*. <http://bigstory.ap.org/article/74aef312a8b64375b945ae21152d808b/how-teach-self-driving-cars-ethics-road>
40. "Self-driving cars may be safer, but there has been little discussion of their moral choices." Justin Pritchard, November 19, 2014. *The Japan Times* courtesy of Associated Press. http://www.japantimes.co.jp/news/2014/11/20/business/self-driving-cars-may-safer-little-discussion-moral-choices/?utm_source=rss&utm_medium=rss&utm_campaign=self-driving-cars-may-safer-little-discussion-moral-choices#VG5NDckvE3I
39. "Google teaches ethics to driverless cars. Can they react better than humans?" Justin Pritchard, November 19, 2014. *CS Monitor* courtesy of Associated Press. <http://www.csmonitor.com/Innovation/Latest-News-Wires/2014/1119/Google-teaches-ethics-to-driverless-cars.-Can-they-react-better-than-humans>
38. "Self-driving cars: safer, but what of their morals." Justin Pritchard, November 19, 2014. *Associated Press*. <http://bigstory.ap.org/article/74aef312a8b64375b945ae21152d808b/how-teach-self-driving-cars-ethics-road>
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35. "Self-Driving Cars are the Best Thing to Ever Happen to Cyclists." Alexander George, October 20, 2014. *Outside Magazine*. <http://www.outsideonline.com/outdoor-gear/gear-shed/tech-talk/Will-Self-Driving-Cars-Be-the-Savior-of-Cyclists.html>
34. "Get Ready to Say Goodbye to the Traffic Light." Bradley Berman, August 20, 2014. *Read Write*. <http://readwrite.com/2014/08/20/traffic-light-smart-cars-networked-roads>
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32. "Driverless Vehicles can substantially improve safety on roads: Jeffrey Miller, IEEE." Srinkanth RP. May 27, 2014. *Information Week*. <http://www.informationweek.in/informationweek/interviews/295988/driverless-vehicles-substantially-improve-safety-roads-jeffrey-miller-ieee>

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30. "6 tendencias para os carros no futuro proximo." January 29, 2014. *Exame.com*. <http://exame.abril.com.br/tecnologia/noticias/6-tendencias-para-os-carros-no-futuro-proximo#1>
29. "How to fix a car – without a mechanic." January 20, 2014. *BBC Future*. <http://www.bbc.com/future/story/20140120-fix-a-car-without-a-mechanic>
28. "Carros vao interagir entre si e serao mais ageis para fugir de transtornos e evitar acidentes." January 9, 2014. *Brazil Estado de Minas*. http://www.em.com.br/app/noticia/tecnologia/2014/01/09/interna_tecnologia,486120/carros-vao-interagir-entre-si-e-serao-mais-ageis-para-fugir-de-transtornos-e-evitar-acidentes.shtml
27. "Carros estarao conectados a internet em 2025, dizem especialistas." November 5, 2013. *Brazil Epoca*. <http://epoca.globo.com/vida/vida-util/tecnologia/noticia/2013/11/quando-seu-carro-estara-bconectado-internetb-em-2025-dizem-especialistas.html>
26. "The Future Mode of Intelligent Transportation." October 10, 2013. *iChina*.
25. "Most new cars to be Internet-enabled by 2025." September 5, 2013. *The Denver Post*. http://www.denverpost.com/technology/ci_24021259/most-new-cars-be-internet-enabled-by-2025
24. "60 percent of vehicles to be Internet-enabled by 2025." Ellyne Phneah, September 2, 2013. *ZDNet*. <http://www.zdnet.com/60-percent-of-vehicles-to-be-internet-enabled-by-2025-7000020107/>
23. "IEEE: 60 Percent of Cars Will Be Internet-Enabled by 2025." Darryl K. Taft, August 29, 2013. *eWeek*. <http://www.eweek.com/innovation/ieee-60-of-cars-will-be-internet-enabled-by-2025.html>
22. "The Need for High Speed: IEEE Experts Predict 60 Percent of the Vehicles on the Road Will Be Internet-Enabled by 2025." August 28, 2013. *PR News Wire* article includes quotations from me. <http://www.prnewswire.com/news-releases/the-need-for-high-speed-ieee-experts-predict-60-percent-of-the-vehicles-on-the-road-will-be-internet-enabled-by-2025-221479981.html>
21. "Vehicular Technology Conference Focuses on Wireless." July 8, 2013. IEEE The Institute article includes quotations from me. <http://theinstitute.ieee.org/benefits/conferences/vehicular-technology-conference-focuses-on-wireless>
20. "Major Road Blocks Linger, But Driverless Cars Are Here to Stay." July 5, 2013. *Fox Business* article includes quotations from me. <http://www.foxbusiness.com/industries/2013/07/03/major-road-blocks-linger-but-driverless-cars-are-here-to-stay/>
19. Informania Interview on KRUA. May 16, 2013. Discussion about K12 summer camps and Intelligent Transportation Systems research. <http://www.kruaradio.org/infomania-dr-miller-interview/>
18. "The Impact of Driverless Technology and Autonomous Cars." March 26, 2013. Written by Rebekah Coleman. Loans.org article includes quotations from me. <http://loans.org/auto/articles/driverless-technology-autonomous-cars>
17. Nominated for "2013 White House Champions of Change – Transportation Technology Solutions for the 21st Century." March 26, 2013.
16. "Intelligent Transportation Careers Speed Ahead." March 2013. *Today's Engineer Career Focus* article includes quotations from me. <http://www.todaysengineer.org/2013/Mar/career-focus.asp>
15. Who Wants to Be a Millionaire? – A question on the show that aired on February 27, 2013 featured the IEEE from the articles below published about driverless cars by 2040. 4th Question – "With self-driving cars expected to become the norm, the Institute of Electrical and Electronics Engineers predicts that by 2040, drivers will no longer need what?" Answer – Driver's licenses.
14. "IEEE Identify Driverless Cars as Most Viable Form of Intelligent Transportation, Dominating the Roadway by 2040." September 26, 2012. *After Market Auto Safety*. <https://aftermarketautosafety.wordpress.com/2012/09/26/ieee-identify-driverless-cars-as-most-viable-form-of-intelligent-transportation-dominating-the-roadway-by-2040/>
13. "Driverless Cars Allowed on California Roads." September 26, 2012. *Environment News Service*. <http://ens-newswire.com/2012/09/26/driverless-cars-allowed-on-california-roads/>
12. NPR Southern California Radio Interview – "AirTalk with Larry Mantle." 89.3 KPCC, 89.1 KUOR, 90.3 KVL. September 25, 2012. Discussion about Governor Larry Brown signing bill allowing self-driving cars in California. <http://www.scpr.org/programs/airtalk/2012/09/26/28581/governor-brown-paves-the-road-for-hands-free-drivi/> Actual radio segment - <http://www.scpr.org/programs/airtalk/2012/09/26/>
11. QR77 Radio Interview – "The Rob Breckinridge Show." September 21, 2012. Lead story for the show was on driverless vehicles.

10. "Top Five Predictions about the Future of Driverless Cars." September 20, 2012. *AoIAutos.com*.
<http://dreamcarscreditblog.com/uncategorized/top-five-predictions-about-the-future-of-driverless-cars/>
9. "You won't need a driver's license by 2040." September 18, 2012. CNN article includes quotations from me. <http://www.cnn.com/2012/09/18/tech/innovation/ieee-2040-cars/index.html>
8. "You won't need a driver's license by 2040." September 17, 2012. Wired.com article includes quotations from me. <http://www.wired.com/autopia/2012/09/ieee-autonomous-2040/>
7. "How Self-Driving Cars Will Change Transportation." September 10, 2012. MSN.com Autos article includes quotations from me. <http://editorial.autos.msn.com/blogs/autosblogpost.aspx?post=fd1dd24a-7eea-4a00-8a97-dd7c3aab7a1c>
6. "Look Ma, No Hands! Expert Members of IEEE Identify Driverless Cars As Most Viable Form of Intelligent Transportation Dominating the Roadway by 2040 and Sparking Dramatic Changes in Vehicular Travel." September 5, 2012. PR Newswire article includes quotations from me.
<http://www.prnewswire.com/news-releases/look-ma-no-hands-168623236.html>
5. "Look Ma, No Hands!" September 2, 2012. IEEE News Release includes quotations from me.
http://www.ieee.org/about/news/2012/5september_2_2012.html
4. "Jeff Miller and ITS Help Anchorage Address a National Dilemma." *Transportation Communications Newsletter*, April 25, 2012, ISSN 1529-1057.
3. *Alaska University Transportation Center Spotlight Column*, based on my research in Intelligent Transportation Systems in Alaska, March 2012.
2. *IEEE Intelligent Transportation Systems Magazine Editor-in-Chief's Column*, announcing me as the incoming Editor-in-Chief of the ITS Magazine, winter 2011.
1. *Sustainable City Network Article by Randy Rodgers*, April 20, 2011.
http://www.sustainablecitynetwork.com/topic_channels/transportation/article_ca00cf16-69db-11e0-9b0e-001a4bcf6878.html?mode=story

