TEXAS STATE VITA

I. Academic/Professional Background

A. Name and Title

Name: Dr. Stan McClellan Title: Professor

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
PHD	1995	Texas A&M University	Electrical Engineering	
MS	1991	Texas A&M University	Electrical Engineering	
BS	1986	Texas A&M University	Electrical Engineering	

C. University Experience

Position	*University*	*Comments*	*Dates*
Professor, Ingram School of Engineering	Texas State University. San Marcos, TX, United States		September 1, 2013 - Present
Director, Ingram School of Engineering	Texas State University. San Marcos, TX		September 1, 2013 - June 1, 2018
Assoc. Professor & Assoc. Director, Ingram School of Engineering	Texas State University. San Marcos, TX		September 1, 2008 - August 31, 2013
Asst/Assoc. Professor, Electrical & Computer Engineering	University of Alabama at Birmingham. Birmingham, AL		July 1995 - December 2001

D. Relevant Professional Experience

Position	*Entity*	*Comments*	*Dates*
Chief Technology Officer & co-Founder	Power Tagging Technologies, Boulder, CO		April 2008 - November 2010
Chief Architect - Systems & Solutions / VP Business Development	ZNYX Networks, Inc., Fremont, CA		June 2006 - April 2008
Disstinguished Technologist & Technical Director	Hewlett Packard Company, Plano, TX		March 2000 - January 2006

E. Other Professional Credentials (licensure, certification, etc.)

Professional Engineer, TBPE/PELS. (2021 - Present). License Number: 143522.

II. TEACHING

B. Courses Taught:

Texas State University:

EE 3350 - ELECTRONICS I

EE 4372 - COMMUNICATION NETWORKS

EE 4372 - COMMUNICATN NTWRKS

EE 4376 - TELECOMMUNICATIONS

EE 4377 - DIGITAL SIGNL PROC

EE 4390 - EE DESIGN I

EE 4391 - EE DESIGN II

EE 5372 - ADVANCED NETWORK

ENGR 4395 - INDEPENDENT STUDY ENGINEERS

ENGR 5100 - SEMINAR ENGR

ENGR 5199B - THESIS

ENGR 5299B - THESIS

ENGR 5398A - PROJECT

ENGR 5399A - THESIS

TECH 5384 - PROBLEMS IN TECH

TECH 5399A - THESIS

TECH 5399B - THESIS

C. Directed Student Learning (i.e. theses, dissertations, exit committees, etc.):

Supervisor / Chair, Independent Study, "Spectral Interference in LTE Band 8 (900MHz)", Status: In Progress. (2021 - Present). Ingram School of Engineering, Texas State University.
Student(s): Kevin Seets, Undergraduate, BS Electrical Engineering.

Supervisor / Chair, Master's Thesis, Status: Proposal. (2021 - Present). Ingram School of Engineering, Texas State University.
Student(s): Bishal Sharma, Graduate, MS Engineering.

Supervisor / Chair, Master's Thesis, Status: Proposal. (2021 - Present). Ingram School of Engineering, Texas State University.
Student(s): Bishal Thapa, Graduate, MS Engineering.

Supervisor / Chair, Master's Thesis, Status: Proposal. (2021 - Present). Ingram School of Engineering, Texas State University.
Student(s): Dupri Grimes, Graduate, MS Engineering.

Member, Master's Thesis, Status: Completed. (2021). Computer Science, Texas State University.
Student(s): Vinay Lokesh, Graduate, MS Computer Science.

Supervisor / Chair, Master's Thesis, "Digital Signal Processing and Machine Learning Applied to Power Line Communications", Status: Completed. (2019 - 2021). Ingram School of Engineering, Texas State University.
Student(s): Kushal Thapa, Graduate, MS Engineering.

Supervisor / Chair, Master's Thesis, "Reducing TCP Retransmissions By Using Machine Learning For More Accurate RTT Estimation", Status: Completed. (November 2019). Ingram School of Engineering, Texas State University.
Student(s): Bikram Dasgupta, Graduate, MS Engineering.

Member, Master's Thesis, "Improving bandwidth allocation in cloud computing environments via ‘Bandwidth as a Service’ partitioning scheme", Status: Completed. (2015). Computer Science, Texas State University.
Student(s): Anthony Amaro, Graduate, MSCS.

Supervisor / Chair, Master's Thesis, "Improvements to the Stream Transmission Control Protocol (SCTP)", Status: Completed. (2014). Computer Science, Texas State University.
Student(s): Eduardo Gonzalez, Graduate, MSCS.

Supervisor / Chair, Master's Thesis, "Analysis of the Stream Transmission Control Protocol (SCTP)", Status: Completed. (2011). Computer Science, Texas State University.
Student(s): Sagun Khatri, Graduate, MSCS.

Supervisor / Chair, Master's Thesis, "Power quality analysis using IEEE 519", Status: Completed. (2011). Engineering Technology, Texas State University.
Student(s): Veeraraghan Sampath, Graduate, MSET.

Member, Master's Thesis, "Improving the performance of constructive multi-start search using record keeping", Status: Completed. (2010). Computer Science, Texas State University.
Student(s): Charles King, Graduate, MSCS.

Member, Dissertation, "Quality of service technologies in the next generation Internet", Status: Completed. (2001). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Ken Burst, Doctoral, PhDEE.

Supervisor / Chair, Dissertation, "Telepathology performance optimization through server based automatic tissue pre-classification", Status: Completed. (2001). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Mark Barr, Doctoral, PhDEE.

Supervisor / Chair, Master's Thesis, "Web interface for VIPER", Status: Completed. (2001). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Chakravarthy Sannedhi, Graduate, MSEE.

Supervisor / Chair, Master's Thesis, "Testing QoS in a VoIP network", Status: Completed. (2001). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Manpreet Singh, Graduate, MSEE.

Supervisor / Chair, Master's Thesis, "A mobile office, v1.0", Status: Completed. (2001). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Mohammed Amin, Graduate, MSEE.

Supervisor / Chair, Master's Thesis, "Mobile commerce using WAP", Status: Completed. (2001). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Rajendra Majji, Graduate, MSEE.

