

# CURRICULUM VITAE

## Nicholas Bambos

R. Weiland Professor of Electrical Engineering  
and of Management Science & Eng.

Fortinet Chairman, Management Science & Eng.

Stanford University

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Nick Bambos is R. Weiland Professor in the School of Engineering at Stanford University, having a joint appointment in the Department of Electrical Engineering and the Department of Management Science & Engineering. He is also the Fortinet Chairman of the Management Science & Engineering department. He heads the Computer Network Architecture and Performance Engineering research group at Stanford. This is comprised of PhD students and industry visitors engaged in research projects in his Computer Network Laboratory, which require solid understanding of the physical principles of computing and networking, hardware and software architectures (e.g., digital design, file systems), and focuses on system architectures and high-performance engineering of computer systems and networks. His research contributions span the areas of wireless networking, the Internet, cloud computing and data centers, high-speed networking, multimedia streaming, information service engineering, computer systems security, etc. His methodological interests and contributions span the areas of network control, online task scheduling, routing and distributed processing, etc.

He has graduated over 25 Ph.D. students, who have moved on to key positions in academia (Stanford, CalTech, Michigan, GaTech, NYU, USC, Columbia, etc.), the information technology industry (Cisco, IBM, Broadcom, Qualcomm, Nokia, MITRE, ST Micro, Intel, Samsung, Google, Facebook, Twitter, etc.), technology startups and the finance industry. From 1999 to 2005 he served as Director of the Stanford Networking Research Center project, a partnership between Stanford and information technology industries, involving tens of corporate members, faculty and doctoral students.

He received his Ph.D. in Electrical Engineering and Computer Sciences (EECS) from the University of California at Berkeley (1989), as well as the M.S. in EECS (1987) and the M.A. in Mathematics (1989) from the same University. He graduated in Electrical Engineering from the National Technical University of Athens-Greece (1984) with first class honors. Before joining Stanford as an Associate Professor in 1996, he served as Assistant (1990-95) and tenured Associate Professor (1995-96) in the Electrical Engineering Department of the University of California at Los Angeles (UCLA).

Nick Bambos has received several best paper awards, has held the Cisco Systems Faculty Development Chair (1999-2003) in computer networking at Stanford, and has won the IBM Faculty Award (2002) for high-impact research in performance engineering of computer systems and networks, as well as the Griffin Award (1997). He has been the David Morgenthaler Faculty Scholar (1996-99) at Stanford, and has received the National Young Investigator Award (1992) from the National Science Foundation (NSF) for research in computer networks and distributed computing architectures, as well as the NSF Research Initiation Award (1990) for studies in performance modeling of computer systems. He has also been a U.C. Regents Fellow, a David Gale Fellow, and an Earl Anthony Fellow at U.C. Berkeley.

He has served as editor of various research journals, on international technical and scientific committees, and on review panels for networking and computing technologies. He has also served on the boards of start-up companies, as a consultant for high-technology development and management, and as an expert witness in high-profile patent litigation cases involving networking, computing and information technologies.

## EDUCATION

- **Ph.D. in Electrical Engineering and Computer Sciences**, University of California at Berkeley, 1989.
- **M.A. in Mathematics**, University of California at Berkeley, 1989.
- **M.S. in Electrical Engineering and Computer Sciences**, University of California at Berkeley, 1987.
- **Diploma in Electrical Engineering - First Class Honors**, National Technical University of Athens-Greece, 1984.

## PROFESSIONAL EXPERIENCE

- **R. Weiland Professor** in the School of Engineering, Stanford University, 2016 – present.
- **Fortinet Chairman**, Department of Management Science & Engineering, Stanford University, 2016 – present.
- **Professor**, Department of Management Science & Engineering, and Department of Electrical Engineering, Stanford University, 2003 – present.
- **Head, Computer/Network Architecture and Performance Engineering Research Lab**, Stanford University, 1998 – present.
- **Director**, Stanford Networking Research Center, Stanford University, 1999 – 2005.
- **Associate Professor**, Department of Management Science & Engineering, and Department of Electrical Engineering, Stanford University, 1999 – 2003.
- **Associate Professor**, Department of Engineering-Economic Systems & Operations Research, and (courtesy appointment at) Department of Electrical Engineering, Stanford University, 1996 – 1999.
- **Associate Professor** (tenured), Department of Electrical Engineering, University of California at Los Angeles, 1995 – 1996.
- **Assistant Professor**, Department of Electrical Engineering, University of California at Los Angeles, 1989 – 1995.