Conferences Attended

- *IEEE 78th Vehicular Technology Conference*, Las Vegas, Nevada, USA, September 2013.
- *IEEE 9th Intelligent Vehicles Symposium*, Gold Coast, Queensland, Australia, June 2013.
- *IEEE 4th Vehicular Networking Conference*, Seoul, South Korea, November 2012.
- *ITS Alaska Annual Meeting*, Anchorage, Alaska USA, October 2012.
- *IEEE 15th Intelligent Transportation Systems Conference*, Anchorage, Alaska, USA, September 2012.
- *IEEE 8th Intelligent Vehicles Symposium*, Alcala de HERNANDEZ, Spain, June 2012.
- *IEEE 75th Vehicular Technology Conference*, Yokohama, Japan, May 2012.
- *IEEE Panel of Editors Meeting*, San Francisco, California, USA, April 2012.
- *IEEE 3rd Vehicular Networking Conference*, Amsterdam, The Netherlands, November 2011.
- *ITS Alaska Annual Meeting*, Anchorage, Alaska USA, October 2011.
- *IEEE Systems, Man, and Cybernetics Conference*, Anchorage, Alaska, USA, October 2011.
- *IEEE 14th Intelligent Transportation Systems Conference*, Washington DC, USA, October 2011.
- *IEEE 74th Vehicular Technology Conference*, San Francisco, California, USA, September 2011.
- *ITE Western District Annual Meeting*, Anchorage, Alaska, USA July 2011.
- *IEEE 73rd Vehicular Technology Conference*, Budapest, Hungary, May 2011.
- *American Planning Association's National Planning Conference*, Boston, Massachusetts, USA, April 2011.
- *IEEE 2nd Vehicular Networking Conference*, Jersey City, New Jersey, USA, December 2010.
- *ITS Alaska Annual Meeting*, Fairbanks, Alaska, USA, October 2010.
- *Alaska Community Transportation Transit Conference*, Fairbanks, Alaska, USA, October 2010.
- *IEEE 13th Intelligent Transportation Systems Conference*, Madeira Island, Portugal, September 2010.
- *IEEE 6th Intelligent Vehicles Symposium*, La Jolla, California, USA, June 2010.
- *IEEE International Conference on Robotics and Automation*, Anchorage, Alaska, USA, May 2010.
- *Maintenance Decision Support System Product Showcase*, Anchorage, Alaska, USA, April 2010.
- *Arctic Ice and Snow Roads 2010 Conference*, Anchorage, Alaska, USA, March 2010.
- *IEEE 12th Intelligent Transportation Systems Conference*, St. Louis, Missouri, USA, October 2009.
- *IEEE 70th Vehicular Technology Conference*, Anchorage, Alaska, USA, September 2009.
- *IFAC Symposium on Control Systems*, Redondo Beach, California, USA, September 2009.
- *IEEE 69th Vehicular Technology Conference*, Barcelona, Spain, April 2009.

- *IEEE 6th Consumer Communication and Networking Conference*, Las Vegas, Nevada, USA, January 2009.
- *IEEE 4th Intelligent Vehicles Symposium*, Eindhoven, The Netherlands, June 2008.
- *IEEE 10th Intelligent Transportation Systems Conference*, Seattle, Washington, USA, October 2007.
- *IEEE 3rd Intelligent Vehicles Symposium*, Istanbul, Turkey, June 2007.
- *IEEE 29th International Conference on Software Engineering*, Minneapolis, Minnesota, USA, May 2007.
- *IEEE 9th Intelligent Transportation Systems Conference*, Toronto, Ontario, Canada, September 2006.
- *ITS America Conference*, Phoenix, Arizona, USA, May 2005.
- *IEEE 1st Consumer Communication and Networking Conference*, Las Vegas, Nevada, USA, January 2004.

Awards Received by Students Advised

- Lowell Perry. *Office of Undergraduate Research and Scholarship (OURS)* for “ATV Remote Monitoring System,” fall 2013. \$2500
- Wolfram Donat. *Office of Undergraduate Research and Scholarship (OURS) Discovery Award* for “Computer Vision for Vehicular Robotics,” spring 2013. \$250
- Vex Robotics High School World Competition Participant, April 2013. As a regional winner, we were invited to participate in the world competition.
- Vex Robotics High School Region Competition Winner, March 2013. I advised a group of four high school students to participate in the competition.
- Jacob Wingerd. *Office of Undergraduate Research and Scholarship (OURS)* for “Digital Snow Plow Monitoring for User Navigation Purposes,” fall 2012, \$1900.
- Timothy Menard, 2nd Place, *IEEE 2012 Region 6 Paper Competition*, September 2012. \$500
- Wolfram Donat. *Office of Undergraduate Research and Scholarship (OURS)* for “Computer Vision for Vehicular Robotics,” spring 2012. \$2000
- Timothy Menard. Admitted to University of Nevada, Las Vegas, Master’s program in Electrical and Computer Engineering, fall 2012.
- Timothy Menard. Internship with Toyota InfoTechnology, Mountain View, California, summer 2012.
- Timothy Menard, *USUAA Leadership Award*, spring 2012. \$1000
- Timothy Menard, BP 1st Place Award, *University of Alaska Anchorage School of Engineering Spring 2012 Design Competition*, spring 2012. \$300
- Timothy Menard, Society of Women Engineers Community Engagement Award, *University of Alaska Anchorage School of Engineering Spring 2012 Design Competition*, spring 2012. \$50
- Timothy Menard, 1st Place, *IEEE Spring 2012 Northwest Area Paper Competition*, April 2012. \$750
- Timothy Menard. 1st Place, *IEEE UAA Student Branch Spring 2012 Paper Competition*. (moved onto IEEE Spring 2012 Northwest Area Paper Competition), March 2012.
- Timothy Menard. *UAA Leadership Honors*, spring 2012.
- Timothy Menard. *Society of American Military Engineers Scholarship – Anchorage Post*, 2011. \$750
- Timothy Menard. *University of Alaska Anchorage School of Engineering Scholarship*, fall 2011. \$500
- Timothy Menard. *UAA University Honors College Discovery Grant* to attend IEEE Intelligent Transportation Systems Conference, Washington DC, October 2011. \$1000
- Timothy Menard. Internship with Toyota InfoTechnology, Mountain View, California, summer 2011.
- Timothy Menard. 1st Place, “FreeSim_Mobile: iPhone vs Android.” *University of Alaska Anchorage School of Engineering Spring 2011 Design Competition*. \$3000
- Timothy Menard. *USUAA Student Travel Grant* to attend IEEE Intelligent Vehicles Symposium in Baden-Baden, Germany, spring 2011. \$850
- Timothy Menard. 2nd Place, *IEEE Spring 2011 Northwest Area Paper Competition*, April 2011. \$500
- Timothy Menard. 1st Place, *IEEE UAA Student Branch Spring 2011 Paper Competition*. (moved onto IEEE Spring 2011 Northwest Area Paper Competition), March 2011.
- Timothy Menard. *USUAA Student Travel Grant* to attend IEEE Intelligent Vehicles Symposium in San Diego, California, spring 2010. \$750
- Timothy Menard. 1st Place, “FreeSim_Mobile.” *University of Alaska Anchorage School of Engineering Fall 2010 Design Competition*. \$3000

- Timothy Menard. *Office of Undergraduate Research and Scholarship (OURS)* for FreeSim_Mobile, fall 2010. \$1000

Presentations – NOTE: This list does not include presentations associated with publications at conferences. All of the papers published at conferences had associated presentations.

