Exhibit 2019 Zynga, Inc. v. Personalized Media Communications, LLC Case IPR2013-00156 (SCM)

# Personal

Curriculum Vitae of Dr. Samuel H. Russ

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Citizenship:	U.S.

# Education

Ph.D. in Electrical Engineering, Georgia Institute of Technology, 1991.

Thesis Title: An Information-Theoretic Approach to Analysis of Computer Architectures and Compression of Instruction Memory Usage

Thesis Advisor: Dr. Cecil O. Alford

Bachelor's of Electrical Engineering (with Highest Honor), Georgia Institute of Technology, 1986.

# **Employment**

#### **University of South Alabama**

Associate Professor, Department of Electrical and Computer Engineering (2011)

<u>Assistant Professor</u>, Department of Electrical and Computer Engineering -- Developing new class in signal integrity, developing cross-disciplinary collaborative research efforts, updating labs and class materials, teaching both undergraduate and graduate classes.

## Scientific-Atlanta (Now Cisco's Service Provider Video Tech. Group) 2000 - 2007

<u>Manager, Advanced Technologies R&D</u>, Explored major new technologies including home networking and multi-room video distribution; oversaw construction of prototypes and demonstrations; demonstrated technologies at trade shows and to stock analysts; managed group of approximately 10 designing set-top boxes for the cable television industry including all phases of high-volume electronic design including layout, high-speed digital design, emissions considerations, gate array conversion, and designing with custom ASICs; supervised cross-functional team to increase hard drive reliability; wrote numerous patent applications. Products in widespread use today including Time Warner Cable and Cablevision.

#### **IVI Checkmate (Now Ingenico)**

<u>Matrix Manager, Electrical Engineering</u>, Supervised staff of approximately 6 electrical engineers, oversaw assignments, allocated time across multiple projects, worked to coordinate project schedules with priorities, assisted in sales and other customer communications.

<u>Staff Electrical Engineer</u>, Oversaw major design overhaul of touch-pad payment system including embedded-systems design, power-system design, and system layout and schematic capture. System is in wide use today at Wal-Mart, Home Depot, and others.

## Mississippi State University

<u>Thrust Leader</u>, Computing Systems Research Thrust and Systems Integration Group, NSF Engineering Research Center -- Coordinate research plans and NSF reporting for 6 faculty and 3 full-time staff, assist in development of strategic plans and pursuit of funding opportunities, oversight of development of the ERC-wide integrated testbed. Managed multi-year research project in distributed computing that included 11 students and 5 faculty.

<u>Assistant Professor</u>, Department of Electrical & Computer Engineering -- Developed all-new graduate class in circuit board design, authored textbook chapter, developing new undergraduate lab, pioneered teaching classes over 2-way interactive video.

2007 – Present

#### 1999 - 2000

1994 - 1999

# 2

#### **Dickerson Vision Technologies (Now Cognex)**

<u>Director of Manufacturing</u>--Oversaw the development and implementation of a manufacturing plan for the company.

<u>Senior Applications Engineer</u>--Developed firmware and user-interface software for the company's proprietary hardware, Assisted in development of machine vision system hardware, Assisted in sales duties.

## **Georgia Institute of Technology**

## 1987 - 1991

<u>Graduate Research Assistant</u>--Helped design five VLSI chips while developing two custom CPU's, Silicon-compiler-based computer chip design, including initial design, full functional simulation, size and timing optimization, and manufacturing test development.

