

# Wayne Eric Stark

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**Personal Data:**

Birth Date: February 26, 1956  
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The University of Michigan  
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**Positions Held:**

9/96-present: Professor of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor.

9/88-9/96: Associate Professor of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor.

9/82-9/88: Assistant Professor of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor.

**Education:**

Ph.D., Electrical Engineering, May 1982, University of Illinois.

M.S., Electrical Engineering, August 1979, University of Illinois.

B.S., Electrical Engineering, May 1978, University of Illinois. (Highest Honors).

**Honors and Awards:**

Journal of Communications and Networks Best Paper Award 2010.

IEEE Military Communications Conference Ellersick Best Paper Award, 2009.

IEEE Milcom Board 2002 Technical Achievement Award for sustained contributions to military communications.

IEEE Fellow: 1997. For contributions to the theory and practice of coding and modulation in spread-spectrum systems.

National Science Foundation Presidential Young Investigator 1985-1990.

**Governmental Grants and Contracts:**

2016-2017 NIST (\$50,000)  
2014-2016 NIST (\$100,000)  
2010-2011 KAUST (\$419,372, Co-PI with 2 others)  
2009-2013 NSF Grant (\$2,865,386 Co-PI with 5 others)  
2008 NSF MRI Grant (\$274,233, Co-PI with 2 others)  
2007 AFOSR Grant (\$140,000, Co-Pi with one other Co-PI)  
2004 JPL Grant (\$150,000)  
2002 ONR Grant (\$1,251,000)  
2000 NSF Grant (\$499,000, Demos Teneketzis, PI)  
2000 ONR Grant (\$247,000)  
2000 ARO Equipment Grant (\$168,000)  
1998-2000 DARPA Glomo Research Grant (\$200,000)  
1997-1999 DARPA Small Unit Operations Research Grant (\$500,000)  
1996-2000 Director: ARO Multidisciplinary University Research Initiative Grant entitled "Low Energy Electronics Design of Mobile Platforms" (\$5,000,000)  
1995-1999 ARO Multidisciplinary University Research Initiative Grant (\$4,000,000, George Haddad, PI)  
1995 ARO Equipment Grant (\$245,552)  
1995-2000 ARO Focused Research Initiative Grant (\$635,950)  
1992-1995 NSF Research Grant (\$284,711)  
1983-1985 NSF Initiation Grant (\$60,000)  
1985-1990 NSF Presidential Young Investigator Award (\$235,000)  
1986 NSF Equipment Grant (\$81,427)  
1985-1988 ONR Research Grant (\$247,668)

**Industrial Grants and Contracts:**

Ford, Hughes, TRW, General Electric, Ericsson, Raytheon (\$210,000)

**Professional Activities:**

*Member:* Editorial Board IEEE Journal on Selected Areas in Communications (JSAC) 2011-present  
*Guest Editor:* IEEE Journal on Selected Areas in Communications Special Issue on Advances in Military Networking and Communications, December 2011  
*Guest Editor:* IEEE Journal on Selected Areas in Communications Special Issue on Advances in Multicarrier CDMA, June 2006  
*Guest Editor:* IEEE Journal on Selected Areas in Communications Special Issue on Advances in Military Wireless Communications, May 2005.  
*Guest Editor:* IEEE Journal on Selected Areas in Communications Special Issue on Wideband CDMA II, June 2001  
*Guest Editor:* IEEE Journal on Selected Areas in Communications Special Issue on Wideband CDMA I, August 2000  
*Member:* NSF Wireless Technology Panel 1999

*Associate Editor:* IEEE Transactions on Communications 1984-1989

*Member:* IEEE Information Theory Society Board of Governors, 1985-1988.

*Reviewer:* IEEE, NSF, ARO.

*Co-organizer:* 1986 IEEE International Symposium on Information Theory, Ann Arbor, Michigan.