67. Miller, Jeffrey. "CS@SC Summer Camps and ABET Summary." *USC Computer Science Industry Advisory Board Meeting*, Los Angeles, California, USA, November 5, 2015.
66. Miller, Jeffrey. "Computer Science Capstone." *USC CET Instructional Design Meet Up*, Los Angeles, California, USA, October 16, 2015.
65. Miller, Jeffrey. "CS@SC K12 Outreach - Computer Science in K12 Curricula." *Calvary Christian Retreat*, Malibu, California, USA, October 9, 2015.
64. Miller, Jeffrey. "Computer Science Capstone." *USC Viterbi School of Engineering Division of Engineering Education – Capstone Retreat*, Los Angeles, California, USA, August 18, 2015.
63. Miller, Jeffrey. "Ethics in Driverless Vehicles." *Beverly Hills Rotary Club*, Beverly Hills, California, USA, August 3, 2015.
62. Miller, Jeffrey. "Current Technology and Ethics in Driverless Vehicles." *University of California Los Angeles Beyond the Headlines*, Los Angeles, California, USA, May 5, 2015.
61. Miller, Jeffrey. "USC Explore Reception." *University of Southern California Viterbi School of Engineering*, Los Angeles, California, USA, April 9, 2015.
60. Miller, Jeffrey. "Ethics in Driverless Vehicles." *National Academy of Sciences Distinctive Voices*, Irvine, California, USA, January 14, 2015.
<https://www.youtube.com/watch?v=SfP7FBSnojK&feature=youtu.be>
<https://twitter.com/uscviterbi/status/565643247473528832>
59. Miller, Jeffrey. "USC On-Campus Admitted Student Reception." *University of Southern California Viterbi School of Engineering*, Los Angeles, California, USA, April 26, 2014.
58. Miller, Jeffrey. "Are Computer Engineers and Computer Scientists Real Engineers?" *University of Alaska Anchorage Fall 2013 Preview Day*, Anchorage, Alaska, USA, November 15, 2013.
57. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Society Magazine Editor-in-Chief Report." *IEEE Intelligent Transportation Systems Society Board of Governors and Executive Committee Meeting*, The Hague, The Netherlands, October 5-6, 2013.
56. Miller, Jeffrey. "ITS in Alaska and K12 STEM Robotics Competition." *ITE Alaska October 2013 Member Luncheon*, Anchorage, Alaska, USA, October 1, 2013.
55. Miller, Jeffrey. "IEEE 78th Vehicular Technology Conference" Welcome Address. *Presentation at IEEE 78th Vehicular Technology Conference*, Las Vegas, Nevada, USA, September 3, 2013.
54. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Society Magazine Editor-in-Chief Report." *IEEE Intelligent Transportation Systems Society Board of Governors and Executive Committee Meeting*, Gold Coast, Queensland, Australia, June 23, 2013.
53. Miller, Jeffrey. "2013 Vex Robotics World Competition Recap." *IEEE Alaska Section May Member Luncheon*, May 15, 2013.

52. Miller, Jeffrey. "Intelligent Transportation System Projects in Alaska and Beyond." *IEEE Alaska Section March Member Luncheon*, March 20, 2013.
51. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Society Magazine Editor-in-Chief Report." *IEEE Intelligent Transportation Systems Society Executive Committee Meeting*, New Orleans, Louisiana, USA, February 9, 2013.
50. Miller, Jeffrey (presented by Dave Butcher). "IEEE Northwest Area Awards Summary." *IEEE Region 6 Annual Meeting*, Las Vegas, Nevada, USA, February 2, 2013.
49. Miller, Jeffrey (presented by Joe Decuir). "IEEE Northwest Area Awards." *IEEE Fall 2012 Northwest Area Meeting*, Seattle, Washington, USA, October 20, 2012.
48. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Society Magazine Editor-in-Chief Report." *IEEE Intelligent Transportation Systems Society Board of Governors and Executive Committee Meeting*, Anchorage, Alaska, USA, September 15, 2012.
47. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Society VP Administrative Activities Report." *IEEE Intelligent Transportation Systems Society Board of Governors and Executive Committee Meeting*, Anchorage, Alaska, USA, September 15, 2012.
46. Miller, Jeffrey (presented by Alex Wyglinski). "IEEE 78th Vehicular Technology Conference." *Presentation at IEEE 76th Vehicular Technology Conference*, Quebec City, Quebec, Canada, September 5, 2012.
45. Miller, Jeffrey. "Intelligent Transportation System Projects in Heterogeneous Connectivity Environments." *Alaska Department of Transportation Quarterly Design Meeting*, July 31, 2012.
44. Miller, Jeffrey. "Vehicle-to-Infrastructure Design and Applications in Disconnected Environments." *Universitas Miguel Hernandez*, Elche, Spain, June 11, 2012.
43. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Society Magazine Editor-in-Chief Report." *IEEE Intelligent Transportation Systems Society Board of Governors Executive Committee Meeting*, Alcala de Henares, Spain, June 7, 2012.
42. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Society VP Administrative Activities Report." *IEEE Intelligent Transportation Systems Society Board of Governors and Executive Committee Meeting*, Alcala de Henares, Spain, June 7, 2012.
41. Miller, Jeffrey. "Design of Vehicular Ad-Hoc Networks (VANETs) and Applications in Disconnected Environments." *University of Alabama*, Tuscaloosa, Alabama, USA, April 27, 2012.
40. Miller, Jeffrey (presented by Joe Decuir). "IEEE Northwest Area Awards." *IEEE Spring 2012 Northwest Area Meeting*, Spokane, Washington, USA, April 14, 2012.
39. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Society Magazine Editor-in-Chief Report." *IEEE Intelligent Transportation Systems Society Executive Committee Meeting*, Atlanta, Georgia, USA, February 11, 2012.
38. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Society VP Administrative Activities Report." *IEEE Intelligent Transportation Systems Society Executive Committee Meeting*, Atlanta, Georgia, USA, February 11, 2012.
37. Miller, Jeffrey. "Intelligent Transportation Systems Projects in Alaska." *Municipality of Anchorage AMATS January 2012 Meeting*, Anchorage, Alaska, USA, January 12, 2012.

36. Miller, Jeffrey. "IEEE Alaska Report." *IEEE Fall 2011 Northwest Area Meeting*, Portland, Oregon, USA, October 15, 2011.
35. Miller, Jeffrey. *Introduction to Banquet Entertainment – IEEE Systems, Man, and Cybernetics Conference*, Anchorage, Alaska, USA, October 11, 2011.
34. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Society VP Administrative Activities Report." *IEEE Intelligent Transportation Systems Society Board of Governors and Executive Committee Meeting*, Washington DC, USA. October 8, 2011.
33. Miller, Jeffrey. "IEEE 14th Intelligent Transportation Systems Conference." *Presentation at IEEE 13th Intelligent Transportation Systems Conference*, Washington DC, USA, October 6, 2011.
32. Miller, Jeffrey. *IEEE Alaska Section Award Banquet Master of Ceremony*, Anchorage, Alaska, September 17, 2011.
31. Miller, Jeffrey. "Academic Profession and Intelligent Transportation Systems Research." *Guest Lecture – Engineering Seminar (ENGR 192/292)*, University of Alaska Anchorage, September 13, 2011.
30. Miller, Jeffrey. "IEEE 74th Vehicular Technology Welcome Message." *IEEE 74th Vehicular Technology Conference*, San Francisco, California, September 6, 2011.
29. Miller, Jeffrey. "Using Vehicle Probes for Accurate Travel Time Estimation." *Institute of Transportation Engineers (ITE) Western District Annual Meeting*, Anchorage, Alaska, July 13, 2011.
28. Miller, Jeffrey. "IEEE 74th Vehicular Technology Conference." *Presentation at IEEE 73rd Vehicular Technology Conference*, Budapest, Hungary, May 16, 2011.
27. Miller, Jeffrey. *Engineering Graduation Luncheon*, Anchorage, Alaska, April 21, 2011.
26. Miller, Jeffrey. *Acceptance of Anchorage Convention and Visitors' Bureau Seymour Award (Meeting Champion of the Year, 2011)*, Anchorage, Alaska, April 15, 2011.
25. Miller, Jeffrey. "UAA Engineering Programs." *BP Explorers' Visit to UAA School of Engineering*, Anchorage, Alaska, April 12, 2011.
24. Miller, Jeffrey, Teresa Brewer. "Real-Time Freight Tracking using GPS and Cellular Transceivers for Transportation and Community Planning." *American Planning Association 2011 National Planning Conference*, Boston, Massachusetts, April 9, 2011.
23. Miller, Jeffrey. "IEEE Alaska Report." *IEEE Spring 2011 Northwest Area Meeting*, Richland, Washington, April 2, 2011.
22. Miller, Jeffrey. "Distributed Real-Time Vehicular Data Gathering through a Vehicle-to-Infrastructure Network in Anchorage." *University of Alaska Anchorage, Complex Systems Lecture*, Anchorage, Alaska, March 25, 2011.
21. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Society VP Administrative Activities Report." *IEEE Intelligent Transportation Systems Executive Committee Meeting*, Orlando, Florida, February 5, 2011.
20. Miller, Jeffrey. "Fundamentals of Engineering Exam Review – Computers." *University of Alaska, Anchorage School of Engineering FE Refresher Series, Fall 2010*, University of Alaska, Anchorage, October 21, 2010.