# **Publications**

## **Book Chapters**

- 1. Samuel H. Russ, "High-Speed Digital Effects", Chapter 10 of John Kraus and Daniel Fleisch, *Electromagnetics with Applications, Fifth Edition*, McGraw-Hill, 1998. (Textbook)
- Samuel Russ, Bret Webb, Jonathan Holifield and Justin Walker (2011). "PILS: Low-Cost Water-Level Monitoring, Environmental Monitoring", Dr. E.O. Ekundayo, Ph.D., (Ed.), pp. 137-156, ISBN: 978-953-307-724-6, InTech, (Peer-reviewed)

#### **Journal Articles**

- 1. Samuel H. Russ and Salim Alsharif, "Packet Loss Behavior of HomePlug AV Traffic at Video Bit Rates", *IEEE Transactions on Consumer Electronics*, Vol. 57, No. 2, May 2011, pp. 823-826.
- Samuel H. Russ and Ramesh Nallur, "Digital Video Recording onto Solid-State Disks: Feasibility and Lifetime Estimation", *IEEE Transactions on Consumer Electronics*, Vol. 57, No. 2, May 2011, pp. 558-563.
- Samuel H. Russ and Sasan Haghani, "802.11g Packet-Loss Behavior at High Sustained Bit Rates in the Home", *IEEE Transactions on Consumer Electronics*, Vol. 55, No. 2, May 2009, pp. 788-791.
- Samuel H. Russ, and Ramesh Nallur, "A Framework for Calculating Fundamental DVR Performance Limits", *IEEE Transactions on Consumer Electronics*, Vol. 55, No. 1, Feb. 2009, pp. 132-138.
- 5. Ioana Banicescu, Sheikh Ghafoor, Vijay Velusamy, Samuel H. Russ, Mark Bilderback, "Experiences from integrating algorithmic and systemic load balancing strategies", *Concurrency and Computation: Practice and Experience*, Volume 13, Number 2, pp. 121-139 (2001).
- Roger L. King, Samuel H. Russ, Aric B. Lambert, Donna S. Reese, "An artificial immune system model for intelligent agents", *Future Generation Computer Systems*, Volume 17, Issue 4, pp. 335 - 343 (January 2001).
- 7. Dr. Samuel H. Russ, Jonathan Robinson, Matt Gleeson, Brad Meyers, and Chun-Heong Tan, "Using Hector to Run MPI Programs over Networked Workstations", *Concurrency - Practice and Experience*, Vol. 11, No. 4, pp. 189-204 (1999).
- 8. Russ, S.H. Reece, K. Robinson, J. Meyers, B. Rajan, D. Rajagopalan, L. Chun-Heong Tan, "Hector: an agent based architecture for dynamic resource management", *IEEE Concurrency*, Vol. 7, No. 2, pp. 47-55, Apr-Jun 1999.
- 9. Dr. Samuel H. Russ, Jonathan Robinson, Dr. Brian K. Flachs, and Bjorn Heckel, "The Hector Distributed Run-Time Environment", *IEEE Transactions on Parallel and Distributed Systems*, Vol. 9, No. 11, pp. 1102-1114 (1998).
- 10. S.H. Russ and C.O. Alford, "Coupled Noise and Its Effects on Modern Packaging Technology", *IEEE Transactions on Components, Hybrids, and Manufacturing Technology*, Volume 13, Number 4, December 1990, pp. 1074-1082.