*Panel Member:* National Science Foundation Research Initiation Awards, 1985, 1992, 1995.

*Panel Member:* National Science Foundation Grant Awards, 1996.

*Consultant:* Irwin Magnetics, General Electric, InterDigital Communications Corporation, Intratech Systems Inc. Ericsson.

#### **Patents:**

- US Patent 9,772,397, *PMCW-PMCW interference mitigation*, September 26, 2017.
- US Patent 9753121, *Power control for improved near-far performance of radar systems*, September 5, 2017.
- US Patent 9,720,073, *Vehicular radar sensing system utilizing high rate true random number generator*, August 1, 2017.
- US Patent 9,689,967B1, *Adaptive transmission and interference cancellation for MIMO radar*, April, 2017.
- US Patent 9,575,160, *Vehicular radar sensing system utilizing high rate true random number generator*, February 21, 2017.
- US Patent 7,929,623, *FEC In Cognitive Multi-User OFDM*, April, 2011.
- US Patent 7,257,085, *Method and controller for data rate adaptation in wireless networks*, June 14, 2007.
- US Patent 6,282,181, *Pseudorandom number sequence generation in radio communication systems*, August 28, 2001.
- US Patent 6,240,538, *Method and apparatus for errors and erasures decoding*, May 5, 2001.
- US Patent 6,072,786, *Method for acquisition of spotbeam beacon frequency within a satellite communications system*, June 6, 2000.
- US Patent 6,028,538, *Method, keyboard and system for transmitting key characters*, Feb. 22, 2000.
- US Patent 5,938,787, *Communications systems and methods employing code rate partitioning with nonorthogonal modulation*, August 17, 1999.
- US Patent 4,796,110, *System and method for encoding and storing digital information on magnetic tape*, Jan. 3, 1989.

## Expert Witness Work

- Broadcom vs. Qualcomm, January 2005-April 2009. (Wilmer Hale, Boston MA). Represented Broadcom for infringement and validity of US Patent 5,657,317. Produced expert reports; was deposed and testified at trial. Produced expert reports for contempt proceedings; was deposed twice for contempt proceedings. (Case No. 8:05-CV-00467)
- DTL vs. Cingular, June 2006-November 2007. (Lerner, David, Littenberg, Krumholz & Mentlik, LLP, Westfield NJ). Represented DTL for infringement of US Patent 5,051,719. Produced expert reports for Markman hearing and infringement, was deposed for Markman hearing. (Case No. 2:06-CV-156)
- CSIRO vs. Microsoft, June 2007- April 2009. (Fish and Richardson). Represented Microsoft for noninfringement of US Patent 5,487,069. Produced expert report for noninfringement, was deposed on November 14, 2008. (Case No. 6:06-CV-549-LED)
- HTC Corporation et al vs. ICom GmbH & Co., KG, July 2009 -December 2009. (Kilpatrick Townsend). Represented ICom for infringement and validity of US Patent 5,390,216. Produced expert report prior to Markman hearing. Was deposed on December 18, 2009. Produced expert report on infringement. Was deposed on July 9, 2011. (Case No. 1:08-CV-01897-RMC) **Technology Involved:** Cellular Communication Systems.
- Apple vs. Samsung, May 2011-March 2013. (Wilmer Hale, Boston MA). Represented Apple for non-infringement and invalidity of US Patent 7,486,644 in the ITC. Produced noninfringement and invalidity reports. Was deposed in April 2012. Testified at International Trade Commission Hearing in June 2012. (Investigation No. 337-TA-794) **Technology Involved:** Cellular Communication Systems.
- Apple vs. Samsung, August 2012-December 2012. (Herbert Smith Freehills). Represented Apple for non-infringement and invalidity of Australian Patent 2005239657 in the Australian Court System. Produced various noninfringement and invalidity reports. Testified in the Australian Court in December 2012. (Case No. NSD 1243 of 2011) **Technology Involved:** Cellular Communication Systems.
- Apple vs. Samsung, May 2011-June 2012. (Wilmer Hale, Boston MA). Represented Apple for non-infringement and invalidity of 7,362,867 in the Northern District of California. Produced noninfringement and invalidity reports. Was deposed in April 2012. (Case No. 11-CV-01846-LHK.) **Technology Involved:** Cellular Communication Systems.
- Interdigital vs. Nokia, HTC, ZTE, January 2011-February 2013. (Wilson Sonsini). Represented Interdigital for infringement and validity of US Patent 7,616,970 in the International Trade Commission. Produced noninfringement and invalidity reports. Was deposed in December 2012. Testified at the hearing in February 2013. (Investigation No. 337-TA-800) **Technology Involved:** WiFi and Cellular Communication Systems.

- Interdigital vs. Samsung, March 2013-January 2014. (Latham Watkins). Represented Interdigital for infringement and validity of US Patent 7,616,970 in the International Trade Commission. Produced noninfringement and invalidity reports. Was deposited in September 2013. (Investigation No. 337-TA-868). **Technology Involved:** WiFi and Cellular Communication Systems.
- Ericsson vs. Adaptix, February 2013-December 2013. (Finnegan and Winston Strawn). Represented Ericsson for noninfringement and invalidity of US Patent 6,870,808 in the International Trade Commission. Produced noninfringement and invalidity reports. Was deposited in September 2013. (Investigation No. 337TA871). **Technology Involved:** Cellular Communication Systems.
- 2-way Computing vs. Sprint, December 2011-August 2015, (Case No. 2:11-CV-00012-JCM-PAL). (Knobbe Martin, Russ August & Kabat). Representing 2-Way Computing for infringement and validity of US Patent 5,434,797 in the District of Nevada. Produced infringement and validity reports. Was deposited in October 2013. **Technology Involved:** Cellular Communication Systems.
- Apple vs. CoreWireless, (Case No. 6:12-cv-0100). May 2012-March 2015 (Wilmer Hale, Boston MA). Representing Apple for non-infringement and invalidity of U.S. Patents 6,266,321, 6,978,143, 7,383,022, 7,599,664 in the Eastern District of Texas. Produced invalidity report and noninfringement report. Was deposited in May 2014. Testified at trial in March 2015. **Technology Involved:** Cellular Communication Systems.
- Ericsson vs. Intellectual Ventures, March 2014-On going (McDermott Will & Emery LLP). Representing Ericsson for Inter Partes Review of U.S. Patents 5,602,821, 5,963,557, 6,952,408, 6,370,153 Produced declarations for each of the Patents. Was deposited for the '408 Patent (March 2015), the '557 and '153 Patents (July 2015, November 2015) and '831 Patent (March 2016, August 2016). **Technology Involved:** Cellular Communication Systems.
- Adaptix, Inc. vs. Apple, Inc. and AT&T Mobility LLC, Case No. 3:13-cv-01777 (N.D. California), and Case No. 3:13-cv-02023 (N.D. California). 2013-2016 (Wilmer Hale, Cadwalder). Represented Apple and AT&T for noninfringement of US Patent 6,947,748 B2 and US Patent 7,454,212 B2 in Northern District of California. Produced noninfringement report. Deposited December 2014. **Technology Involved:** Cellular Communication Systems.
- California Institute of Technology v. Hughes Communications, Inc., et al., Case No. 2:13-cv-07245-MRP-JEM. 2014-2015 (Wilmer Hale). Represented Hughes in noninfringement of US Patent US Patent Nos. 7,116,710, 7,421,032, 7,916,781, and 8,284,833. **Technology Involved:** Satellite Communication Systems.
- TCL Communication Technology Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson, et al. v., No. 8:14-CV-00341 JVS AN (C.D. Cal.) 2015-2015 (McKool Smith). Represented Ericsson. **Technology Involved:** Cellular Communication Systems.

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