19. Miller, Jeffrey. "Real-Time Data Collection through ITS Architectures in Anchorage." *Alaska Community Transportation Conference, ITS Alaska Annual Meeting*, Fairbanks, Alaska, October 6, 2010.
18. Miller, Jeffrey. "IEEE 14th Intelligent Transportation Systems Conference." *Presentation at IEEE 12th Intelligent Transportation Systems Conference*, Madeira Island, Portugal, September 22, 2010.
17. Miller, Jeffrey (presented by James Irvine). "IEEE 74th Vehicular Technology Conference." *Presentation at IEEE 72nd Vehicular Technology Conference*, Ottawa, Canada, September 7, 2010.
16. Miller, Jeffrey. "Anchorage Real-Time Traffic Gathering and Distribution." *Intelligent Transportation Society of Alaska Membership Meeting*, Anchorage, Alaska, July 13, 2010.
15. Miller, Jeffrey. "FreeSim Overview and Current Status." *Pangomedia Developer Meeting*, Anchorage, Alaska, May 14, 2010.
14. Miller, Jeffrey. "Determining Real-Time Flow of Traffic in Anchorage using Vehicle Probes." *Anchorage Freight Advisory Committee Meeting*, Municipality of Anchorage, Alaska, April 12, 2010.
13. Miller, Jeffrey. Welcome Speech for *Arctic Ice and Snow Roads 2010 Conference*, Anchorage, Alaska, March 30, 2010.
12. Miller, Jeffrey. "Fundamentals of Engineering Exam Review – Computers." *University of Alaska, Anchorage School of Engineering FE Refresher Series, Spring 2010*, University of Alaska Anchorage, March 25, 2010.
11. Miller, Jeffrey. "IEEE 70th Vehicular Technology Conference Welcome Message." *IEEE 70th Vehicular Technology Conference*, Anchorage, Alaska, September 21, 2009.
10. Miller, Jeffrey. "IEEE 70th Vehicular Technology Conference." *Presentation at IEEE 69th Vehicular Technology Conference*, Barcelona, Spain, April 28, 2009.
9. Miller, Jeffrey. "Dynamic Intelligent Transportation Systems." *Guest Lecture – American Indian Science and Engineering Society (AISES)*, University of Alaska Anchorage, April 3, 2009.
8. Miller, Jeffrey. "Fundamentals of Engineering Exam Review – Computers." *University of Alaska, Anchorage School of Engineering FE Refresher Series, Spring 2009*, University of Alaska Anchorage, March 31, 2009.
7. Miller, Jeffrey. "Fundamentals of Engineering Exam Review – Computers." *University of Alaska, Anchorage School of Engineering FE Refresher Series, Fall 2008*, University of Alaska Anchorage, October 23, 2008.
6. Miller, Jeffrey. "Jeffrey Miller's Current Research." *Bachelor of Science in Engineering Faculty Research Seminar*, University of Alaska Anchorage, October 14, 2008.
5. Miller, Jeffrey. "Career in Computer and Software Engineering." *Guest Lecture – Engineering Seminar (ENGR 192/292)*, University of Alaska Anchorage, September 30, 2008.
4. Miller, Jeffrey. "E-Week – Exciting Era of Engineering." *E-Week Presentation*, Bartlett High School, Anchorage, Alaska, February 13, 2008.
3. Miller, Jeffrey. "Intelligent Transportation Systems." *Guest Lecture – Transportation Engineering (CE 402)*, University of Alaska Anchorage, October 24, 2007.

2. Miller, Jeffrey. "A Future in Computer Science." *Guest Lecture for IEEE Student Chapter*, California State University, Los Angeles, November 14, 2002.
1. Miller, Jeffrey. "Web Services." *Directed Research Project (CS 590)*, University of Southern California, April 2002.

Professional Course Development

34. Southern New Hampshire University, Fundamentals of Data Mining (DAT220), June 2014.
33. Southern New Hampshire University, Introduction to SQL (IT220), April 2014.
32. Rasmussen College, Computer Science Program Curriculum, September 2013.
31. Rasmussen College, Web Developer Program Curriculum, February 2013.
30. Rasmussen College, Software Application Developer Program Curriculum, February 2013.
29. Rasmussen College, Software Engineering Program Curriculum, January 2013.
28. Charter College, Project Management (PM4799), October 2012.
27. Everest College, CompTIA A+ (ITSS1004, ITSS2001, ITSS3001), October 2012.
26. ITT, Project Management for Information Technology (PM3440), October 2012.
25. ITT, Email and Web Services (NT2670), October 2012.
24. Strayer University, C++ Development (unknown course number), July 2012.
23. Columbia Southern University, Data Analytics (ITC12A), May 2012.
22. Education Affiliates, Windows Server Network Resources (CNS160), May 2012.
21. Education Affiliates, Windows Server Network Infrastructure (CNS150), May 2012.
20. Education Affiliates, Help Desk Support (CNS135), May 2012.
19. ITT, Managing Software Development Projects (PM4540), January 2012.
18. ITT, Project Management for Information Technology (PM3140), December 2011.
17. Everest Colleges, Institutes, and Universities, Basic Computing (ITSS2001), November 2011.
16. ITT, 3D Modeling Techniques (GC1330), September 2011.
15. ITT, Physical Networking (NT1310), September 2011.
14. ITT/ESI, Web Programming in VB.NET (WT1220), July 2011.
13. ITT/ESI, Systems Analysis (PM3140), May 2011.
12. International Education Corporation, System Architecture CompTIA A+ (CT2009-110), April 2010.
11. International Education Corporation, Windows Applied Computing CompTIA A+ (CT2009-120), April 2010.

10. Walden/Laureate University, Computer Forensics (CMIS 4104), August 2009.
9. Walden/Laureate University, Information Security Techniques II (CMIS 4103), May 2009.
8. Walden/Laureate University, Information Security and Privacy (CMIS 4101), March 2009.
7. International Education Corporation, Network Architecture (Module D in Computer Systems Technician Program), November 2008.
6. International Education Corporation, Client Operating Systems (Module E in Computer Systems Technician Program), November 2008.
5. Strayer University, System Modeling Theory (CIS212), September 2008.
4. Strayer University, Data Warehousing Systems (CIS522), September 2008.
3. Baker College, Internet and Web Security (ITS405), August 2008.
2. Strayer University, Java Programming II (CIS407), August 2007.
1. Westwood College, Compiler and Interpreter Design (SG400), July 2006.