## HONORS AND AWARDS

- **Best Paper Award in Green Communication and Computing** by the TAOS (Transmission, Access & Optical Systems) Technical Committee for the paper: *Dynamic Resource Management in Virtualized Data Centers with Bursty Traffic* (with M. Valdez-Vivas, J. Apostolopoulos) presented in the IEEE International Communications Conference (ICC'14) in Sydney, Australia, June 2014.
- **“Best of Globecom” Paper Award** (top 2%) for the paper: *Dynamic Resource Management in Cloud Computing with Frictions and Congestion “Weather”* (with M. Valdez-Vivas, J. Apostolopoulos) presented in IEEE Global Communications Conference (Globecom'14) in Austin, TX, December 2014.
- **2013-14 Eugene L. Grant Teaching Award**, Stanford University.
- **Best Journal Paper Award for 2011** from the IEEE Multimedia Communications Technical Committee for the paper: *Channel, Deadline, and Distortion Aware Scheduling of Video Streams over Wireless Links* (with A. Dua, C. Chan, J. Apostolopoulos), IEEE Trans. on Wireless Communications, 9(3):1001-1011, 2010.
- **HP Faculty Award**, Hewlett-Packard Laboratories, Palo Alto, 2006
- **Cisco Systems Faculty Scholar**, School of Engineering, Stanford University, 1999 - 2003.
- **IBM Faculty Award**, IBM Corporation Research Labs, 2002.
- **Dana Adams Griffin Award**, School of Engineering, Stanford University, 1997.
- **David Morgenthaler Faculty Scholar**, School of Engineering, Stanford University, 1996 - 1999.
- **National Young Investigator Award**, National Science Foundation, 1992 - 1997.
- **Research Initiation Award**, National Science Foundation, 1990 - 1992.
- **EECS Departmental Scholar**, University of California at Berkeley, 1988 - 1989.
- **U.C. Regents Fellow**, University of California at Berkeley, 1986 - 1988.
- **Earl C. Anthony Fellow**, University of California at Berkeley, 1985 - 1986.
- **David and Sylvia Gale Fellow**, University of California at Berkeley, 1984 - 1985.
- **First Class Honors** for top graduating students in 1984 (among 150 students), Electrical Engineering Department, National Technical University of Athens-Greece, 1984.
- **Academic Excellence Awards** (annual), Hellenic State Scholarships Foundation, Greece, 1979 - 1984.
- **Academic Prizes** (annual), Hellenic Engineering Society, Greece, 1979 - 1984.
- **First Class Honors** for top students admitted to the University in 1979 (among tens of thousands of students participating in a national-level entrance exam), National Technical University of Athens-Greece, 1979.

## **DISTINGUISHED INVITED LECTURES AND TALKS** (selected; additional talks on pg. 19)

- *Keynote Address – Power Control and Bandwidth Management in Wireless Networking*, IEEE Wireless On-Demand Network Systems and Services Conference (WONS), Jackson Hole, WY, February 2017.
- *Plenary Address – Digital Living 2030*, Shandong Chinese Academy of Sciences, Jinan, China, January 2017.
- *Keynote Address – A Risk Management View to Information Security*, IEEE Conference on Decision and Game Theory for Security, Berlin, Germany, Nov. 2010.
- *Keynote Address – Wireless Computing: From Infrastructure to Services*, IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Athens, September 2007.
- *Invited Distinguished Lecture - Three Control Problems in Packet Switching*, Workshop on Mathematics of Networks, Ecole Normale Supérieure, Paris, France, June 2007.
- *Invited Distinguished Talk - Throughput and Power Issues in Packet Switches*, Center for Ultra-Broadband Information Networks, University of Melbourne, Australia, August 2007.
- *Keynote Talk - Opportunities and Challenges in Wireless Computing and Multimedia Networking*, Network Ventures Conference, Redwood Shores, CA, March 2005.
- *IBM Distinguished Talk - Resource Management and Load Balancing in Flexible Computing/Networking Service Platforms*, IBM Research Labs, Almaden, CA, June 2005
- *Distinguished Speaker - Power Control in Wireless Networks*, Wireless Industry Forum, Electrical Engineering Department, University of Texas at Austin, April 2004.
- *Plenary Talk - Power Control in Wireless Networks* and member of Panel of Experts on Network Technology Trends, IEEE Workshop on Local and Metropolitan Area Networks (LANMAN), pp. 69-74, CA, April 2004
- *Invited Lecture - Geometry of Packet Scheduling in Communication Switches*, Laboratory for Information and Decision Systems, Massachusetts Institute of Technology, Nov. 2004.
- *Plenary Talk – Next Generation Wireless System Architectures* and member of Panel of Experts on Wireless Technologies in the IEEE International Conference in Broadband Networks (BroadNets), San Jose, CA, October 2004.
- *Plenary Talk – Next Generation Wireless Data Networks: Control Plane Principles and Architectures*. Strategic Architecture Council of Sun Microsystems, Nov. 2003
- *International Expert* invited to serve on the International Evaluation Committee for network engineering research at INRIA (the French/European National Institute of Informatics and Automation of 900 scientists working in six campuses), 2003-2004.

## UNIVERSITY AND PROFESSIONAL SERVICE

- *Academic Senate* of Stanford University (Member), 2005 – 2010
- *Committee on Research*, Stanford University (Member), 2009 – 2012.
- *Member of the Steering Board*, Conference on Decision and Game Theory for Security (GameSec), 2010-present.
- *Member of the Scientific Board*, LINCS – Laboratory on Information, Networking and Communication Sciences, Paris, France (founded by INRIA, Institut Telecom, France Telecom and Alcatel-Lucent), 2010-present.
- *Member the Editorial Boards* of the Wireless Networks Journal (2001-07), Computer Networks Journal (2000-02), Queueing Systems Theory and Applications (1999-2007).
- *Member of the Technical Program Committees* of the various networking/computing conferences (IEEE Infocom 2001-03, IEEE Globecom 2001-03, IEEE Mobicom 2002, IEEE VTC 2003, IEEE MobiWac 2005, SpasWin 2006, BroadNets 2006-07, Wireless Broadband World Forum 2006-07, GameComm 2008)
- *Technical Reviewer* for several research journals in computing and networking, as well as in queueing systems and applied probability (IEEE/ACM Transactions on Networking, IEEE Tran. on Vehicular Technology, IEEE Tran. on Automatic Control, Advances in Applied Probability, Journal of Applied Probability, Annals of Applied Probability, Operations Research, Journal of the ACM, Math of OR, IEEE Trans. on Communications)
- *Member of various Technical Panels* of the National Science Foundation (NSF) and other research and technology development agencies (NSF Information Technology Research Panel, 2002; INRIA Project Evaluation Panel, 2003; NSF CAREER Panel, 2005; NSF Foundations Panel, 2006; NSF NeTS CAREER Panel, 2006; NSF FIND Panel, 2007; NSF CDI Panel, 2008).

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