Supervisor / Chair, Master's Thesis, "Artificial speech generation for VoIP testing", Status: Completed. (2001). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Umashankar Thyagarajan, Graduate, MSEE.

Supervisor / Chair, Master's Thesis, "A web-based environment for testing quality of voice in a VoIP network", Status: Completed. (2000). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Fayaz Shaikh, Graduate, MSEE.

Supervisor / Chair, Master's Thesis, "Application performance monitoring techniques", Status: Completed. (2000). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Surya Chataut, Graduate, MSEE.

Supervisor / Chair, Master's Thesis, "A Java-Enabled Architecture for Telemedicine", Status: Completed. (1999). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Peter Adams, Graduate, MSEE.

Supervisor / Chair, Master's Thesis, "A Prototype Telepathology System", Status: Completed. (1998). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Edward Kujawski, Graduate, MSBME.

Supervisor / Chair, Master's Thesis, "Improving the Performance of Federal Standard 1016", Status: Completed. (1998). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Keith Rutherford, Graduate, MSEE.

Supervisor / Chair, Master's Thesis, "Performance Analysis of Telepathology in an ATM Network", Status: Completed. (1998). Electrical & Computer Engineering, University of Alabama at Birmingham.
Student(s): Ying-Lung Liang, Graduate, MSEE.

D. Courses Prepared and Curriculum Development:

Master of Science, Major in Engineering, Final Authority Proposal, Texas State University. Approved: 2014 - 2015.

Civil/Environmental Engineering Program, Final Authority Proposal, Texas State University. Proposed: 2016 - 2017.

Master of Science, Major in Engineering, Preliminary Authority Proposal, Texas State University. Approved: 2013 - 2014.

Computer Engineering Program, Preliminary Authority Proposal, Texas State University. Proposed: 2016.

Civil/Environmental Engineering Program, Preliminary Authority Proposal, Texas State University. Proposed: 2015 - 2016.

E. Teaching Grants and Contracts

1. Funded External Teaching Grants and Contracts:

McClellan, Stanley A. Code Composer IV Academic Applications in Signal Processing, Texas Instruments, Private / Foundation / Corporate, $150,000.00. (Funded: 2009). Gift.

III. SCHOLARLY/CREATIVE

A. Works in Print (including works accepted, forthcoming, in press):

1. Books:

a. Scholarly Monographs:

Refereed:

Koutitas, G., & McClellan, S. (2017). *The Smart Grid as an Application Development Platform*. *Artech House*. Boston and London, USA and UK: Artech House. Retrieved from http://us.artechhouse.com/The-Smart-Grid-as-an-Application-Development-Platform-P1900.aspx http://us.artechhouse.com/The-Smart-Grid-as-an-Application-Development-Platform-P1900.aspx
Book_Koutitas-1.jpg

c. Edited Books:

Refereed:

McClellan, S. A. (2019). *Smart Cities in Application: Healthcare, Policy, and Innovation*. Springer. Retrieved from https://www.springer.com/9783030193959 https://www.springer.com/9783030193959

Jimenez, J. (2017). *Smart Cities: Applications, Technologies, Standards, and Driving Factors*. (S. A. McClellan & G. Koutitas, Eds.). Springer International. https://doi.org/10.1007/978-3-319-59381-4 http://www.springer.com/us/book/9783319593807

d. Chapters in Books:

Refereed:

McClellan, S. A. (2020). New Trajectories for Hardware Enabled ICT Security. In *New Compute Trajectories for Decadal Plan Full Technical Report* (p. Chapter 4). US Department of Energy, with SRC.

McClellan, S. A., Conner, K., & Conner, D. (2007). Telecommunication Methods. In *The Encyclopedias of Electrical and Electronics Engineering (online edition)*. Wiley.

McClellan, S. A., & Seker, R. (2006). Quality of Service in Packet-Switched Networks. In *The Electrical Engineering Handbook, 3rd ed.* (Vol. 4). Boca Raton, FL: IEEE Press.

McClellan, S. A., Low, S., & Tan, W.-T. (2004). Disruptive Technologies and Their Affect on Global Telecommunications. In *Advances in Computers: Architectural Issues* (Vol. 61, pp. 199–273). San Diego, CA: Elsevier Academic Press.

McClellan, S. A., Conner, K., & Conner, D. (2001). Telecommunication Methods. In *The Encyclopedias of Electrical and Electronics Engineering, 2nd ed.* New York, NY: Wiley Interscience.

Shaikh, F., & McClellan, S. A. (2001). Evaluation of end-to-end QoS mechanisms in IP networks. In *Networking – ICN 2001: Proceedings Part II* (Vol. 2094/2001, pp. 579–590). Heidelberg: Springer-Verlag.

Conner, D., & McClellan, S. A. (1998). Telecommunication of engineering information. In *The Encyclopedias of Electrical and Electronics Engineering*. New York, NY: Wiley Interscience.

McClellan, S. A., & Gibson, J. (1997). Speech signal processing: Coding, transmission, and storage. In *The Electrical Engineering Handbook, 2nd ed.* (pp. 339–348). Boca Raton, FL: IEEE Press.

Grimes, G., McClellan, S. A., Winokur, T., Conner, D., Vaughn, G., Goldman, J., … Fleming, W. (1997). Applications of virtual reality technology in pathology. In *Medicine Meets Virtual Reality: Global Healthcare Grid* (pp. 319–327). Amsterdam: IOS Press.

Gibson, J. D., & McClellan, S. A. (1993). Block source coding over GF(q). In *Finite Fields, Coding Theory, and Advances in Communications and Computing* (Vol. 141, pp. 291–306). New York, NY: Marcel Dekker.

2. Articles:

a. Refereed Journal Articles:

Thapa, K., McClellan, S. A., & Valles Molina, D. (2022). Supervised Machine Learning in Inter-Level, Ultra-Low Frequency Power Line Communications. *International Journal On Advances in Telecommunications*, *14*(1 & 2).