Professional Courses Taught

1. State of Alaska, Department of Natural Resources, “AJAX for Java Developers”, March 2009.

Grants Received

Total funding as PI/Co-PI - **\$1,248,373.91**

Total funding as team member - **\$120,000**

Total funding pending - **\$19,030**

45. USC Department of Computer Science. “Robotics Summer Camps.” April 2015-August 2015. \$20,230, PI
44. USC Department of Computer Science. “Ethics and Law in Driverless Vehicles.” *Submitted January 2015*. \$19,030, PI
43. Institute for Education, Kathy Kemper, and James Valentine. “A Coding Camp at the Viterbi School of Engineering.” April 2015-August 2018. \$100,000, PI
42. Northrop Grumman. Support for Computer Science Capstone Course Student Projects. 2014-2015. \$5000, PI
41. REC Foundation. Vex Robotics Super Kit. October 2014. \$999, PI
40. Personal Grant from Tarek Shraibati. Vex Robotics Super Kit. October 2014. \$1027.50, PI
39. ConocoPhillips – Robotics, Alternative Energy, and Structure Destruction Summer Camps for K12 Students. May 1, 2014-August 15, 2014. \$80,000, PI (deferred)
38. BP – Robotics, Alternative Energy, and Structure Destruction Summer Camp Initiative for Pre-College Students. May 1, 2014-August 15, 2014. \$90,000, PI (deferred)
37. IEEE Foundation Grant – “K12 STEM Outreach in Computer and Electrical Engineering.” July 1, 2013-August 31, 2013. \$19,680, PI

36. Vex Robotics High School World Competition, funded by UAA's School of Engineering, UAA's Computer Science and Engineering department, Visit Anchorage, IEEE Alaska, and ITE Alaska. \$7500, PI
35. BP – Robotics, Alternative Energy, and Structure Destruction Summer Camp Initiative for Pre-College Students. May 1, 2013-August 15, 2013. \$80,000, PI
34. Municipality of Anchorage – “Freight Vehicle Tracking for Real-Time Freight Route Origin-Destination Data.” December 2012-December 2013. \$5,000, PI
33. Vex Robotics – “RECF/VEX Robotics Competition Grant.” November 2012-February 2013. \$1233.95, PI
32. University of Alaska Anchorage, Faculty Development Grant – “Test Bed for Robotic Driverless Transportation of Goods and Medical Supplies in Remote Areas.” January 2013-June 2013. \$2147, PI
31. University of Alaska Anchorage Faculty Leadership in Expanding Undergraduate Research (FLEUR) – “Security in Mobile and Vehicular Ad Hoc Networks (MANET/VANET).” August 2014-December 2014. \$4,913.89, PI
30. Personal Grant – Online Researching for Proprietary Project. July 15, 2012-December 31, 2013. \$900, PI
29. University of Alaska, Research Travel Grant – IEEE Vehicular Technology Conference-fall 2012, Quebec City, Quebec, Canada. September 3-7, 2012. \$580.20, PI
28. University of Alaska, Faculty Development Grant – “Disconnected Vehicular Ad Hoc Network Robotic Hardware Test Platform.” July 1, 2012-December 31, 2012. \$2,853, PI
27. Visit Anchorage (formerly Anchorage Convention and Visitors' Bureau) Funding for Student Internship. February 2012-October 2012. \$3,750, PI
26. GCI – Cellular Data Plan for Vehicle Tracking at UAA. November 2011-?. \$750/month, PI
25. BP – Robotics, GPS Tracking, and Rapid Prototyping Summer Camp Initiative for Middle and High School Students. May 1, 2012-August 15, 2012. \$80,000, PI
24. BP – Robotics, GPS Tracking, and Rapid Prototyping Summer Camp Initiative for Middle and High School Students. May 1, 2011-August 15, 2011. \$80,000, PI
23. Alaska University Transportation Center – “Information Gathering Infrastructure towards Intelligent Transportation.” August 1, 2011-December 31, 2012. \$85,000, PI
22. University of Alaska, Anchorage – “Information Gathering Infrastructure towards Intelligent Transportation.” August 1, 2011-December 31, 2012. \$85,000, PI
21. Alaska University Transportation Center – “Gathering of Vehicular Parameters in a Vehicle-to-Infrastructure Intelligent Transportation System.” August 1, 2010-December 31, 2011. \$99,546, PI
20. University of Alaska, Anchorage – “Gathering of Vehicular Parameters in a Vehicle-to-Infrastructure Intelligent Transportation System.” August 1, 2010-December 31, 2011. \$99,611, PI
19. University of Alaska, Faculty Development Grant – “Determining Time to Traverse and Origin-Destination Matrices using Probe Vehicles.” July 1, 2010-December 31, 2010. \$4500, PI

18. Alaska University Transportation Center – “Assessment of Traffic Congestion in Anchorage Utilizing Vehicle-Tracking Devices and Intelligent Transportation System Technology.” August 1, 2009-July 30, 2011. \$84,639, PI
17. University of Alaska, Anchorage – “Assessment of Traffic Congestion in Anchorage Utilizing Vehicle-Tracking Devices and Intelligent Transportation System Technology.” August 1, 2009-July 30, 2011. \$72,252, PI
16. Alaska Natives in Science and Engineering Program (ANSEP) Grant – “Assessment of Traffic Congestion in Anchorage Utilizing Vehicle-Tracking Devices and Intelligent Transportation System Technology.” August 1, 2009-July 30, 2011. \$12,394, PI
15. United States Department of Energy Grant – “A First Assessment of U.S. In-Stream Hydrokinetic Energy Resources since the 1986 NYU Study.” January 10, 2010-June 30, 2011. \$120,000, Team Member
14. University of Alaska, Anchorage, Engineering K-12 Outreach, Bridging, and Summer Camps – “UAA School of Engineering Summer Robotics/Mechatronics Workshop and Competition.” May 1, 2010-May 31, 2010. \$59,996, Co-PI
13. Alaska Natives in Science and Engineering Grant – “UAA School of Engineering Summer Robotics/Mechatronics Workshop and Competition.” May 1, 2010-May 31, 2010. \$30,000, Co-PI
12. University of Alaska, Faculty Development Grant – “Distributed Vehicle Gathering for Intelligent Transportation System Applications”, July 1, 2009-December 31, 2009. \$4500, PI
11. University of Alaska, Research Travel Grant – IFAC Symposium on Control of Transportation Systems, Redondo Beach, California, USA, September 2009. \$400.38, PI
10. University of Alaska, Special United Academics Research Travel Grant – IEEE 69th Vehicular Technology Conference, Barcelona, Spain, April 26-29, 2009. \$500, PI
9. Xilinx University Program Donation – 5 Digilent Inc. Spartan 3E FPGA Boards for Digital Circuits Design course (CSE342). April 2009. \$745, Recipient
8. University of Alaska, Special United Academics Research Travel Grant – IEEE Intelligent Vehicles Symposium, Xi'an, China. June 3, 2009-June 6, 2009. \$1000, PI
7. University of Alaska, Research Travel Grant – “Presentation of Alaska Intelligent Transportation Systems.” University of Southern California, Los Angeles, California, March 2009. \$409.83, PI
6. Alaska Natives in Science and Engineering Program (ANSEP) Grant – “Acquisition and Analysis of Vehicular Tracking Technology in Anchorage.” January 1, 2009-December 31, 2009. \$10,000, PI
5. University of Alaska, Faculty Development Grant – “Determination of Probabilities of Factors in Vehicle Crashes using Intelligent Transportation Systems.” July 1, 2008-December 31, 2008. \$4500, PI
4. University of Alaska, Research Travel Grant – IEEE Intelligent Transportation Systems Conference 2008, Beijing, China. October 12, 2008-October 15, 2008. \$316.16, PI
3. Alaska University Transportation Center – Additional support for IEEE 4th International Intelligent Vehicles Symposium, Eindhoven, The Netherlands. June 3, 2008-June 6, 2008. \$2000, Recipient

2. University of Alaska, Faculty Development Grant – “Algorithms and Data Structures for the Application of a Super-Vehicle in a Hybrid Vehicle-to-Vehicle-to-Infrastructure (V2V2I) Mobile Ad-Hoc Network (MANET) Architecture.” January 1, 2008-June 30, 2008. \$4500, PI
1. University of Alaska, Special United Academics Research Travel Grant – IEEE Intelligent Vehicle Symposium 2008, Eindhoven, The Netherlands. June 3, 2008-June 6, 2008. \$750, PI

Refereed Publications – NOTE: All of the papers that were published in conference proceedings had associated presentations at the respective conference.