#### 1992 - 1994

### **U.S. Patents**

- 1. U.S. Patent Number 6,748,080, "Apparatus for entitling remote client devices", Samuel Russ, Michael Gaul, Anthony Wasilewski, and Howard Pinder, June 8, 2004.
- 2. U.S. Patent Number 7,181,010, "Apparatus for entitling remote client devices", Samuel Russ, Michael Gaul, Anthony Wasilewski, and Howard Pinder, February 20, 2007.
- 3. U.S. Patent Number 7,360,233, "Broadcast carousel system access for remote home communication terminal", Samuel Russ, Michael Gaul, and Anthony Wasilewski, April 15, 2008.
- 4. U.S. Patent Number 7,360,235, "Systems and methods for operating a peripheral record/playback device in a networked multimedia system", David Davies, Samuel Russ, and Irvan Krantzler, April 15, 2008.
- 5. U.S. Patent Number 7,499,822, "Analog set-top calibration patterns in manufacturing", Leo Montreuil, Wayne B. Williams, Samuel H. Russ, and Robert Kriete, March 3, 2009
- 6. U.S. Patent Number 7,505,592, "Apparatus for entitling and transmitting service instances to remote client devices", Samuel H. Russ, Michael Gaul, Anthony Wasilewski, and Howard Pinder, March 17, 2009
- 7. U.S. Patent Number 7,516,470, "Locally-updated interactive program guide", Samuel H. Russ and Michael Gaul, April 7, 2009
- 8. U.S. Patent Number 7,826,711, "Digital Video Disc (DVD) Player or Digital Video Recorder (DVR) Playback with Memory", Samuel H. Russ, Nov. 2, 2010.
- 9. U.S. Patent Number 7,849,486, "Networked subscriber television distribution", Samuel H. Russ, David Lett, Jonathan Robinson, and Michael Gaul, Dec. 7, 2010.
- U.S. Patent Number 7,860,250, "Apparatus for entitling and transmitting service instances to remote client devices", Samuel H. Russ, Michael Gaul, Anthony Wasilewski, and Howard Pinder, Dec. 28, 2010.
- 11. U.S. Patent Number 7,861,272, "Networked subscriber television distribution", Samuel H. Russ, David Lett, Jonathan Robinson, and Michael Gaul, Dec. 28, 2010.
- 12. U.S. Patent Number 7,870,584, "Interactive program guide with selectable updating", Samuel H. Russ and Michael Gaul, Jan. 11, 2011.
- 13. U.S. Patent Number 7,876,998, "DVD playback over multi-room by copying to HDD", William Wall and Samuel H. Russ, Jan. 25, 2011.
- 14. U.S. Patent Number 7,908,625, "Networked multimedia system", Neil C. Robertson, David B. Lett, Samuel H. Russ, Bohdan S. Prus, Michael A. Gaul, and Ajith N. Nair, March 15, 2011.
- 15. U.S. Patent Number 7,937,737, "Field qualification of disk drives in consumer electronics devices", Samuel H. Russ and Mark R. Murray, May 3, 2011.
- 16. U.S. Patent Number 7,961,780, "Generated set top calibration patterns in manufacturing", Leo Montreuil, Wayne B. Williams, Samuel H. Russ, and Robert Kriete, Jun. 14, 2011.
- 17. U.S. Patent Number 7,978,720, "Digital media device having media content transfer capability", Samuel H. Russ, Christopher L. Stallings, July 12, 2011.
- 18. U.S. Patent Number 8,046,806, "Multiroom point of deployment module", William E. Wall, Samuel H. Russ, Oct. 25, 2011.
- 19. U.S. Patent Number 8,127,236, "Proximity detection using wireless connectivity in a communications system", Paul J. Claussen, Ajith N. Nair, and Samuel H. Russ, Feb. 28, 2012.
- 20. U.S. Patent Number 8,181,205, "PVR Channel and PVR IPG Information", Samuel H. Russ, Michael A. Gaul, and Dariusz S. Kaminski, May 15, 2012.
- 21. U.S. Patent Number 8,208,796, "Systems and methods for prioritizing the storage location of media data", Bohdan Prus and Samuel H. Russ, June 26, 2012.
- 22. U.S. Patent Number 8,280,229, "DVD playback over multi-room by copying to HDD", William E. Wall and Samuel H. Russ, October 2, 2012.
- 23. U.S. Patent Number 8,295,338, "Generated set top calibration patterns in manufacturing", Leo Montreuil, Wayne B. Williams, Samuel H. Russ, and Robert A. Kriete, October 23, 2012

24. U.S. Patent Number 8,364,015, "Stretch and zoom bar for displaying information", Samuel H. Russ and Gary Hibbard, January 29, 2013.

# **Non-U.S. Patents**

- 1. European Patent Number EP1543680B1, "Locally-updated interactive program guide", Samuel Russ and Michael Gaul, Feb. 17, 2010.
- 2. European Patent Number EP1673937B1, "Proximity detection using wireless connectivity in a communications system", Paul Claussen, Ajith Nair, and Samuel Russ, April 21, 2010.
- 3. European Patent Number EP1604523B1, "Method for determining the encryption of a service content depending on the fidelity of the reformatting of said content", Samuel Russ, Michael Gaul, Anthony Wasilewski, and Howard Pinder, Nov. 21, 2012.