McClellan, S. A., Valles Molina, D., & Koutitas, G. (2019). Dynamic Voltage Optimization Based on In-Band Sensors and Machine Learning. *Applied Sciences*, *9*(14). https://doi.org/https://doi.org/10.3390/app9142902 https://doi.org/10.3390/app9142902

Valles Molina, D., & McClellan, S. A. (2019). Using machine learning to optimize Linux networking. *Linux Journal*, (298), 128–138. Retrieved from https://secure2.linuxjournal.com/ljarchive/LJ/298/12625.html https://secure2.linuxjournal.com/ljarchive/LJ/298/12625.html

Forfang, W., Gonzalez, E., McClellan, S. A., & Viswanathan, V. R. (2014). A VAD/VOX Algorithm for Amateur Radio Applications. *Int. J. Adv. in Telecom.*, *7*(1 & 2), 34 – 44.

McClellan, S. A., & Peng, W. (2013). Improving Retransmission Performance of IP-Based Transport Protocols. *Int. J. Adv. in Telecom.*, *6*(3 & 4), 123–131.

McClellan, S. A. (2006). iSCSI brings distributed storage to mezzanine clients. *RTC Mag.*, xx–yy.

McClellan, S. A., Fleming, P., & Smith, D. (2005). Standards-based platforms: The path to ATCA applications. *RTC Mag.*, 30–35.

Barr, M., McClellan, S. A., Winokur, T., & Vaughn, G. (2004). An Automated Tissue Pre-Classification Approach for Telepathology: Implementation and Performance Analysis. *IEEE Trans. Info. Tech. in Biomed.*, *8*(2), 97–102.

Shaikh, F., McClellan, S. A., Singh, M., & Sannedhi, K. C. (2002). End-to-end testing of IP quality of service mechanisms. *IEEE Computer Mag.*, 80–87.

Winokur, T., McClellan, S. A., Siegal, G., Redden, D., Gore, P., Lazenby, A., … McDonald, J. (2000). A prospective trial of telepathology for intraoperative consultation (frozen sections). *Human Pathology*, *31*, 781.

Stricklen, M., Cummings, B., & McClellan, S. A. (2000). Linux and the Next Generation Internet. *Linux Journal*, *73*, 90–98.

McClellan, S. A., Gibson, J., & Rutherford, K. (1999). Efficient pitch filter encoding for variable rate speech processing. *IEEE Trans. Speech and Audio Processing*, *7*, 18–29.

Winokur, T., McClellan, S. A., Siegal, G., Reddy, V., Listinsky, C., Conner, D., … McDonald, J. (1998). An initial trial of a prototype telepathology system featuring static imaging with discrete control of the remote microscope. *Am. J. Clin. Path.*, *110*, 43–49.

Winokur, T., McClellan, S. A., Siegal, G., Reddy, V., Listinsky, C., Conner, D., … McDonald, J. (1998). Parallel frozen-section diagnosis by telepathology and microscopy utilizing a prototype telepathology microscope. *Telemed. J.*, *4*(1), 117.

Grimes, G., McClellan, S. A., Goldman, J., Conner, D., McDonald, J., Winokur, T., … Fleming, W. (1997). Remote microscopy for hi-res real-time interactive pathology. *Advanced Imaging*, 13ff.

McClellan, S. A., & Gibson, J. D. (1997). Variable rate CELP based on subband flatness. *TSAP*, *5*(2), 120–130.

Winokur, T., McClellan, S. A., Kujawski, E., Siegal, G., Listinsky, C., Reddy, V., & McDonald, J. (1997). A prototype telepathology system combining features of dynamic and static telepathology. *Cell Vision: Journal of Analytic Morphology*, *3*(6), 474.

3. Conference Proceedings:

a. Refereed Conference Proceedings:

DasGupta, B., Valles Molina, D., & McClellan, S. A. (Accepted / In Press). A Comparison of MLA Techniques for Classification of Network Bandwidth Loss. IEEE Computer Society.

Thapa, K., & McClellan, S. A. (2021). An evaluation of neural network performance using complex-valued input data (pp. 27–31).

Lokesh, V., Thapa, K., & McClellan, S. A. (2021). Remote filesystem event notification and processing for distributed systems (pp. 22–26).

Thapa, K., McClellan, S. A., & Valles Molina, D. (2021). Supervised machine learning in digital power line communications (pp. 16–21).

Dasgupta, B., Valles Molina, D., & McClellan, S. A. (2019). Estimating TCP RTT with LSTM Neural Networks (pp. pp. 192–198).

DasGupta, B., Valles Molina, D., & McClellan, S. A. (2019). A K-Means Algorithm Approach for Classifying Wireless Signal Loss Using RTT and Bandwidth. IEEE. https://doi.org/10.1109/IEMCON.2018.8615015

McClellan, S. A., & Casey, M. L. (2018). A survey of 5G security standards. In *Proc. 12th Int'l Conf. on Digital Telecomm.* Athens, Greece.

Amaro, A., Peng, W., & McClellan, S. A. (2016). A Survey of Cloud Bandwidth Control Mechanisms. In *Proc. 7th Int'l Conf. on ICT Convergence (ICTC'16)*. Jeju Island, Korea.

Amaro, A., Peng, W., & McClellan, S. A. (2016). Bandwidth as a Service: Transport Layer Bandwidth Guarantees for Cloud Environments. In *Proc. 7th Int'l Conf. on ICT Convergence (ICTC'16)*. Jeju Island, Korea.

Gonzalez, E., McClellan, S. A., & Peng, W. (2014). RTOmin as a balancing parameter between fast retransmissions and timeouts with in the Stream

Control Transmission Protocol (SCTP). In *Proc. 2nd Int'l Conf. on Systems and Informatics (ICSAI)*. Shanghai, China.

Gonzalez, E., McClellan, S. A., & Peng, W. (2014). The Stream Control Transmission Protocol (SCTP) and its potential for amateur radio. In *Proc. 2014 ARRL/TAPR Digital Comm. Conf.* Austin, TX.

McClellan, S. A., Casey, M. L., & Chung, M. (2013). Coherent Pre-Distortion of Low-Frequency PLC Carriers. In *Proc. 6th Int'l Conf. on Comm. Theory, Reliability, and Quality of Service*. Venice, Italy.

McClellan, S. A., & Peng, W. (2013). Estimating Retransmission Timeouts in IP-Based Transport Protocols. In *Proc. 8th Int'l Conf. on Digital Telecomm.* Venice, Italy.

McClellan, S. A. (2013). IP Transport Protocols and VMs. In *Proc. Ethernet Technology Summit'13*. Santa Clara, CA.

Kastner, K., McClellan, S. A., & Stapleton, W. A. (2012). Dynamic Spectrum Allocation in Low-Bandwidth Power Line Communications.

McClellan, S. A. (2012). Designing the Private Cloud: Practical Aspects of Virtualization. In *Proc. Server Design Summit'12*. Santa Clara, CA.

McClellan, S. A. (2012). Military Applications of ATCA. In *Proc. ATCA Summit'12*. Santa Clara, CA.

McClellan, S. A. (2012). Poster Session: Open standard blade servers enable high performance applications. In *18th IEEE Real Time Conf.* Berkeley, CA.

Gonzalez, E., & McClellan, S. A. (2012). A hybrid VOX system using emulated hardware behaviors. In *Proc. 7th Int'l Conf. on Digital Telecomm.* Chamonix, France.

Kastner, K., McClellan, S. A., & Stapleton, W. A. (2012). Dynamic spectrum allocation in low-bandwidth power line communications. In *Proc. 2nd Int'l Conf. on Adv. in Cognitive Radio*. Chamonix, France.

McClellan, S. A., Austin, K., & Deikman, A. (2011). Datacenter in a box: Embracing open-standard blade servers. In *Proc. Server Design Summit'11*. Santa Clara, CA.

Christopher, H., Berens, S., & McClellan, S. A. (2011). Accurate Application of Conservation Voltage Regulation (CVR) for Power Conservation. In *15th IEEE Int'l Symp. on Power Line Comm.* Udine, Italy.

Kastner, K., Gonzales, E., & McClellan, S. A. (2010). Power Line Communication and the MSMA Algorithm. In *Undergrad. Research Conf.* San Marcos, TX.

Sampath, V., & McClellan, S. A. (2010). Power Quality Monitoring Using IEEE 519. In *2nd Int'l Research Conf. for Grad. Students*. San Marcos, TX.

McClellan, S. A., & Powell, P. (2010). Advanced System Management - A new approach to substation automation. In *Proc. Smart Grid Roadshow*. Cincinnati, OH.

McClellan, S. A. (2008). Network flows management beyond 10Gbps. In *Proc. ATCA Summit'08*. Santa Clara, CA.

McClellan, S. A. (2007). ATCA and μTCA: Interchangeable parts. In *Proc. Themis Int'l Conf.* Maui, HI.

McClellan, S. A. (2006). WiMAX and μTCA: Interchangeable parts forWiMAX deployment. In *Proc. ATCA Summit'06*. Santa Clara, CA.

McClellan, S. A. (2006). μTCA: System software. In *Proc. WiMAX Forum*. San Diego, CA.

McClellan, S. A., Zhang, D., & Low, S. (2001). An architectural view of third generation (3G) wireless networks. In *Proc. SSGRR'01*. L'Aquila, Italy.

Shaikh, F., & McClellan, S. A. (2001). Evaluation of end-to-end QoS mechanisms in IP networks. In *Proc. IEEE Intl Conf. on Networking (ICN'01)*. Colmar, France.

Shaikh, F., & McClellan, S. A. (2001). An integrated environment for voice quality evaluation in IP networks. In *Proc. Applied Telecom. Symposium (part of Adv. Simul. Technol. Conf. ASTC'01)*. Seattle, WA.

Chataut, S., & McClellan, S. A. (2000). Tools for application performance management. In *Proc. 5th World Conference on Integ. Design & Process Technology*. Dallas, TX.

McClellan, S. A., Burst, K., & Grimes, G. (1999). Issues and techniques in network-based distributed healthcare: Advanced networking techniques. In *Proc. 4th World Conference on Integ. Design & Process Technology*. Kusadasi, Turkey.

Liang, Y., McClellan, S. A., & Burst, K. (1999). Issues and techniques in network-based distributed healthcare: Quality of service and bandwidth. In *Proc. 4th World Conference on Integ. Design & Process Technology*. Kusadasi, Turkey.

Bonner, B., Stricklen, M., & McClellan, S. A. (1999). The Linux DSP Shell. In *Proc. LinuxExpo'99*. Raleigh, NC.

McClellan, S. A., Vaughn, G., Grimes, G., & Winokur, T. (1998). Medical image transmission systems. In *Proc. 3rd World Conference on Integ. Design & Process Technology* (pp. 94–101). Berlin, Germany.

Goode, J., & McClellan, S. A. (1998). Real-time demonstrations of quantization and prediction using the TI ’c31 DSK. In *Proc. Amer. Soc. Engr. Educ.: Frontiers in Educ.* Seattle, WA.

McClellan, S. A., & Winokur, T. (1997). TelePath: Real-time, remote pathology. In *SECON* (pp. 234–236). Blacksburg, VA.

Winokur, T., McClellan, S. A., Kujawski, E., Siegal, G., Listinsky, C., Reddy, V., & McDonald, J. (1996). A prototype telepathology system combining features of dynamic and static telepathology. In *Proc. Int. Conf. of Telepathology*. Rockville, MD.

McClellan, S. A., Winokur, T., & Kujawski, E. (1996). A prototype system for telepathology. In *Proc. First Annual Telecommunications Conf.* (pp. 208–215). Austin, TX.

McClellan, S. A., & Gibson, J. D. (1996). Lag-indexed VQ for pitch filter coding. In *ICASSP*. Atlanta, GA.

Rutherford, K., McClellan, S. A., & Adhami, R. (1996). Improving the performance of Federal Standard 1016 (CELP). In *SECON* (pp. 216–219). Tampa, FL.

McClellan, S. A., & Gibson, J. D. (1996). Variable rate vector quantization of the speech spectral envelope. In *SECON* (pp. 208–215). Tampa, FL.

Gibson, J. D., Moodie, M. L., & McClellan, S. A. (1995). Variable rate techniques for CELP speech coding. In *Conf. Rec. 29th Annual Asilomar Conf.* Pacific Grove, CA.

McClellan, S. A., & Gibson, J. D. (1995). Distortion measures for variable rate coding. In *ISIT* (p. 197). Whistler BC, Canada.

McClellan, S. A., & Gibson, J. D. (1995). Variable rate CELP based on subband flatness. In *ICC* (pp. 1409–1413). Seattle, WA.

McClellan, S. A., & Gibson, J. D. (1994). Spectral entropy: An alternative indicator for rate allocation? In *ICASSP* (p. I.201–I.204). Adelaide, Australia.

McClellan, S. A., & Gibson, J. D. (1994). Variable rate tree coding of speech. In *Proc. IEEE Wichita Conf. on Commun., Networking, and Signal Processing* (pp. 134–139). Wichita, KS.

Gibson, J. D., Stanners, S. P., & McClellan, S. A. (1993). Spectral entropy and coefficient rate for speech coding. In *Conf. Rec. 27th Annual Asilomar Conf.* (pp. 925–929). Pacific Grove, CA.

McClellan, S. A., & Gibson, J. D. (1991). Group (source) coding of the prediction residual. In *Proc. 25th Annual Conf. on Inform. Sciences and Systems* (pp. 179–184). Baltimore, MD.

5. Reports:

McClellan, S. A., & Carvallo, A. E. (2021). *Building a 5G Research Network at STAR Park*.

6. Book Reviews:

McClellan, S. A. (2020, June). Applications of Artificial Intelligence in Renewable Energy and Green Technology. UK: Wiley.

McClellan, S. A. (2020, February). Telecommunications in Smart Grids. UK: Wiley.

B. Works Not in Print:

2. Invited Talks, Lectures, and Presentations:

McClellan, S. A., "Intelligent Grid Management Interface," Savannah River National Lab, Augusta, GA, United States. (May 2018).

McClellan, S. A., Digital 360, "Advances in Smart Networks." (2021).

McClellan, S. A., 16th Int'l Conf. on Digital Telecommunications, "Applications of Machine Learning and Artificial Intelligence in Modern Networks," PA, Portugal. (2021).

McClellan, S. A., 16th Int'l Conf. on Digital Telecommunication, "Connected Infrastructure: Innovations in Education, Demonstration, and Applied Research," Porto, Portugal. (2021).

McClellan, S. A., Connected Infrastructure Symposium, "Wireless Networking Technologies." (2021).

McClellan, S. A., SRC/DoE Workshop on ICT Hardware Enabled Security, "Smart Grid Security," Department of Energy (DoE), Online. (August 26, 2020).

McClellan, S. A., IEEE GreenTech 2018, "5G: Backbone of the Smart City," IEEE, Austin, TX, United States. (April 2018).

McClellan, S. A., IEEE GreenTech 2018, "Smart City Applications," IEEE, Austin, TX, United States. (April 2018).

McClellan, S. A., IEEE Global Communications Conf. (GLOBECOM'2014), "The Smart Grid as an Application Deployment Platform," IEEE. (December 2014).

McClellan, S. A., Energy Thought Summit (ETS'14), "Game Changers in Technology." (March 2014).

McClellan, S. A., Energy Thought Summit (ETS'14), "Machine to Machine Communications." (March 2014).

McClellan, S. A., IEEE Int'l Conf. on Communications (ICC'2012), "Cyber Security & Threat Management for the Smart Grid," IEEE. (2012).

McClellan, S. A., 18th IEEE Real Time Conf, "Open Standard Blade Servers," IEEE. (2012).

McClellan, S. A., Ethernet Technology Summit, "Ethernet Fabrics & Hardware Optimization." (February 2012).

McClellan, S. A., IEEE Global Communications Conf. (GLOBECOM'2011), "Smart Grid Standards, Technologies, and Applications," IEEE. (December 2011).

McClellan, S. A., Server Design Summit, "System Scaling & Networking." (November 2011).

McClellan, S. A., IEEE Int'l Conf. on Communications (ICC'2011), "Standards, Technologies, and Platforms for Emerging Smart Grid Deployments," IEEE. (June 2011).

McClellan, S. A., Ethernet Technology Summit, "Advances in 40 & 100 Gbps Ethernet." (February 2011).

McClellan, S. A., 24th IEEE Computer & Communications Workshop (CCW'2010), "Security & Network Management in Emerging Smart Grid deployments," IEEE. (October 2010).

McClellan, S. A., 24th IEEE Com- puter & Communications Workshop (CCW'2010), "Smart Grids, Electric Vehicles, & Mobile Load/Source Technology," IEEE. (October 2010).

3. Consultancies:

Litigation, Hendershot Cowart, PC, Houston, TX. (2022 - Present).

Litigation, Kasowitz Benson Torres LLP, New York, NY. (2022 - Present).

Additional Comments: Brazos/WSOU v. VMware

Litigation, Kassab Law Firm, Houston, TX. (2022 - Present).

Litigation, Marshall, Gerstein & Borun LLP, Chicago, IL. (2022 - Present).

Non-Governmental Organization (NGO), Generation USA. (2021 - Present).

Board of Advisors, Sertainty Corporation. (2021 - Present).

Litigation, Susman Godfrey LLP. (2021 - Present).

Additional Comments: Brazos/WSOU v. Microsoft

Litigation, Whitley Penn LLP. (2021 - Present).

Additional Comments: Brazos/WSOU v. Microsoft

Technical Expert, The Barr Group. (2019 - Present).

Technical Expert, The Expert Institute. (2018 - Present).

For Profit Organization, Gerson Lehman Group, United States. (2000 - Present).

Litigation, Etheridge Law Group. (2021 - 2022).

Additional Comments: Brazos/WSOU v. Microsoft

Litigation, Callahan Law Firm. (2019 - 2021).

Additional Comments: D.Nelson v. Sunbeam

Litigation, Kherkher, Garcia, Fass, Hawley, LLP. (2019 - 2020).

Litigation, William, Hart, Boundas, Easterby, LLP. (2019).

Litigation, American Express (GBT). (2017 - 2019).

Litigation, AT&T Wireless, United States. (2016 - 2019).

Litigation, Alcatel/Lucent, United States. (2014 - 2016).

Litigation, Charles River Associates. (2014).

Litigation, F5 Networks, United States. (2012 - 2013).

Litigation, Research In Motion (RIM). (2012 - 2013).

For Profit Organization, Flex Radio Systems, United States. (February 2011 - November 2012).

For Profit Organization, Dominion Virginia Power, United States. (March 2009 - September 2009).

For Profit Organization, Xcel Energy, United States. (June 2008 - October 2008).

5. Other Works not in Print:

b. Works "in progress":

Reports:

McClellan, S. A., & Seets, K. (In Preparation; Not Yet Submitted). *Spectral Interference at 900MHz around STAR Park*.

c. Other Works Not in Print:

Industry / Academic Panel Sessions:

McClellan, S. A., IEEE Smart City Summit 2019, "Mobility and Autonomous Vehicles," IEEE, TACC, Austin, TX, United States. (November 2019).

Industry Executive Panel Discussions:

McClellan, S. A., IEEE GlobeCom 2019, "Disruptive Technologies and Use Cases- Building blocks towards the Smart City," IEEE, Waikoloa, HI, United States. (December 2019).

Industry Panel Sessions:

McClellan, S. A., Smart City Summit, "Smart City, Smart State, Texas State." (June 2017).

Moderated Panel Sessions:

McClellan, S. A., Digital 360 Summit 2020, "Smart Networks," Online. (August 19, 2020).

Webinars:

McClellan, S. A., IEEE ICC'2012 "Sneak Peek" webinar, "International Experts to Explore Smart GridSecurity, Threat Identification and Management at IEEE ICC 2012," IEEE. (February 2012).

Patents:

McClellan, Stanley A, Peng, Wuxu. "Optimization of retransmission timeout boundary". Patent Cooperation Treaty. Number / ID: USPTO 10,404,562. (Date Awarded: 2019).

McClellan, Stanley A. "Suppression of interference in power and communication signals". Patent Cooperation Treaty. Number / ID: USPTO 9,876,516. (Date Awarded: 2018).

McClellan, Stanley A. "Intelligent power system and methods for its application". International. Number / ID: USPTO 8,519,832. (Date Awarded: 2013).

McClellan, Stanley A. "Active path selection for SCTP". International. Number / ID: USPTO 7,193,971. (Date Awarded: 2007).

McClellan, Stanley A. "Fault-tolerant associations for IP transport protocols". International. Number / ID: USPTO 7,111,035. (Date Awarded: 2006).

McClellan, Stanley A. "Digital telepathology imaging system programmed for identifying im- age regions of potential interest and anticipating sequence of image acquisition". International. Number / ID: WIPO WO/1999/030264A1. (Date Awarded: 1999).

McClellan, Stanley A. "Digital telepathology imaging system with bandwidth optimization and virtual focusing". International. Number / ID: WIPO WO/1999/013360A2. (Date Awarded: 1999).

C. Scholarly / Creative Grants and Contracts:

1. Funded External Grants and Contracts:

Stapleton, William A, McClellan, Stanley A. Freescale Internet of Things Lab Donation, Freescale Semiconductor, Private / Foundation / Corporate, $315,000.00. (Funded: 2013 - Present). Gift.

McClellan, Stanley A (Principal), Percent Contribution: 100%. JETS STO-000143 (8-3706), Jacobs/NASA Johnson Space Center, Private / Foundation / Corporate, $304,502.00. (Funded: May 2021 - 2022). Contract.

McClellan, Stanley A (Principal), Percent Contribution: 100%. JETS STO-000144 (8-3753), Jacobs/NASA Johnson Space Center, Private / Foundation / Corporate, $289,100.00. (Funded: May 2021 - 2022). Contract.

McClellan, Stanley A (Principal), Percent Contribution: 100%. JETS STO-000145 (8-3776), Jacobs/NASA Johnson Space Center, Private / Foundation / Corporate, $291,636.00. (Funded: May 2021 - 2022). Contract.

McClellan, Stanley A (Principal), Percent Contribution: 100%. JETS STO-000125 (8-3649), Jacobs/NASA Johnson Space Center, Private / Foundation / Corporate, $358,366.00. (Funded: February 2021 - 2022). Contract.

McClellan, Stanley A (Principal), Valles Molina, Damian (Co-Principal). Engineering & Technical Support for Astro-Materials Curation, Jacobs JETS, Private / Foundation / Corporate, $200,700.00. (Funded: January 2021 - December 2022). Grant.

Additional Comments: Jacobs JETS Task Order 006 / Snead

McClellan, Stanley A (Principal), Percent Contribution: 100%. JETS STO-000093 (8-2309), Jacobs/NASA Johnson Space Center, Private / Foundation / Corporate, $889,675.00. (Funded: March 2019 - 2022). Contract.

McClellan, Stanley A (Principal), Percent Contribution: 100%. JETS STO-000088 (8-3174), Jacobs/NASA Johnson Space Center, Private / Foundation / Corporate, $934,192.00. (Funded: January 2019 - 2022). Contract.

McClellan, Stanley A (Principal), Percent Contribution: 100%. JETS STO-000089 (8-2686/3178), Jacobs/NASA Johnson Space Center, Private / Foundation / Corporate, $1,307,166.00. (Funded: December 2016 - 2022). Contract.

Additional Comments: Ongoing/annual renewal

McClellan, Stanley A (Principal), Percent Contribution: 100%. JETS STO-001 (8-2248/3358), Jacobs/NASA Johnson Space Center, Private / Foundation / Corporate, $655,551.00. (Funded: October 2014 - 2022). Contract.

Additional Comments: Ongoing/annual renewal

Currit, Nathan Allen (Co-Principal), Percent Contribution: 49%, Jensen, Jennifer (Co-Principal), Percent Contribution: 49%, McClellan, Stanley A (Principal), Percent Contribution: 2%. JETS STO-000090 (8-2284), Jacobs/NASA

Johnson Space Center, Private / Foundation / Corporate, $2,126,189.00. (Funded: January 2015 - September 2022). Contract.

McClellan, Stanley A (Principal), Percent Contribution: 100%. JETS STO-000165 (8-3811), Jacobs/NASA Johnson Space Center, Private / Foundation / Corporate, $233,481.00. (Funded: June 2021 - December 2021). Contract.

McClellan, Stanley A (Principal), Percent Contribution: 100%. JETS STO-000142 (8-3773), Jacobs/NASA Johnson Space Center, Private / Foundation / Corporate, $259,521.00. (Funded: April 2021 - November 2021). Contract.

Chen, Heping (Principal), McClellan, Stanley A (Co-Principal). JETS Intern / LePere (S27720), Jacobs Technology Group, Private / Foundation / Corporate, $12,650.00. (Funded: January 2019 - May 2020). Contract.

Jimenez, Jesus (Principal), Aslan, Semih (Co-Principal), Perez, Eduardo (Co-Principal), McClellan, Stanley A (Co-Principal), Dong, Zhijie (Co-Principal), Valles Molina, Damian (Co-Principal). Joint study for a data-intensive analysis of the NEC In-Vehicle Passenger Detection System-Phase V, NEC America, Private / Foundation / Corporate, $9,200.00. (Submitted: October 2018, Funded: November 2018 - August 2019). Contract.

Chen, Heping (Principal), McClellan, Stanley A (Co-Principal). JETS Intern / Cowden (S27678), Jacobs Technology Group, Private / Foundation / Corporate, $30,240.00. (Funded: September 2017 - December 2018). Contract.

Chen, Heping (Principal), McClellan, Stanley A (Co-Principal). JETS Intern / Tellez (S27721), Jacobs Technology Group, Private / Foundation / Corporate, $11,750.00. (Funded: September 2017 - December 2018). Contract.

Koutitas, Georgios (Principal), McClellan, Stanley A (Co-Principal). JETS Intern / Grohman (S26189), Jacobs Technology Group, Private / Foundation / Corporate, $45,042.00. (Funded: August 2017 - December 2018). Contract.

Jimenez, Jesus (Principal), Aslan, Semih (Co-Principal), Perez, Eduardo (Co-Principal), McClellan, Stanley A (Co-Principal), Dong, Zhijie (Co-Principal), Valles Molina, Damian (Co-Principal). Joint study for a data-intensive analysis of the NEC In-Vehicle Passenger Detection System-Phase IV, NEC America, Private / Foundation / Corporate, $7,500.00. (Submitted: September 2017, Funded: October 2017 - August 2018). Contract.

Chen, Heping (Principal), McClellan, Stanley A (Co-Principal). JETS Intern / Jang (S26180), Jacobs Technology Group, Private / Foundation / Corporate, $50,665.00. (Funded: May 2017 - May 2018). Contract.

Jimenez, Jesus (Co-Principal), McClellan, Stanley A. JETS / Prejean STO-S24612 (8-2286), Jacobs Technology Group, Private / Foundation / Corporate, $608,120.00. (Funded: January 2015 - April 2018). Contract.

Additional Comments: Ongoing/annual renewal

Jimenez, Jesus (Principal), Aslan, Semih (Co-Principal), Perez, Eduardo (Co-Principal), McClellan, Stanley A (Co-Principal), Stapleton, William A (Co-Principal). Joint study for a data-intensive analysis of the NEC In-Vehicle Passenger Detection System-Phase III, NEC America, Private / Foundation / Corporate, $54,900.00. (Submitted: March 2016, Funded: May 2016 - May 2017). Contract.

Jimenez, Jesus (Principal), Aslan, Semih (Co-Principal), Perez, Eduardo (Co-Principal), McClellan, Stanley A (Co-Principal), Stapleton, William A (Co-Principal). Joint study for a data-intensive analysis of the NEC In-Vehicle Passenger Detection System-Phase II, NEC America, Private / Foundation / Corporate, $44,600.00. (Funded: March 2016 - May 2016). Contract.

Yu, Qingkai, Chen, Yihong, McClellan, Stanley A. JETS / Sosa STO-S24613 (8-2285), Jacobs Technology Group, Private / Foundation / Corporate, $260,586.00. (Funded: January 2015 - April 2016). Contract.

Jimenez, Jesus (Principal), Aslan, Semih (Co-Principal), McClellan, Stanley A (Co-Principal), Stapleton, William A (Co-Principal), Viswanathan, Vishu Ramamoorthy (Supporting). Joint study for a data-intensive analysis of the NEC In-Vehicle Passenger Detection System, NEC America, Private / Foundation / Corporate, $43,008.00. (Funded: November 2015 - December 2015). Contract.

Stapleton, William A, McClellan, Stanley A. Advanced Avionics for Exploration Student Projects (STO-002), Jacobs Technology Group, Private / Foundation / Corporate, $8,000.00. (Submitted: September 2014, Funded: October 2014 - May 2015). Contract.

McClellan, Stanley A. Performance Testing for Virtualized Environments, ZNYX Networks, Inc., Private / Foundation / Corporate, $122,000.00. (Submitted: July 2012, Funded: September 2012 - August 2014). Sponsored Research.

McClellan, Stanley A. Next Generation System Architecture, ZNYX Networks, Inc., Private / Foundation / Corporate, $50,000.00. (Funded: June 2010 - June 2012). Sponsored Research.

McClellan, Stanley A. Smart Grid System Evaluation, Power Tagging Technologies, Private / Foundation / Corporate, $85,000.00. (Funded: September 2010 - August 2011). Sponsored Research.

McClellan, Stanley A. Communications Education & Research, Agilent Technologies, Inc, Private / Foundation / Corporate, $25,000.00. (Funded: 2009). Gift.

McClellan, Stanley A. TWACS System Evaluation, Dominion Virginia Power, Private / Foundation / Corporate, $20,000.00. (Funded: 2009). Gift.

2. Submitted, but not Funded, External Grants and Contracts:

McClellan, Stanley A (Principal). SBIR Phase I:Robotic State Engine, A Robotically-operable Isochronous-gateway, US National Science Foundation SBIR Program, Federal, $255,900.00. (Submitted: 2021). Grant.

McClellan, Stanley A (Principal), Carvallo, Andres Eloy (Co-Principal), Valles Molina, Damian (Co-Principal), Aslan, Semih (Co-Principal). US/Israel Critical Infrastructure Cyber Security Center (CICSC), Israel – U.S. Binational Industrial R&D Foundation, Private / Foundation / Corporate, $12,000,000.00. (Submitted: 2021). Sponsored Research.

McClellan, Stanley A. Intelligent Distributed Transmission Power Control for Adaptive Resiliency, US Department of Energy SBIR Program, Federal, $150,000.00. (Submitted: May 2020). Grant.

McClellan, Stanley A (Principal). An Examination of Social and Technical Trust in Participatory Design: Implications for Technology Adoption in Low-Income Communities and the Future Engineering Workforce, US National Science Foundation, Federal, $3,000,000.00. (Submitted: October 2019). Grant.

McClellan, Stanley A (Principal). Tamper Resistant Microprocessor Design for Cyber-Resilient Energy Systems, Semiconductor Research Corporation, Private / Foundation / Corporate, $150,000.00. (Submitted: May 2019). Grant.

McClellan, Stanley A (Principal), Carvallo, Andres Eloy (Co-Principal), Aslan, Semih (Co-Principal), Valles Molina, Damian (Co-Principal). Tamper Resistant Microprocessor Design for Cyber-Resilient Solar Inverters in Solar Power, US Department of Energy, Federal, $8,400,000.00. (Submitted: December 2018). Grant.

3. Funded Internal Grants and Contracts:

Jin, Tongdan, McClellan, Stanley A. Designing an Internet-Based Metering System for Smart Grid Technology, Texas State University - Research Enhancement Program (REP), Institutional (Higher Ed), $16,000.00. (Funded: January 2011 - January 2012). Sponsored Research.

IV. SERVICE

A. Institutional

1. University:

System Architect & Manager, Regional 5G/PLTE Network. (2021 - Present).

Systwm Architect & Manager, Regional LoRaWAN Network. (2021 - Present).

Co-Director, Connected Infrastructure Initiative (CIEDAR). (January 2020 - Present).

Program Director, JSC Engineering, Technology & Science (JETS) Program. (2014 - Present).

University Representative, Texas Space Grant Consortium (NASA). (2013 - Present).

Member, Intellectual Property Committee (IPC). (2011 - Present).

Chair, Academic Computing Committee. (2021 - 2023).

Chair, Summative Review - Dean of Applied Arts. (2021 - 2022).

Faculty Senator - College of Science & Engineering, Faculty Senate. (May 2019 - May 2022).

Member, STAR Park Strategic Planning Committee. (2015 - 2018).

Member, Academic Computing Committee (ACC). (2014 - 2018).

Member, Entrepreneurship Working Group. (2014 - 2018).

Member, Registration & Academic Calendar Coordinating Committee (RACCC). (2014 - 2018).

Member, STAR Park Commercialization Advisory Council. (2014 - 2018).

Co-Chair, Cooperative Education Working Group. (2014 - 2017).

Member, Campus Information Resources Advisory Committee (CIRAC). (2016).

Member, Search Committee - AVPEMM. (September 2015 - June 2016).

Member, Mission Statement Task Force. (February 2016 - May 2016).

Senator - College of Science & Engineering, Faculty Senate. (2012 - 2013).

2. College:

External Observer, McCoy College Summative Review - Ann Watkins. (January 2020 - March 2020).

Representative / Organizer / Manager, Graduate Student Recruiting Organization (ENGINE). (2016 - 2019).

Chair, Ingram Hall Development Committee (ESB). (2015 - 2018).

Member, RFM Renovation Committee (C/EE). (2016 - 2017).

Chair, RFM Renovation Committee (MS Eng). (2014 - 2016).

Member, Search Committee - COSE Dean. (March 2016 - June 2016).

Member, College Review Group. (2008 - 2013).

Member, College Review Group. (2008 - 2012).

3. Department/School:

Chair, Search Committee - EE Faculty (2017-19). (August 2016 - June 2017).

Chair, Search Committee - EE Faculty (2016-3). (August 2015 - June 2016).

Chair, Search Committee - Ingram Endowed Chair (2016-45). (August 2015 - June 2016).

Chair, Search Committee - EE Faculty (2015-56). (August 2014 - June 2015).

Chair, Ingram School of Engineering Personnel Committee. (2009 - 2012).

Member, Search Committee - IE Faculty (2012-29). (August 2011 - June 2012).

Chair, Search Committee - EE Faculty (2011-24). (August 2010 - June 2011).

Chair, Search Committee - EE Faculty (2010-28). (August 2009 - June 2010).

Member, Search Committee - MFGE Faculty (2010-18). (August 2009 - June 2010).

Chair, Search Committee - EE Faculty (2009-29). (August 2008 - June 2009).

Chair, Search Committee - EE Faculty (2009-30). (August 2008 - June 2009).

Member, Search Committee - EE Faculty (2009-31). (August 2008 - June 2009).

B. Professional:

Reviewer / Referee, NSF SBIR Program. (2001 - Present).

Reviewer / Referee, IEEE Transactions on Education. (2000 - Present).

Reviewer / Referee, IEEE Spectrum. (1995 - Present).

Reviewer / Referee, ASEE / DOD Fellowship Program (SMART). (October 2019 - February 2021).

Campus Representative, American Society of Engineering Education (ASEE). (2014 - 2019).

Co-Chair, IEEE GlobeCom 2019 - Industry Forum, Kona, HI. (December 9, 2019 - December 13, 2019).

Coordinator / Organizer, IEEE Smart City Summit, Austin, TX. (November 1, 2019).

Reviewer / Referee, ASEE / DOD Fellowship Program (SMART). (October 2018 - February 2019).

Reviewer / Referee, NSF Graduate Research Fellowship Program (GRFP). (2016 - 2017).

Coordinator / Organizer, International Conference on Digital Telecommunications (ICDT), Venice, Italy. (September 2016 - April 2017).

Reviewer / Referee, ASEE / DOD Fellowship Program (SMART). (October 2016 - February 2017).

Coordinator / Organizer, Server Design Summit, San Jose, CA, United States. (2009 - 2012).

Coordinator / Organizer, Ethernet Summit, San Jose, CA, United States. (2008 - 2012).

C. Community:

Board of Directors, San Marcos Academy, San Marcos, TX. (2007 - 2013).

Board of Directors, Power Tagging Technologies, Boulder, CO. (2008 - 2010).

D. Organization Memberships:

Texas Board of Professional Engineers (lic. 143522) (TBPE/PELS). (2021 - Present).

Eta Kappa Nu (HKN). (1995 - Present).

Institute of Electrical and Electronics Engineers (IEEE). (1990 - Present).