27. Enriquez, D.J., Sean Jenson, Alexander Bautista, Paloma Field, Sun-il Kim, Muhammad Ali, Jeffrey Miller. “On Systems and Software Design for Detection and Mapping of Slippery Road Sections via On-Vehicle Monitoring.” *Submitted to International Journal of Intelligent Transportation Systems Research, Springer*, Submitted December 2014.
26. Sanchez-Medina, Javier, Jeffrey Miller, Enrique Rubio-Royo. “Global Temperature vs Greenhouse Emissions Model: Genetic Algorithm Driven Parametric Multiobjective Fitting.” *2014 International Conference on Artificial Intelligence*, Las Vegas, Nevada, USA, July 2014.
25. Smith, Kristian, Jeffrey Miller. “OBDII Data Logger Design for Large-Scale Deployments.” *IEEE 16th Intelligent Transportation Systems Conference*, The Hague, The Netherlands, October 2013.
24. Miller, Jeffrey, John Harriss, Wolfram Donat, Vitaly Ivanov, Paul Kelly, Dustin Mendoza, Zakary Stone. “Vehicular Robotic Test Bed for ITS Applications.” *Demonstration Abstract, IEEE 4th Vehicular Networking Conference*, Seoul, Korea, November 2012.
23. Menard, Timothy, John Lund, Jeffrey Miller, Todd Petersen. “907-Plow – Anchorage’s Approach to Real-Time Snowplow Tracking.” *IEEE 15th Intelligent Transportation Systems Conference*, Anchorage, Alaska, USA, September 2012.
22. Miller, Jeffrey, Wolfram Donat, John Harris. “Signal Timing for Fleeting Multiple Intersecting Roadways.” *IEEE 15th Intelligent Transportation Systems Conference*, Anchorage, Alaska, USA, September 2012.
21. Enriquez, D.J., Alex Bautista, Paloma Field, Sun-il Kim, Sean Jensen, Muhammad Ali, Jeffrey Miller. “CANOPNR: CAN-OBD Programmable-Expandable Network-Enabled Reader for Real-Time Tracking of Slippery Road Conditions using Vehicular Parameters.” *IEEE 15th Intelligent Transportation Systems Conference*, Anchorage, Alaska, USA, September 2012.
20. Menard, Timothy, Jeffrey Miller, Michael Nowak, David Norris. “Comparing the GPS Capabilities of the Samsung Galaxy S, Motorola Droid X, and the Apple iPhone for Vehicle Tracking using FreeSim_Mobile.” *IEEE 14th Intelligent Transportation Systems Conference*, Washington DC, USA, October 2011.
19. Menard, Timothy, Jeffrey Miller. “Comparing the GPS Capabilities of the iPhone 4 and iPhone 3GS for Vehicle Tracking using FreeSim_Mobile.” *IEEE 7th Intelligent Vehicles Symposium*, Baden Baden, Germany, June 2011.
18. Menard, Timothy, Jeffrey Miller. “FreeSim_Mobile: A Novel Approach to Real-Time Traffic Gathering using the Apple iPhone.” *IEEE 2nd Vehicular Networking Conference*, Jersey City, New Jersey, December 2010.
17. Miller, Jeffrey, Sun-il Kim, Timothy Menard. “Intelligent Transportation Systems Traveling Salesman Problem (ITS-TSP) – A Specialized TSP with Dynamic Edge Weights and Intermediate Cities.” *IEEE 13th Intelligent Transportation Systems Conference*, Madeira Island, Portugal, September 2010.

16. Miller, Jeffrey, Sun-il Kim, Muhammad Ali, Timothy Menard. "Determining Time to Traverse Road Sections based on Mapping Discrete GPS Vehicle Data to Continuous Flows." *IEEE 6th Intelligent Vehicles Symposium*, La Jolla, California, USA, June 2010.
15. Miller, Jeffrey. "Analysis of the Traveling Salesman Problem with a Subset of Intermediate Cities and Dynamic Edge Weights used with Intelligent Transportation Systems." Invited paper at *IEEE 7th International Conference on Information, Communications, and Signal Processing*, Fisherman's Wharf, Macau, China, December 2009.
14. Miller, Jeffrey, Muhammad Ali. "Dynamic Fastest Paths with Multiple Unique Destinations (DynFast-MUD) – A Specialized Traveling Salesman Problem with Intermediate Cities." *IEEE 12th Intelligent Transportation Systems Conference*, St. Louis, Missouri, USA, October 2009.
13. Miller, Jeffrey. "Analysis of Fastest and Shortest Paths in an Urban City Using Live Vehicle Data from a Vehicle-to-Infrastructure Architecture." *12th International Federation on Automatic Control (IFAC) Symposium on Control in Transportation Systems*, Redondo Beach, California, USA, September 2009.
12. Miller, Jeffrey. "Distributed Urban Data Gathering in a Vehicle-to-Infrastructure Architecture." *2009 National Rural Intelligent Transportation Systems Conference*, Seaside, Oregon, USA, August 2009.
11. Miller, Jeffrey. "Fastest Path Analysis in a Vehicle-to-Infrastructure Intelligent Transportation System Architecture." *IEEE 5th Intelligent Vehicles Symposium*, Xi'an, Shaanxi, China, June 2009.
10. Miller, Jeffrey. "Dynamically Computing Fastest Paths for Intelligent Transportation Systems." *IEEE Intelligent Transportation Systems Magazine*, Volume 1, Number 1, spring 2009.
9. Miller, Jeffrey. "Analysis of Vehicle Lane Changes for Determining Fastest Paths in the V2V2I ITS Architecture." *IEEE 11th Intelligent Transportation Systems Conference*, Beijing, China, October 2008.
8. Miller, Jeffrey. "Aggregation Algorithms in a Vehicle-to-Vehicle-to-Infrastructure (V2V2I) Intelligent Transportation System Architecture." *3rd International Symposium of Transport Simulation*, Queensland, Australia, August 2008.
7. Miller, Jeffrey. "Fastest Path Determination at Lane Granularity using a Vehicle-to-Vehicle-to-Infrastructure (V2V2I) Intelligent Transportation System Architecture." *IEEE 4th International Workshop on Vehicle-to-Vehicle Communications* in conjunction with *IEEE 4th Intelligent Vehicles Symposium*, Eindhoven, The Netherlands, June 2008.
6. Miller, Jeffrey. "Vehicle-to-Vehicle-to-Infrastructure (V2V2I) Intelligent Transportation System Architecture." *IEEE 4th Intelligent Vehicles Symposium*, Eindhoven, The Netherlands, June 2008.
5. Miller, Jeffrey. "FreeSim – A Free Real-Time V2V and V2I Freeway Traffic Simulator." *IEEE Intelligent Transportation Systems Society Newsletter*, December 2007.
4. Miller, Jeffrey, Ellis Horowitz. "FreeSim – A Free Real-Time Freeway Traffic Simulator." *IEEE 10th Intelligent Transportation Systems Conference*, Seattle, Washington, USA, October 2007.
3. Miller, Jeffrey, Ellis Horowitz. "FreeSim – A V2V and V2R Freeway Traffic Simulator." *IEEE 3rd International Workshop on Vehicle-to-Vehicle Communications* in conjunction with *IEEE 3rd Intelligent Vehicles Symposium*, Istanbul, Turkey, June 2007.
2. Miller, Jeffrey, Ellis Horowitz. "Algorithms for the Real-Time Processing of Traffic Data." *IEEE 9th Intelligent Transportation Systems Conference*, Toronto, Ontario, Canada, September 2006.

1. Miller, Jeffrey. "Characterization of Data on the Gnutella Peer-to-Peer Network." *IEEE 1st Consumer Communication and Networking Conference*, Las Vegas, Nevada, USA, January 2004.

Supplement to Book

1. Miller, Jeffrey. Lab Manual to Accompany The Web Application Hacker's Handbook: Discovering and Exploiting Security Flaws by Davydd Stuttard and Marcus Pinto, ISBN 978-0-470-17077-9, August 2008.

Book Technical Content Consultant

1. Idzikowski, Lisa. Computer Science in the Real World. Abdo Consulting Group, Inc., Minneapolis, Minnesota, 2016. ISBN

Other Publications

19. Miller, Jeffrey. "Expanding and Improving." IEEE Intelligent Transportation Systems Magazine Editor-in-Chief Column, Volume 5, Number 3, fall 2013.
18. Miller, Jeffrey. "Timelines and Deadlines." IEEE Intelligent Transportation Systems Magazine Editor-in-Chief Column, Volume 5, Number 2, summer 2013.
17. Miller, Jeffrey. "Motive, Motivate, Motivation." IEEE Intelligent Transportation Systems Magazine Editor-in-Chief Column, Volume 5, Number 1, spring 2013.
16. Miller, Jeffrey. "September 2012 Executive Committee/Board of Governors Meeting Summary." *IEEE Intelligent Transportation Systems Society Newsletter*, October 2012.
15. Miller, Jeffrey. "2012 IEEE Intelligent Transportation Systems Conference Summary." *IEEE Intelligent Transportation Systems Society Newsletter*, October 2012.
14. Miller, Jeffrey. "Reflecting on First Year." IEEE Intelligent Transportation Systems Magazine Editor-in-Chief Column, Volume 4, Number 4, winter 2012.
13. Miller, Jeffrey. "2012 IEEE Intelligent Transportation Systems Conference Summary." IEEE Intelligent Transportation Systems Magazine Conference Report, Volume 4, Number 4, winter 2012.
12. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Conference 2012 General Chair Message." IEEE 15th Intelligent Transportation Systems Conference Program, September 2012.
11. Miller, Jeffrey. "June 2012 Executive Committee/Board of Governors Meeting Summary." *IEEE Intelligent Transportation Systems Society Newsletter*, July 2012.
10. Miller, Jeffrey. "Back to School." IEEE Intelligent Transportation Systems Magazine Editor-in-Chief Column, Volume 4, Number 3, fall 2012.
9. Miller, Jeffrey. "Time for the Magazine." IEEE Intelligent Transportation Systems Magazine Editor-in-Chief Column, Volume 4, Number 2, summer 2012.
8. Miller, Jeffrey. "February 2012 Executive Committee Meeting Summary." *IEEE Intelligent Transportation Systems Society Newsletter*, May 2012.
7. Miller, Jeffrey. "April 2012 Board of Governors Meeting Summary." *IEEE Intelligent Transportation Systems Society Newsletter*, May 2012.
6. Miller, Jeffrey. "Continuing the Success." IEEE Intelligent Transportation Systems Magazine Editor-in-Chief Column, Volume 4, Number 1, spring 2012.

5. Miller, Jeffrey. "October 2011 Executive Committee and Board of Governors Meeting Summary." *IEEE Intelligent Transportation Systems Society Newsletter*, November 2011.
4. Miller, Jeffrey. "IEEE Vehicular Technology Conference Fall 2011 Technical Program Chair Message." IEEE Vehicular Technology Conference Fall 2011 Program, September 2011.
3. Miller, Jeffrey. "February 2011 Executive Committee Meeting Summary." *IEEE Intelligent Transportation Systems Society Newsletter*, April 2011.
2. Miller, Jeffrey. "IEEE Intelligent Transportation Systems Magazine Guest Editorial – Macroscopic and Microscopic Traffic Simulators." IEEE Intelligent Transportation Systems Magazine, Volume 2, Number 4, fall 2010.
1. Miller, Jeffrey. "IEEE Vehicular Technology Conference Fall 2009 General Chair Message." IEEE Vehicular Technology Conference Fall 2009 Program, September 2009.

Professional Experience

Associate Professor of Engineering Practices, Department of Computer Science

University of Southern California – Los Angeles, California, January 2014-present

- Research in intelligent transportation systems, K12 STEM education, undergraduate and graduate computer science education
- Courses Taught
 - Introduction to Programming (CSCI 103L)
 - Principles of Software Development (CSCI 201L)
 - Design and Construction of Large Software Systems (CSCI 401/477ab)
 - Created updated syllabus and curriculum for course, 2015
 - Analysis of Algorithms (CSCI 570)
- Outreach
 - Director, CS@SC Summer Camps, 2015
 - Mentor, Viterbi Student-Alumni Mentoring Program (VSAMP), 2015-2016
 - Incorporating Computer Science in K8 Curricula. *Calvary Christian Retreat*, Malibu, California, USA, October 9, 2015.
 - CS@SC Summer Camp Reunion, STEM Spotlight on the Department of Computer Science, November 3, 2015.
- Department Service
 - ABET Point-of-Contact, 2014-present
 - 6-year accreditation received in fall 2015 for Computer Engineering/Computer Science and Computer Science programs
 - USC VexU Robotics Team Adviser, 2014-present
 - Division of Engineering Education Committee Member, 2015-present
 - Division of Engineering Continuous Improvement Committee, 2015-present
 - Computer Science Non-Tenure-Track Monthly Meeting Coordinator, 2014-present
 - Computer Science Annual Retreat Teaching Faculty Breakout Leader, 2014-present
 - Faculty Advisor, Upsilon Pi Epsilon Computer Science Honor Society, 2014
 - Computer Science Faculty Voting Sub-Committee, 2015
 - Computer Science Non-Tenure-Track Promotion Committee, 2015
 - Computer Science Teaching Faculty Annual Evaluation Committee, 2015
 - Computer Science Lecturer Hiring Committee, 2014-present
 - Fall 2015 Academic Career Mentoring Panel, October 28, 2015.
 - University Trojan Family Weekend – Viterbi Breakfast with the Dean, October 23, 2015.
 - Master's Degree Early Start Welcome Lunch, July 9, 2015
 - Explore USC, On-Campus Admitted Student Reception, April 9, 2015
 - Viterbi Robotics Open House VexU Showcase, April 7, 2015
 - Explore USC, On-Campus Admitted Student Reception, April 26, 2014
- Professional Development
 - USC Center for Excellence in Teaching Faculty Forum, "Effective Group Work," October 30, 2015.
 - Viterbi Capstone and Senior Design Retreat Speaker, August 18, 2015.
 - USC Computer Science Department Retreat, September 20-21, 2014
 - Engaged Learning Retreat, USC Viterbi School of Engineering Division of Engineering Education, August 21, 2014.
 - Improve Your Teaching Effectiveness – Flipping the Classroom, Mark Redekopp, January 24, 2014.

Adjunct Professor, Department of Computer Science

California State University, Los Angeles – Los Angeles, California, February 2002-August 2007, April 2014-December 2014

- Courses
 - Introduction to Web Site Development (CS120)
 - Introduction to SQL and Databases (CS122)
 - Introduction to Programming (CS201)
 - Introduction to Object-Oriented Programming (CS202)
 - Programming with Data Structures (CS203)

- C Programming (CS242)
- Computer Ethics in the Information Age (CS301)
- Algorithm Design and Analysis (CS312)
- Web and Internet Programming (CS320)
- Introduction to Automata Theory (CS386)
- Java for C++ Programmers (CS454 – Special Topics)
- Enterprise Architecture (CS454 – Special Topics, now CS420)
- Compilers (CS488)
- Undergraduate Computer Science Wrap-Up Course (CS490)
- Directed Study (CS499)
- Led a team of undergraduate students in a directed research (CS499) in the design and implementation of a compiler project to be used for the programs in the compiler class (CS488)
- Aided in preparing course documents for ABET accreditation in 2006
- Voted 2002 Professor of the Year by the students in the Computer Science department – 1st lecturer ever to be given this award
- Authored CS420 class on enterprise web architecture, covering RMI, CORBA, Web Services, and different MVC architectures, including Spring and Struts

Online Adjunct Professor, Information Technology Program

American Public University System/American Military University System – December 2009-present

- Facilitated online education for APUS/AMUS (mostly active or retired military) students around the world
- Courses
 - Application Development (ENTD 411)
 - Systems Engineering (ENTD 412)
 - Enterprise Development using ASP.NET (ENTD 462)
 - Enterprise Development using C# (ENTD 463)
 - Enterprise Development using .NET (ENTD 464)
 - Enterprise Development using J2EE (ENTD 481)
 - Relational Database Concepts (INFO 221)
 - Local Area Network Technologies (ISSC 340)
 - Introduction to Networking (ISSC 341)

Associate Professor with tenure, Computer Science and Engineering, July 2011-December 2013

Assistant Professor, Computer Systems Engineering, August 2007-June 2011

Chair, Bachelor of Science in Engineering Department (Computer, Electrical, and Mechanical Engineering), February 2011-November 2011

University of Alaska Anchorage – Anchorage, Alaska, August 2007-December 2013

- Courses Taught
 - Programming in Java (CS110)
 - Introduction to Computer Systems (CSE102)
 - Introduction to C Programming for Engineers (CSE294A/205) – online and traditional
 - Object-Oriented C++ Programming for Engineers (CSE 294B/215)
 - Engineering Systems Administration (CSE394B)
 - Digital Circuits Design (CSE342/394D)
 - Computer Networking for Engineers (CSE394F/355)
 - Design of Computer Systems Engineering (CSE438)
 - VLSI Circuit Design (CSE442)
 - Network Security (CSE465/CSCE465) – online and traditional
 - Independent Study (CSE497)
 - Elements of Electrical Engineering (ES309)
- Authored introduction to computer systems, introductory programming, object-oriented programming, systems administration, digital circuits, computer networking, operating systems, FPGA, and VLSI classes for engineering students focused on applied applications in various engineering disciplines