# **Patents Applied For**

Approximately 25 additional patent applications have been submitted and are in review.

# **Conference Papers**

- 1. Thomas Thomas, Cade Cashen, and Samuel Russ, "Leveraging Smart Grid Technology for Home Health Care", *Proceedings of the 2013 International Conference on Consumer Electronics*, Jan. 11-14, 2013, pp. 276-277.
- Cade Cashen, Samuel Russ, and Thomas Thomas, "Using a Wireless LAN to Perform Motion Detection", *Proceedings of the 2013 International Conference on Consumer Electronics*, Jan. 11-14, 2013, pp. 63-64.
- 3. Nicklaus Thomas, David Evans, and Samuel Russ, "A Markovian Algorithm for Creating Immersive Public-Speaking Audiences", *Proceedings of the 2013 International Conference on Consumer Electronics*, Jan. 11-14, 2013, pp. 384-385.
- 4. Samuel H. Russ, "Podcasting to Improve Software Usage", *Proceedings of the 2012 ASEE Southeastern Section Conference*, April 1-3 2012, Starkville, MS, Paper ID 605.
- 5. Samuel H. Russ, "Using Student ID Numbers to Create Customized Homework Problems", *Proceedings of the 2012 ASEE Southeastern Section Conference*, April 1-3 2012, Starkville, MS, Paper ID 606.
- Samuel H. Russ and Ramesh Nallur, "Digital Video Recording Onto Solid-State Disks", 2011 Digest of Technical Papers, 2011 International Conference on Consumer Electronics, pp. 495-496. (2<sup>nd</sup> place in best paper contest, 2011.)
- 7. Mohammad Mushtaq, Samuel H. Russ, and Mohammad S. Alam, "Variable FEC to Reduce ECC Overhead in Digital Video Transmission", 2011 Digest of Technical Papers, 2011 International Conference on Consumer Electronics, pp. 215-216.
- 8. Samuel H. Russ and Salim Alsharif, "Behavior of HomePlug AV Traffic At High Sustained Bit Rates in the Home", 2011 Digest of Technical Papers, 2011 International Conference on Consumer Electronics, pp. 682-683.
- 9. Samuel H. Russ, Viswakalyan Perepa, Silas Leavesly, and Bret Webb, "Novel Low-Cost Salinity Sensor for Embedded Environmental Monitoring", *Proceedings of IEEE Southeastcon 2010*, March 18-21, 2010, pp. 53-56.
- Samuel H. Russ and Kung-Hsien Chen, "Thermally Conductive Circuit Boards", Proceedings of the 59<sup>th</sup> Electronic Components and Technology Conference (ECTC 2009), May 2009, pp. 465-468.
- 11. Samuel H. Russ and Sasan Haghani, "Behavior of 802.11g Traffic at High Sustained Bit Rates in the Home", 2009 Digest of Technical Papers, 2009 International Conference on Consumer Electronics, Jan. 2009, pp. 423-424.
- 12. Samuel H. Russ, and Ramesh Nallur, "A Framework for Calculating Fundamental DVR Performance Limits", 2009 Digest of Technical Papers, 2009 International Conference on Consumer Electronics, Jan. 2009, pp. 51-52.

- Samuel H. Russ, Rashid Jean-Baptiste, Tangirala Shailendra Krishna Kumar, and Marion G. Harmon, "Transparent Real-Time Monitoring in MPI", *IPPS/SPDP Workshops 1999*, in *Parallel and Distributed Processing*, Lecture Notes in Computer Science, vol. 1586, Springer-Verlag, 1999, pp. 1327-1334.
- Roger L. King, Aric B. Lambert, Samuel H. Russ, and Donna S. Reese, "The Biological Basis of the Immune System as a Model for Intelligent Agents", *IPPS/SPDP Workshops 1999*, in *Parallel and Distributed Processing*, Lecture Notes in Computer Science, vol. 1586, Springer-Verlag, 1999, pp. 156-164.
- 15. Aric Lambert, Roger King, Sam Russ, and Donna Reese, "Intelligent Control Agents for Resource Management of Heterogeneous Parallel Computing", Computational Intelligence for Modeling, Control, and Automation (CIMCA 98) in Concurrent Systems Series, vol. 55, IOS Press, 1999, pp. 116-121.
- 16. Samuel H. Russ and Adam Gaither, "Developing An Integrated Environment for Computational Field Simulation", *Object-Oriented Methods for Inter-Operable Scientific and Engineering Computing: Proceedings of the 1998 SIAM Workshop*, pp. 50-57.
- 17. Samuel H. Russ, Ioana Banicescu, Sheikh Ghafoor, Bharathi Janapareddi, Jonathan Robinson, and Rong Lu, "Hectiling: An Integration of Fine and Coarse-Grained Load-Balancing Strategies", *Proceedings of the Seventh International Symposium on High Performance Distributed Computing*, August 1998, IEEE Computer Society, pp. 106-113.
- Samuel H. Russ, "An Architecture for Rapid Distributed Fault Tolerance", 3rd International Workshop on Embedded High-Performance Computing, in J. Rolim, Editor, *Parallel and Distributed Processing*, Lecture Notes in Computer Science, vol. 1388, Springer-Verlag, 1998, pp. 925-930.
- 19. Dr. Samuel H. Russ, Brad Meyers, Jonathan Robinson, Matt Gleeson, Laxman Rajagopalan, Chun-Heong Tan, and Bjørn Heckel, "User-Transparent Run-Time Performance Optimization", *Proceedings of the 2nd International Workshop on Embedded HPC Systems and Applications*, Geneva, April 1997.
- J. Robinson, S.H. Russ, B. Flachs, and B. Heckel, "A Task Migration Implementation of the Message-Passing Interface", *Proceedings of the 5th High Performance Distributed Computing Conference* (HPDC-5), August 1996, IEEE Computer Society, pp. 61-68.
- S.H. Russ, B. Flachs, J. Robinson, and B. Heckel, "Hector: Automated Task Allocation for MPI", *Proceedings of the 10th International Parallel Processing Symposium*, April, 1996, IEEE Computer Society, pp. 344-348.
- 22. W.S. Tan, C.O. Alford, and S.H. Russ, "GT-EP: A Novel High-Performance Real-Time Architecture", *Proceedings of the 18th International Symposium on Computer Architecture*, May 1991, pp. 12-21.

## Reports

- 1. Aric B. Lambert, Roger L. King, Samuel H. Russ, Donna S. Reese, "Adaptive Analysis for the Design of Hardware Agents Using the Artificial Immune System Model for Resource Management of Heterogeneous Systems", Miss. State Technical Report No. MSSU-COE-ERC-98-10, Aug. 1998.
- 2. Daniel H. Linder, Robert B. Reese, Jon Robinson, and Samuel H. Russ, "JavaCADD: A Javabased Server and GUI for Providing Distributed ECAD Services", Mississippi State University Technical Report No. MSSU-COE-ERC-98-07, May 1998.
- 3. Samuel H. Russ, "Using Hector in an Architecture for Rapid Distributed Fault Tolerance", Mississippi State Technical Report No. MSSU-EIRS-ERC-97-17, December 1997.
- Samuel H. Russ, Jonathan Robinson, Matt Gleeson, and Jose Figueroa, "Dynamic Communication Mechanism Switching in Hector", Mississippi State Technical Report No. MSSU-EIRS-ERC-97-8, September 1997.

 Samuel H. Russ, Brian Flachs, Jonathan Robinson, and Bjorn Heckel, "Hector: Automated Task Allocation for MPI", Mississippi State Technical Report No. MSSU-EIRS-ERC-95-6, September, 1995.

# **Funded Grants and Contracts**

# University of South Alabama

1. Marine Environmental Science Consortium (GRI), Jan. 2011-Dec. 2011, "Conductivity Based In-Situ Hydrocarbon Sensor", PI, \$9,338.

