#### **CURRICULUM VITAE**

Randy Howard Katz

Business Address:

Computer Science Division, EECS Department 465 Soda Hall University of California Berkeley, CA 94720-1776 (510) 642-8778 http://www.cs.Berkeley.edu/~randy *Home Address:* 75 Folsom St. #1100 San Francisco, CA 94105 (415) 777-3382

Personal Information:

Date of Birth: August 19, 1955 Citizenship: United States Marital Status: Married, No Children Physical Characteristics: Height - 5' 9", Weight - 135 lbs., Health - Excellent

#### Education:

- 1. Ph.D. (Computer Science), University of California, Berkeley, June 1980. Thesis: "Database Design and Translation for Multiple Data Models." Advisor: Eugene Wong.
- 2. M.S. (Computer Science), University of California, Berkeley, June 1978. Thesis: "Compilation of Database Queries." Advisor: Lawrence Rowe.
- 3. A.B. (Computer Science), Cornell University, May 1976.

#### Academic Honors and Awards:

- Keynote Address, "From Machine Structures to Programming for Performance: What Every Computer Science Student Should Know about Parallel Programming," Fourth NSF/TCPP Workshop on Parallel and Distributed Computing Education (EduPar-14), Phoenix, AZ, (May 2014).
- Keynote Address, "The Software-Defined Building: A Better Machine for Living," IEEE International Conference on Computing, Networking, and Communications (ICNC 2014), Honolulu, HI, (February 2014).
- Invited Speaker, "Can You Trust Your Software-Defined Building?," Fred B. Schneider 60<sup>th</sup> Birthday Festschrift Symposium on Trust, Cornell University, Ithaca, NY, (December 2013).
- 2011-2012 Donald B. Gilles Memorial Lecturer in Computer Science, University of Illinois Urbana-Champaign, April 2012.
- 2012 Jean-Claude Laprie Award in Dependable Computing for the outstanding paper published at least 10 years previously that has had significantly influenced the theory and/or practice of dependable computing, for the 1988 ACM SIGMOD RAID Paper. See http://www.dependability.org/articles/laprie/2012.html.
- Jim and Donna Gray Faculty Award for Excellence in Undergraduate Teaching, Computer Science Division, EECS Department, University of California, Berkeley, (2011-2012);

Fellow, American Association for the Advancement of Science, 2011;

ACM SIGSOFT Distinguished Paper Award. A. Rabkin, R. H. Katz, "Precomputing Possible Configuration Error Diagnoses," IEEE/ACM International Conference on Automated Software Engineering (ASE 2011), Lawrence, KS, (November 2011);

Keynote Address, ACM HotPower11 Workshop, Cascais, Portugal.

ACM SIGOPS 2011 "Hall of Fame Paper Award" for 1988 ACM SIGMOD RAID Paper for one of the "most influential Operating Systems paper published at least ten years in the past." See <u>http://www.sigops.org/award-hof.html</u>.

Public Service Medal (Pingat Bakti Masyarakat), President of Singapore, 2011.

IEEE James Mulligan Jr. Education Medal, 2010.

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Keynote Address, 30<sup>th</sup> International Conference on Distributed Computer Systems (ICDCS2010), Genoa, Italy, (June 2010);



- Keynote Address, 3rd International Universal Communication Symposium (IUCS2009), Tokyo, Japan, (December 2009);
- Keynote Address, International Conference on Network Protocols, Princeton, NJ, (October 2009):
- Diane S. McEntyre Distinguished Teaching Award, Computer Science Division, EECS Department, 2008;
- Distinguished Lecturer, Department of Computer Science, University of Wisconsin-Madison, Madison, WI, (February 2008);
- Keynote Address, MANWEEK Conferences, San Jose, CA, (October 2007);
- Distinguished Lecturer, Department of Computer Science, Wayne State University, Detroit, MI, (September 2007);
- Keynote Address, IWQoS 2007, Evanston, IL, (June 2007).
- Doctor of Philosophy (Honoris Causa), University of Helsinki, Finland, (May 2007);
- Keynote Address, NOMS 2006, Vancouver, Canada, (April 2006);
- Keynote Address, IWQoS 2005, Passau, Germany, (June 2005);
- Distinguished Visiting Professor, Facolta di Scienze Informatiche, Universita della Svizzera Italiana (USI), Lugano, Switzerland, (June 2005);
- Best Paper Award, F. Yu, T. V. Lakshman, R. H. Katz, "Gigabit Rate Pattern-Matching using TCAM," International Conference on Network Protocols (ICNP), Berlin, Germany, (October 2004).
- Best Paper Award, F. Yu, T. V. Lakshman, R. H. Katz, "Multi-class Classification using TCAM," Hot Interconnects: 12<sup>th</sup> Symposium on High Performance Interconnects, Stanford, CA, (August 2004).
- Best Student Paper Award, USENIX Network and Distributed Information Systems (NDIS) Conference, San Francisco, CA, (March 2004), L. Subramanian, V. Roth, I. Stoica, R. H. Katz, S. Shenker, "Listen and Whisper: Security Mechanisms for BGP," USENIX/ACM Symposium on Networked System Design and Implementation (NSDI'04), San Francisco, CA, (March 2004).
- Best Student Paper Award, CRA Grace Murray Hopper Celebration of Women in Computer Science Conference. Vancouver, BC, (October 2002), Z. Mao, R. H. Katz, "A Framework for Universal Service Access using Device Ensembles." (Mao selected for Hopper Young Investigator Award).
- ACM SIGMOBILE Outstanding Contributor Award, 2002;
- American Academy of Arts and Sciences, Class of 2002;
- Keynote Address, Pervasive 2002, Zurich, Switzerland, (August 2002);
- Keynote Address, Networking 2002, Pisa Italy, (May 2002);
- Keynote Address, International Conference on Networking Protocols (ICNP), Riverside, CA, (October 2001);
- Best Paper Award, S. D. Gribble, M. Welsh, R. von Behren, E. A. Brewer, D. Culler, N. Borisov, S. Czerwinski, R. Gummadi, J. Hill, A. Joseph, R. H. Katz, Z. M. Mao, S. Ross, B. Zhao, "The Ninja Architecture for Robust Internet-Scale Systems and Services," *Journal of Computer Networks, Special Issue on Pervasive Computing*, V 35, N 4, (March 2001), pp. 473-497.
- National Academy of Engineering, Class of 2000;

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- ACM Karl V. Karlstrom Outstanding Educator Award, (May 2000);
- Keynote Address, 20th IEEE International Conference on Distributed Computing Systems, Taipei, Taiwan;
- Decoration for Exceptional Civilian Service, Department of the Air Force, for Service on the United States Air Force Scientific Advisory Board, 1997-1999, (November 1999);
- 1999 American Society for Engineering Education (ASEE) Frederick Emmons Terman Award for *Contemporary Logic Design*, Addison-Wesley-Longham, Reading, MA, 1993. Outstanding engineering textbook published by an author under the age of 40 who receives the award before his/her 45<sup>th</sup> birthday;
- 1999 ACM Doctoral Dissertation Award for Dr. Hari Balakrishnan, "Challenges to Reliable Data Transport over Heterogeneous Environments," (May 1998), currently Professor, MIT Laboratory for Computer Science;
- Keynote Address, 43<sup>rd</sup> Swiss Conference on Communications, Berne, Switzerland, (March 1999);
- 1999 IEEE Reynold B. Johnson Information Storage Award "for the development of Redundant Arrays of Inexpensive Disks (RAID)." With David Patterson and Garth Gibson;
- Keynote Address, 8<sup>th</sup> INRIA-Industry Meeting on Computer Software for Communications and Multimedia, Paris, France, (November 1998);
- Best Paper Award, ACM SIGCOMM'98 Conference, Vancouver, Canada, 1998;
- ACM SIGMOD 1998 "Test of Time Award" for the Most Influential Paper Published in the 1988 ACM SIGMOD Proceedings (Patterson, Gibson, Katz, "The Case for Redundant Arrays of Inexpensive Disks (RAID)");
- The United Microelectronics Corporation Distinguished Professor in Electrical Engineering and Computer Science, 1996 Present;

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Invited Plenary Speaker, IEEE ICCD'97 Conference, Austin, TX, 1997; Best Paper Award, ACM Multimedia Conference, Seattle, WA, 1997; Best Paper Award, IEEE ICCD'97 Conference, Austin, TX, 1997; Best Paper Award, ACM/IEEE Mobile Computing Conference, Budapest, Hungary, 1997; Keynote Address, ACM/IEEE Mobile Computing Conference, Budapest, Hungary, 1997; Keynote Address, ACM Workshop on Satellite-Based Information Systems, Budapest, Hungary, 1997; Fellow of the ACM, 1996; Fellow of the IEEE, 1996; Best Paper Award, ACM Mobile Computing and Networks Conference (MCN'95), Oakland, CA, 1995; Computing Research Association, Distinguished Service Award, 1995; Keynote Address, ASPLOS VI Conference, San Jose, CA, 1994; Keynote Address, Third International Conference on Parallel and Distributed Systems, Austin, TX, 1994; Distinguished Alumni Award, Computer Science and Engineering, University of California, Berkeley, 1994; Brice Colloquium Lecturer, Rice University, Houston, TX, 1994; Keynote Address, ACM SIGUCCS User Services Conference, San Diego, CA, 1993; Keynote Address, Computer Elements Workshop, Vail, CO, 1992; Distinguished Teaching Award, Academic Senate, University of California, Berkeley, 1991–1992; I.E.E.E. Certificate of Appreciation for Program Chairmanship of Second International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS-II);

Best Presentation Award: I.E.E.E. International Conference on Computer Design (ICCD'86);

Distinguished Invited Lecturer: University of Colorado-Boulder, (March 1988);

Distinguished Invited Lecturer: University of Wisconsin-Madison, (November 1987);

Best Paper Award: 23rd A.C.M./I.E.E.E. Design Automation Conference, (June 1986);

Best Presentation Award: 23rd A.C.M./I.E.E.E. Design Automation Conference, (June 1986);

Best Panel Session Award: 33rd I.E.E.E. International Solid-State Circuits Conference (February 1986);

I.B.M. