Jack Brassil

Education

Ph.D. Electrical & Computer Engineering, *University of California, San Diego*.
Dissertation title: "Deflection Routing in Certain Regular Networks"

M.Eng. Electrical Engineering, *Cornell University*.

B.S. Electrical Engineering, *Polytechnic Institute of New York*.

Appointments

2018-present   **Princeton University**, *Senior Director of Advanced CyberInfrastructure*, Office of VP of Information Technology, and *Senior Research Scholar*, Department of Computer Science.
• Develops campus strategy and leads creation of world class computing, networking and data science research infrastructure and instruments.

2015-2018   **National Science Foundation**, *Program Director, CISE/Division of Computer and Network Systems*, Alexandria, VA.
• Conceived and oversaw $200M investments with over 275 Investigators in Computer Science and Engineering research programs, including the Network Technologies and Systems (NeTS) core program, Global Environment for Network Innovations (*GENI*), NSFCloud, and U.S. Ignite smart cities. Managing joint U.S. research partnerships with Japan, Brazil and the European Commission.
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2015-2018   **Princeton University**, *Senior Scholar (on leave at NSF)*, Department of Computer Science.

1999-2015   **HP Laboratories**, *Distinguished Technologist & Program Manager, Networking & Mobility Laboratory*, Princeton, NJ and Palo Alto, CA.
• Led a research team creating, patenting and prototyping high-speed communications techniques for mobile wireless devices. Generated state-of-the art research contributions to location-based services, enterprise networks, cloud computing, privacy and security.

1991-1999   **Bell Laboratories**, *Member of Technical Staff, Communications Research Department*, Murray Hill, NJ.
• Principal Investigator researching computer networking architectures, protocols and applications.

Recognition & Honors

2018   **NSF Director's Award for Superior Accomplishment (co-recipient)**, *for launching the Platforms for Advanced Wireless Research (PAWR) program.*

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2012	**Best Paper Award**, *MobiSec 2012*, "Verifying the Location of a Mobile Device User".
2005	**IEEE Fellow**, *for contributions to computer networking, information hiding and privacy*.
1995	**R&D 100 Product Award**, *for most innovative R&D product in the emerging field of digital image watermarking and related electronic commerce technologies.*

Keynote Lectures

2016	**Fourth IEEE Workshop on Hot Topics in Web Systems and Technologies**, *HotWeb 2016*, "Disruption at the Internet Edge".
2013	**22nd Intl. Conf. on Computer Communications and Networks**, *ICCN 2013*, "Locating Mobile Devices Indoors: Opportunities, Theory, and Practice".
2013	**Intl. Workshop on Cloud Computing and Information Security**, *CCIS 2013*, "Security and Privacy in the Mobile Cloud".

Teaching

Adjunct Professor, *Rutgers University*, CS 352: Internet Protocols & Technology (1998).

Research Advisor, Mentor for 14 graduate and undergraduate research interns from institutions including UC Berkeley, Princeton Univ., MIT, Univ. of Illinois, George Mason, Columbia Univ., Univ. of Victoria, UC Irvine, Purdue Univ., Stanford Univ.

Awards & Grants

Principal Investigator, *NSF-1934704, Workshop on Next Generation Cloud Research Infrastructure*, Convene research community to investigate future of cloud computing research infrastructure: Award – $66,547 (2019).

Principal Investigator, *NSF-1923692, CloudJoin: Migrating CISE Computing Research Infrastructure to the Cloud*, Investigate novel architectures integrating campus research computing and commercial cloud platforms: Award – $291,995 (2019).

Principal Investigator, *NSF GENI Program, InstGENI Project*, Completed deployment of compute server rack with OpenFlow-enabled network switches at 32 universities nationwide. Subcontractors: University of Utah, Northwestern University, PlanetWorks Inc.: Award – $1.5 Mil. (2014).

Co-Principal Investigator, *DARPA Internet Control Plane Program, CHART Project*, Created and led a joint startup-academic team to develop flow-oriented internet architectures and protocols to improve TCP/IP quality-of-service on impaired networks. Subcontractors: Princeton University, UC Berkeley, UC Santa Barbara, George Mason University, Sparta Inc., Anagran Inc.: Award – $6.4 Mil. (3 program phases, 2004-2008).

Advisory Committees

National Research Council, *Board of Assessment for the National Institute of Standards and Technologies*, Appointed to a 5 year term (2001-5) overseeing NIST's Information Technologies Laboratory's research programs.

National Science Foundation, *Computer and Information Science & Engineering panelist (2002, 2004, 2007, 2014)*, Office of CyberInfrastructure panelist (2005).

National Research Council, *Computer Science and Telecommunications Board* , Image and Instrument Integrity Planning Group; Technology for Copyright Protection (1995).

Service

Community, Judge, *Responsible Computer Science Challenge* (2019).

Editorial, Lead Guest Editor, *IEEE JSAC* issue on ATM LANs (1995).

Professional Societies, IEEE – Fellow; IEEE Communications Society – Member, Strategic Planning Committee (1996-97, 1998-99), Electronic Processes Committee (1994-95); ACM; ACM SIGCOMM Member.

Recent Technical Program Committees, SECON Fog Networking Workshop (2015); FIDC (2014); Usenix CSET (2012); ICST TridentCom (2012, 2010); ICDCS-SPCC (2011 - 2012); ACM SIGCOMM VISA Workshop (2009, 2010); ANCS (2009); Information Hiding (2006 - 2008); IEEE INFOCOM (2002); WiTMeMo (2006, 2007); UbiSec (2005); IEEE LANMAN (2002 - 2007), TPC Co-Chair (2002), Conference Co-Chair (2004), Steering Committee (2008 - 2017).

Patents

Granted.

• Mobile Printers	US Pat. 10,369,781
• Mobile Printing	US Pat. 10,052,883
• Authenticating a User's Location in a Femtocell-based Network	US Pat. 9,408,025
• Mobile Device Location Authentication	US Pat. 9,049,817
• Tenant Isolation in a Multi-tenant Cloud System	US Pat. 8,909,053
• Assigning WAN Links to Subflows based on Link Characteristics	US Pat. 8,514,865
• Methods for Location Determination and Asserting Privacy	US Pat. 8,493,443
• Media Program Timing and Identity Delivery Method	US Pat. 7,530,086
• Dynamic Generation of a Networked Information Resource	US Pat. 7,370,077
• Local File Transfer	US Pat. 7,212,785
• Dynamic Bandwidth Allocation in a Reservation System	US Pat. 7,143,166
• Cooperative Networking Method and System	US Pat. 7,065,575
• High Rate Data Communications	US Pat. 6,950,668
• Advertisement Insertion in Real-Time IP Multicast	US Pat. 6,771,644
• Document Copying Deterrent Method	US Pat. 6,086,706
• Signal Quality Measurement	US Pat. 6,611,776
• Document Copying Deterrent Method Using Word Shifting	US Pat. 5,629,770

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