2. University of South Alabama Research Council (USARC), Feb. 2008 – Feb. 2009, "Instrumentation of Hurricane Forecast Models for Performance Optimization", \$5,000 for one year.

#### Mississippi State University

1. National Science Foundation, April 1998-March 1999, "An ERC-CREST Partnership in Distributed and Computational Systems", PI, \$100,000/year, renewable for 5 years.

2. Office of Naval Research, Nov. 1996-Nov. 1998, "Distributed Visualization and Virtual Environments for Oceanography and Meteorology", Co-PI, \$200,000.

3. U.S. Army Waterways Experiment Station, July 1996-July 1999, "Efficient Parallel Wave Modeling", PI, \$200,000, Funded under CHSSI (Common HPC Scalable Software Initiative) of the DoD. (\$50,000 actually funded.)

4. NSF Engineering Research Center for Computational Field Simulation, April 1995- May 1999, "Heterogeneous Computing Testbed (CA 8)", PI, By year: \$34,983/\$70,111/\$55,916. Funded through NSF Engineering Research Center.

#### **Dickerson Vision Technology**

1. Small Business Innovations Research Program of the NSF, Division of Industrial Interface, September 1993 - February 1994, Award No. III-9260914. (\$50,000 Phase I contract conducted at Dickerson Vision Technologies.)

# **Technology Transfer and Licensing**

Hector Distributed Run-Time Environment licensed by MPI Software Technology, Inc., Starkville, MS in June 1998 (while at Mississippi State University)

## **Students Advised (Major Professor)**

Level	At USA	At MSU
Ph.D.		0
Masters	3	9

# **Courses Created and Enhanced**

## **University of South Alabama**

EE 264 Microprocessor Systems and Interfacing – Replaced 68HC11 with Freescale 9S12 architecture and redesigned the entire course, Introduced use of 68HC11 simulator and accompanying podcast to enhance student's ability to visualize microprocessor operation

EE 268 Digital Logic Design Lab – Updated one lab experiment

EE 368 Microprocessor Systems Lab – Developed all-new sequence to tie EE 368 to senior projects with hands-on experiments like motors, photocells, and servomotors.

EE 446 – Obtained donation of boards from Freescale and redesigned all of the experiments to develop more interesting demonstrations and to switch from assembly language to C.

EE 560 Advanced Computer Architecture – Selected new textbook for the class and developed lecture materials to match

EE 469/569 Advanced Digital System Design – Developed all-new course in high-speed circuit board design from an electromagnetics perspective. Added a lab experience in 2009.

EE 457/557 – Developing series of podcasts to augment in-class lectures with materials related to embedded systems and professional development.

EG 101 – Developed systematic curriculum shared by all sections including "checklists" for instructors, handouts, and lecture materials. Introduced motors project, which has become the most popular EG 101 project.

#### Mississippi State University

EE 8993 High Speed Digital Design -- Offered on video nationwide, it features pioneering treatment of high-speed circuit board design from an electromagnetics perspective. Material from the class has been included in one of the best-known electromagnetics textbooks, and it continues to be one of the most popular graduate classes in the department.

EE 4743 Computer Aided Digital Design -- Added breakthrough educational technology to permit remote access to logic synthesis capabilities. Offered on live two-way video starting Fall 1998.

# **Courses Taught**

#### **University of South Alabama**

Number Description	Number of Se	ections	Class Description		
EE 220 Circuit Analysis I	1		Introductory electrical circuit analysis		
EE 264 Microprocessor System	ns 8		Introduction to assembly language		
EE 268 Digital Logic Design L	ab 2		Introductory digital lab		
EE 368 Microprocessors Lab	10	0	Lab for Microprocessors class		
EE 440/540 VHDL Synthesis	1		VHDL, logic design, and synthesis		
EE 469/469 Adv. Digital System	n Design 5		Signal integrity and EMC		
EE 534 VLSI Design Systems	3		VLSI gate-level layout		
EE 560 Adv. Comp. Arch.	3		Graduate-level computer architecture		
EG 101 Intro. To Engineering	3		Freshman engineering seminar		
EG 231 Engr. Econ. and Ethics	3		Economics and Ethics for engineers		
EE 457/557 Adv. Embedded Sy	stems 1		Advanced topics in embedded systems		
EE 548 Computer and Network	Security 2		Encryption algorithms and applications		
EE 446 Embedded Systems Lab	1		Lab for advanced topics in embedded sys.		
Mississippi State University	,				
Nambar Darasiatian	Maria C.C.				

Number Description	Number of Sections	Class Description
EE 2713 Digital Devices	2	Introductory digital class
EE 2111 Electrical Lab I	1	Accompanies introductory digital class
EE 4723 Microcomputers II	1	Microcontroller interfacing
EE 4743 Computer Aided Digita	al Design 8	VHDL, logic design, and synthesis
EE 8993 High-Speed Digital De	sign 4	Signal integrity and high-speed design

# **Honors and Awards**

Technology and Engineering Emmy® Award, 2013, for "Pioneering Development of Multi-Room DVR"

2<sup>nd</sup> Place in "Best Paper – Storage Category" at ICCE 2011. The paper is "Digital Video Recording

Onto Solid-State Disks" as noted in Conference publications above.

Attendee, "Top Prof" Banquet - University of South Alabama chapter of Mortar Board, 2009,2010

Tau Beta Pi Engineering Professor of the Year – University of South Alabama chapter of Tau Beta Pi, 2008. One of two highest awards in the College of Engineering for teaching, and the only award voted on by honor students in the College.

Finalist, 53<sup>rd</sup> International Science and Engineering Fair, 1983, Albuquerque, NM.

# **Professional Activities**

# **Expert Witness Engagements**

Case	Jurisdiction and Case	Year(s)	Witness	Expert	Dep.	Trial
	Number		for	Reports		
WNE Holdings v.	Federal District of Mobile	2011	Plaintiff	1	0	0
Rockwell Automat.						
PMC v. Echostar	Eastern District of Texas	2010-	Plaintiff	2	2	0
		now				
Pegasus v. DirecTV	Delaware	2011-	Plaintiff	0	0	0
et al.		now				
Apple v. Samsung	Int'l Trade Commission	2012	Respondent	4	1	1
	337-TA-796					
EON v. MobiTV et	Delaware	2013	Defendant	1	0	0
al.						
PMC v. Zynga	Eastern District of Texas	2013	Plaintiff	0	0	0

# **Invited Lectures**

"Real-time Monitoring in MPI", Florida A&M University, Tallahassee, FL, August 1998

# Consulting

Consulted with various investment firms concerning telecommunications market, 2007 – ongoing

# **Society Memberships**

Institute of Electrical and Electronic Engineers, IEEE Consumer Electronics Society, IEEE Computer Society, Eta Kappa Nu, Tau Beta Pi, Phi Kappa Phi, Gamma Beta Phi Secretary, Northeast Mississippi Subsection of the IEEE, 1994-95

Article Reviewer

Computers and Electrical Engineering, Supercomputing '94, IEE Transactions, Concurrency: Practice and Experience, International Parallel Processing Symposium, IEEE Transactions on Education, IEEE Transactions on Parallel and Distributed Systems, ICT 2012, ICAEE 2012

## **Proposal Reviewer**

Army Research Office, National Science Foundation, U.S. Department of Energy

## **University Service**

Member, Search Committee, College of Engineering – Search for 2 Associate Dean positions, 2008-09 Member, Search Committee, ECE Department – Search for Assistant Professor positions, 2008-09, 2009-10, 2011-now

Member, University of South Alabama Council on International Education, 2008-09 Chairman, ECE Department "Open House" Committee, 2008-09 Chairman, ECE Department Recruiting and Retention Committee, 2007-08 Updated and conducted experiment for ACE program, 2007 Member, Hearin Undergraduate Committee, 1998 Department Coordinator, United Way Campaign, 1995 Award Referee, 1995 Instructional Paper Award, MSU College of Engineering