- Led Computer Systems Engineering department in preparing ABET documents for securing accreditation, which we received in fall 2008, fall 2010, and fall 2012
- IEEEExtreme Programming Competition Proctor for UAA programming teams in 2012
- Started and facilitated Faculty Research Series where each faculty member in the engineering school presents his research to the rest of the faculty during the semester in 2009
- Hosted Prof. Javier Sanchez Medina from Canary Islands giving a talk on ITS technologies in September 2012.
- Hosted Prof. Mohan Trivedi from UC San Diego giving a talk on ITS technologies in August 2012.
- Hosted Alaska Department of Transportation 511 Training Event in March 2010
- Hosted Apple iPhone Development Training Event in April 2010
- Coordinated end-of-semester Engineering Competition for all School of Engineering students in December 2010
- University and School of Engineering Committees
 - School of Engineering Executive Committee, August 2011-November 2011
 - School of Engineering Facilities Committee Chair, August 2011-November 2011, responsible for being the point-man for the school on a new building and space usage in existing facilities
 - Chair of School of Engineering Web Site Steering Committee, 2009-2013
 - Program Chair, Computer Systems Engineering ABET Visit, fall 2012
 - Program Chair, Computer Systems Engineering ABET Visit, fall 2010
 - Computer Systems Engineering Advising Committee, 2007-2013
 - Computer Systems Engineering Equipment Committee, 2007-2011
 - School of Engineering Computer Committee, 2007-2011
 - Computer Systems Engineering/Electrical Engineering 2008 Faculty Search Committee
 - Computer Systems Engineering/Electrical Engineering 2009 Faculty Search Committee
 - United Academic Board Academic Computing Distance Learning and Instructional Technology Committee, 2008-2009
 - United Academic Board General Education Requirements Committee, 2008-2009
 - Institutional Learning Outcomes and Assessment Task Force, 2008-2009
 - Research, Scholarship, and Creative Activity Review and Evaluation Team, 2010
 - Chair of Computer Science and Engineering Promotion and Tenure Guidelines Committee, 2013
 - Computer Science and Engineering Outstanding Graduate Award Committee, 2013

Senior Solutions Strategist

Pangomedia, Inc. – Anchorage, Alaska, May 2009-August 2010

- Architected high level solutions for clients, working with the development team to see the project from conception through completion
- Identified clients and projects, including ongoing software development projects, IT consulting placement, and fixed-cost projects
- Solicited business by being an active and participating member of the Alaska business community, performing build/buy analyses, and responding to requests for proposals (RFP)

Senior Programmer / Analyst

Resource Data, Inc. – Anchorage, Alaska, April 2008-October 2008

- Consulted at Chenega Federal Systems, working on the Joint Supply Management Module project for the US Department of Defense concerning fuel and ammunition inventory tracking
- Utilized Struts, Spring, Java, J2EE, JDBC, Hibernate, Ajax, and Web Services in the SCRUM software development methodology
- Re-architected the system as new requirements forced a redesign of the application
- Acted as a team lead for four developers and one database administrator

Independent Consultant, May 2005-present

- Created Alaska 511 iPhone app for the Alaska Department of Transportation, displaying real-time traffic conditions and cameras to users. The app is downloadable for free in the App Store.

- Performed small to mid-size programming tasks for different companies using predominantly Java, HTML, JavaScript, CMSs, and Flash
- Automated the drafting of legal documents for a law firm involved with estate planning, including creation of diagrams, flow charts, and Microsoft Word generation
- Migrated a Microsoft Access application to a multi-user web-based application
- Created a socket-based Flash chat application with multiple simultaneous users supporting multiple agents over a Java-based chat server

Founder / Chief Executive Officer

Imaginary Technology, LLC – Burbank, California, August 2005-April 2006

- Started a company that created handheld and standalone point of sale systems for the restaurant industry
- Worked with restaurant owners and potential clients to determine the requirements for the point of sale system
- Managed a team of 5 developers to implement the requirements and install the system
- Responsible for buying hardware, hiring personnel, obtaining investment money, selling the system, and working with owners to improve the system

Application Specialist – Technical Lead / Senior Architect

21st Century Insurance – Woodland Hills, California, February 2005-May 2005

- Worked as a lead and architect on a team responsible for all online payments of insurance policy premiums, including eCheck and direct-debit payments
- Coded in Java on a Websphere-based application using Struts
- Wrote a J2EE tool to allow customer service representatives to see all of the billing history of a customer and all activity that has ever occurred on a customer's policy

Director of Engineering

inQ, Inc. – Agoura Hills, California, July 2004-February 2005

- Responsible for the personnel of the IT department and grew the development/QA team from 2 to 6 within the first 6 months
- Managed a team of 4 programmers and 2 QA engineers on a multi-threaded chat and outbound call application to up-sell online customers of client web sites
- Communicated with clients and partners on all technical issues related to interfacing our application with theirs
- Implemented a complete software development process for use by all departments of the company to interact with the IT department for any requests

Technical Consultant

SBC – Smartpages.com – Pasadena, California, July 2003-July 2004

- Managed a team of 12 programmers on an ongoing project to fix all issues with the production site and reported to the client weekly on the status of the issues
- Responsible for improving and implementing technical processes for the development team
- Created and initiated coding standards, then enforced the standards by performing code inspections on all modified code checked in to the version management software
- Involved in design of documentation templates and other process improvement strategies to aid in increasing the CMM level of the team to CMM Level 3 by 4th quarter of 2005
- Led team in initiating unit testing (using JUnit) and customized exception handling to reduce the number of bugs and the severity of bugs discovered by the quality assurance team

Graduate Research Assistant

Information Sciences Institute (ISI) – Marina Del Rey, California, May 2002-July 2003

- Used PHP4.0 running on Red Hat Linux 7.1 to create a tree structure for browsing the objects of a specified LDAP server
- Created a Service Data Browser using Java Swing to display the service data returned as a web service SOAP message from different providers in different formats, including raw XML, a tree structure, and a status bar

- Designed an interface to allow other programmers to create their own Visualizers to display the service data however they would like in the Service Data Browser
- Created a web-based interface using JSP and JavaBeans to browse specific service data through the use of web services and display the data in a user-friendly tree-based format

Principal Software Engineer

Corticon Technologies, Inc. – Culver City, California, June 2001-May 2002

- Worked as a technical lead on an 8-member project to design and develop an application to automate business rule generation
- Researched augmented decision tables to design efficient algorithms for optimization of business rules, such as expand, collapse (based on an algorithm designed by Dr. Richard N. Shiffman of Yale University), ambiguity checking, and completeness checking
- Helped to design a parser/compiler for creating Java files from business rule statements that could be used with any plug-in architecture
- Technologies included Weblogic, ILOG, JUnit, Ant, and XML (W3C and JDOM)

Programming Consultant

Dacor – Pasadena, California, January 2001-June 2001

- Developed B2B e-commerce site using JSPs, Servlets, JavaBeans, JDBC, and XML that allowed distributors and retailers to automate the ordering of their products –
- Created middleware application using Java to connect a SQL Server database to an existing Legacy system database
- Requested software and database applications to purchase that would best suit the company's growing needs

Systems Administrator / Programmer

Busybox.com – Century City, California, February 2000-January 2001

- Designed and maintained www.busybox.com (corporate site) and promo.busybox.com (promotions site), using HTML, JavaScript, JSP, Servlets, JDBC, and JavaBeans
- Installed necessary components for web applications, including servlet containers, video streaming software, and web servers on Windows NT Server 4.0
- Installed, configured, and developed with IBM Websphere Application Server and Allaire JRun Application Server, using IBM VisualAge for Java and Websphere Studio
- Completed IBM WebSphere Application Server 3.5 certification training and IBM Visual Age for Java certification training

Advanced Java Instructor / Teaching Assistant

Learning Tree University – Chatsworth, California, December 1999-March 2001

- Taught beginning and advanced Java concepts to classes of corporate students that consisted of programmers and managers
- Topics included: AWT, Swing, Networking, File I/O, Web Servers, Servlets, JSP, Reflection, Multi-threaded Applications, Design Patterns, JDBC, XML

Volunteer Experience

Room Parent, 1st Grade Class

Rio Vista Elementary School – Toluca Lake, California, August 2015-June 2016

Head Coach, Girls Under 7

American Youth Soccer Organization (AYSO) – Van Nuys/Sherman Oaks, Fall 2015

Head Coach, Girls Under 6

American Youth Soccer Organization (AYSO) – Van Nuys/Sherman Oaks, Fall 2014

