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Date of Birth: October 28, 1959
Location: Buffalo, New York, USA
Nationality: USA

Current as of July 31, 2023

EDUCATION

Ph.D. Computer Science, University of Rochester, October 1994.

M.S. University of Rochester, May 1991.

M.S. State University of New York at Buffalo, May 1990.

B.S. Cornell University, May 1982.

SELECTED PROFESSIONAL EXPERIENCE

Professor Department of Computer Science, Boston University, 2006 to present. **Department Chair, Computer Science** 2013 – 2018; **Associate Professor** 2000 – 2006; **Assistant Professor** 1994 – 2000. On leave 2000 – 2001.

Professor Faculty of Computing & Data Sciences, Boston University, 2022 to present. **Chair of Academic Affairs, Faculty of Computing & Data Sciences** 2022 – present; **Founding Member, Faculty of Computing & Data Sciences**, 2020 – 2022; **Data Science Faculty Fellow** 2019 – 2022.

Chief Scientist Guavus, Inc., February 2012 to August 2014.

Technical Director Network Appliance, Tewksbury, MA. November 2000 to April 2002.

Chief Architect Webmanage Technologies, Chelmsford, MA. May 2000 to acquisition by Network Appliance in November 2000.

Senior Computer Scientist Calspan Corporation, Buffalo, NY. August 1984 to August 1994.

LEGAL CONSULTING

The following are all cases in which I provided consulting and provided a report or testified at trial or deposition.

Visual Networks v. Paradyne, 2005, District of Maryland.
Retained by Sughrue Mion, Washington DC on behalf of Visual Networks.
Provided Report on validity of Visual Networks patents.
Subject area: Communications networks. Settled.

Akamai Technologies and MIT v. Limelight Networks, 2007 - 2008, District of Massachusetts.
Retained by Choate, Hall and Stewart, Boston MA on behalf of Akamai.
Provided Infringement Report, Noninfringement Rebuttal, Deposition on expert reports, Testimony at trial (3 days).
Subject area: Content delivery networks. All claims were found infringed; no claims were found invalid; $45M award of lost profits.

Interval Research v. Apple, Google, AOL, et al, 2011, US PTO.
Retained by O'Melveny & Myers, San Francisco on behalf of Apple.
Provided expert report in support of re-examination claim.
Subject area: Web browsers. Settled.

Straight Path IP Group v. Sony Et. Al., 2013, International Trade Commission and ED Virginia.
Retained by Wolf Greenfield, Boston MA on behalf of Sony.
Provided declarations in support of petitions for Inter Partes Review to USPTO.
Subject area: Video streaming technology.
Case number: 2:13-cv-00427. Filing Date: 8/1/2013.
Settled.

PersonalWeb v. Microsoft and Yahoo!, 2013-2014, Eastern District of Texas.
Retained by Haltom and Doan, and GreenbergTraurig on behalf of Yahoo!, and Microsoft.
Provided Invalidity Report on PersonalWeb patents, Deposition.
Subject area: Search engine technology.
Case number: 6:12-CV-658, 6:12-CV-663. Filing Date: 9/17/2012.
Settled.

RPX Corporation v. Cedatech Holdings, 2015, Patent Trial and Appeal Board.
Retained by Wolf Greenfield, Boston MA on behalf of RPX.
Provided declaration in support of petition for Inter Partes Review.
Subject area: Web browser and media technology.
Case number: IPR2015-00736. Filing Date: 2/13/2015.
Cedatech responded by disclaiming all patent claims.

Fortinet v. Sophos, 2015, Eastern District of Texas.
Retained by Quinn Emanuel on behalf of Fortinet.
Provided Reports on Invalidity and Noninfringement, Deposition.
Subject area: Security products.
Case number: 3:13-cv-05831-EMC. Filing Date: 12/16/2013.
Settled.

RPX v. Applications In Internet Time, 2015, Patent Trial and Appeal Board.
Retained by Wolf, Greenfield, Boston MA on behalf of RPX.
Provided Declaration in Support of Petition for IPR, Deposition.
Subject area: Application architecture.
Case number: IPR2015-01750. Filing Date: 8/17/2015.
PTAB instituted all claims.

Akamai v. Limelight, 2016-2017, Patent Trial and Appeal Board.
Retained by Choate, Hall & Stewart and WilmerHale, Boston, MA on behalf of Akamai.
Provided Declarations in Support of Petition for IPR, Deposition.
Subject area: Content delivery networks.
Case number: IPR2016-01011. Filing Date: 5/13/2016.
PTAB held all claims unpatentable..

Limelight v. Akamai, 2016-2017, Patent Trial and Appeal Board.
Retained by WilmerHale, Boston MA on behalf of Akamai.
Provided Declaration in Support of Patent Owner Preliminary Response.
Subject area: Content delivery networks.
Case number: IPR2016-01711. Filing Date: 9/6/2016.
PTAB held all claims unpatentable..

Finjan v. Symantec, 2017, Northern District of California.
Retained by Quinn Emanuel, Chicago IL on behalf of Symantec.
Provided Damages Rebuttal Report, Deposition.
Subject area: Security products.
Case number: 4:14-cv-02998. Filing Date: 6/30/2014.
Dismissed 3/5/2018.

Sound View Innovations v. Hulu, 2017-2019, Central District of California.
Retained by O'Melveney & Myers on behalf of Hulu, LLC.
Provided Expert Reports on Noninfringement and Invalidity, Deposition.
Subject area: Database Technology.

Case number: LACV17-04146 JAK (PLAx). Filing Date: 6/2/2017.
Summary Judgment for Defendant.

RPX and Bank of America v. Publishing Technologies, 2018, PTAB.
Retained by Winston & Strawn on behalf of RPX Corporation.
Provided Declaration in support of Petition for Inter Partes Review.
Subject area: Content Management System.
Case number: IPR2018-01131 and IPR2018-01132. Filing Date: 5/31/2018.
PTAB held all claims unpatentable.

Intellectual Ventures v. BITCO and Great West (Old Republic), 2015-2019, Eastern District of Texas.
Retained by Sidley Austin on behalf of BITCO and Great West.
Provided Expert Reports on Invalidity and Noninfringement, Deposition, Testimony at Trial.
Subject area: Web Technology.
Case number: 6:18-cv-00298. Filing Date: 1/20/2015.
Jury Trial March 2019; ruling for plaintiff.

Centripetal Networks, Inc. v. Cisco Systems, Inc., 2019, Eastern District of Virginia, Norfolk.
Retained by Duane Morris on behalf of Cisco.
Provided Expert Reports on Invalidity and Noninfringement, Deposition, Testimony at Trial.
Subject area: Security Products.
Case number: 2:18-cv-00094-HCM-LRL. Filing Date: 3/29/2018.
Bench Trial May-June 2020; ruling for plaintiff.

British Telecommunications PLC v. Fortinet LLC, 2019, PTAB.
Retained by Duane Morris on behalf of Fortinet.
Provided Declaration in Support of IPR.
Subject area: Distributed Network Management.
Case number: IPR2019-01323. Filing Date: 7/11/2019.
PTAB denied institution.

Express Mobile v. Magento (X.commerce), 2019, Northern District of California.
Retained by Sidley Austin on behalf of Magento.
Provided Expert Reports on Invalidity and Ensnarement, Deposition.
Subject area: Web Authoring Software.
Case number: 17-cv-02605-RS. Filing Date: 2019.
Ongoing.

Ohio State Innovation Foundation v. Akamai, 2019, District of Massachusetts, PTAB.
Retained by Farella Braun & Martell on behalf of Akamai.
Provided Declaration in Support of IPR.
Subject area: Content Distribution and Prefetching.
Case number: 1:19-cv-11528. Filing Date: 2019.
Settled.

Askeladden v. Lightwire, 2020, PTAB.
Retained by Wilmer Hale on behalf of Askeladden.
Provided Declaration in Support of IPR.
Subject area: Identity Management in E-commerce. Filing Date: 2020.
PTAB Granted Institution.

Broadcom Corporation and Avago Technologies International Sales Pte. Limited v. Netflix, Inc., 2020, Northern District of California.
Retained by Keker, Van Nest & Peters on behalf of Netflix.
Provided Expert Reports on Invalidity and Non-infringement, Deposition.
Subject area: Video Streaming.
Case number: 3:20-cv-04677-JD. Filing Date: 2020.

CA, Inc. and Avago Technologies International Sales Pte. Limited v. Netflix Inc., 2020, Eastern District of Texas.
Retained by Keker, Van Nest & Peters on behalf of Netflix.
Provided Expert Reports on Invalidity and Non-infringement; Declaration on Claim Construction.
Subject area: Video Streaming.
Case number: 2:21-CV-80-JRG-RSP. Filing Date: 2021.

Sable Networks Inc et al v. Juniper Networks, Inc., 2020, Western District of Texas.
Retained by Farella Braun + Martell, LLP on behalf of Juniper.
Provided Prior Art Search and Analysis.
Subject area: Network Switch Technology.
Case number: 6:20-cv-00524. Filing Date: 2020.
Settled December 2020.

Sable Networks Inc et al v. Cloudflare, 2021, Western District of Texas.
Retained by Farella Braun + Martell, LLP on behalf of Cloudflare.
Provided Prior Art Search, Declaration in IPR.
Subject area: Network Switch Technology.
Case number: 6:21-cv-00261. Filing Date: 2021.

Eolas v. Amazon et al., 2021, Northern District of California.
Retained by Latham and Watkins, LLP on behalf of Amazon.
Provided Report on Invalidity, Deposition.
Subject area: Web Browser Technology.
Case number: 4-17-cv-03022. Filing Date: 2017.
Summary Judgment of Invalidity under Sec 101, May 2022.

RightQuestion, LLC v. Samsung Electronics Co., et al, 2021, Eastern District of Texas.
Retained by O'Melveny and Myers LLP on behalf of Samsung.
Provided IPR Declaration, Invalidity Report, Deposition.
Subject area: Authentication Management.
Case number: 2:21-cv-00238. Filing Date: 2021.

Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards v. IBM, 2021-2022, PTAB.
Retained by GreenbergTraurig, LLP on behalf of Petitioner Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards.
Provided Declaration in Support of IPR, Deposition.
Subject area: Personalization Methods.
Case number: IPR2022-00438, IPR2022-00439. Filing Date: 2021.

Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards v. IBM, 2021-2022, PTAB.
Retained by GreenbergTraurig, LLP on behalf of Petitioner Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards.
Provided Declaration in Support of IPR, Deposition.
Subject area: Authentication Methods.
Case number: IPR2022-00646. Filing Date: 2022.

Wildseed Mobile LLC v. Google LLC and YouTube LLC, 2022, Western District of Texas.
Retained by Keker, Van Nest & Peters on behalf of Google.

Case number: 6:21-cv-1245. Filing Date: 2021.

Wapp Tech v. Bank of America, 2022, Eastern District of Texas.
Retained by O'Melveny & Myers LLP on behalf of Bank of America.

Subject area: Mobile Software Development.
Case number: 4:21-cv-00670. Filing Date: 2021.
Settled.

IBM v. Rakuten, Inc. et al., 2022, District of Delaware.
Retained by GreenbergTraurig, LLP on behalf of Defendants.
Provided Declaration in Support of Claim Construction, Deposition.
Subject area: Networking Technologies.
Case number: 1:21-00461. Filing Date: 2021.

Repairify v. LKQ Corp. and Keystone Automotive Industries, Inc., 2022, Western District of Texas.
Retained by Irwin IP on behalf of Keystone.
Provided Consulting on Invalidity.
Subject area: Automotive Networking.
Case number: 6:21-cv-00819. Filing Date: 2021.

Lionra v. Cisco, 2022, PTAB.
Retained by Duane Morris on behalf of Cisco.
Provided Consulting on Invalidity.
Subject area: Network Security. Filing Date: 2021.

Daedalus v. Samsung, 2022-2023, Eastern District of Texas.
Retained by O'Melveny and Myers LLP on behalf of Samsung.
Provided Consulting on Invalidity.
Subject area: Security Technology.
Case number: 2:22-cv-352. Filing Date: 2021.

PATENTS HELD

Methods for storing and reading digital data on a set of DNA strands, US Patent # 10,027,347, issued July 17, 2018.

Method and Apparatus for Whole-Network Anomaly Diagnosis and Method to Detect and Classify Network Anomalies Using Traffic Feature Distributions, US Patent # 8,869,276, issued October 21, 2014.

Compressed Set Representation for Sets as Measures in OLAP Cubes, US Patent # 8,533,167, issued September 10, 2013.

Method and Apparatus for Dynamic Resource Discovery and Information Distribution in a Data Network, US Patent # 7,747,741, issued June 29, 2010.

System for Creating and Distributing Prioritized List of Computer Nodes Selected as Participants in a Distribution Job, US Patent # 7,346,682, issued March 18, 2008.

Method and Apparatus for Election of Group Leaders in a Distributed Network, US Patent # 6,993,587, issued January 31, 2006.

Method and Apparatus for Scalable Distribution of Information in a Distributed Network, US Patent # 6,748,447, issued June 8, 2004.

Method and Apparatus for Reliable and Scalable Distribution of Data Files in Distributed Networks, US Patent # 6,718,361, issued April 6, 2004. European Patent # EP1305924 issued March 31, 2010.

Distributed Routing, US Patent # 6,370,584, issued April 9, 2002.

Method and Apparatus for Assigning Tasks in a Distributed Server System, US Patent # 6,223,205, issued April 24, 2001.

Selected Honors

Innovator of the Year, 2014, Boston University.

IEEE Fellow, 2011, "For contributions to the measurement and analysis of networks and distributed systems."

ACM Fellow, 2010, "For contributions to the measurement and analysis of networks and distributed systems."

Funding

Recipient of over 25 research grants from NSF, ARO, NGIA, Sprint, GTE, Xerox, and Hewlett-Packard totalling over $13.8 M.

Selected Professional Activities

Scientific Advisory Board of the Max Plank Institute for Software Systems, 2016 – present.

General Co-Chair, CoNEXT 2011.

Chair, ACM SIGCOMM 2007–2009.

Program Co-Chair, IFIP Networking 2010.

Program Committee Chair, Internet Measurement Conference 2003.

Books

M. Crovella and B. Krishnamurthy, "Internet Measurement: Infrastructure, Traffic, and Applications," John Wiley and Sons, 2006, 512 pp.

Published Articles

Author of over 200 published articles in Computer Science, cited more than 30,000 times according to Google Scholar.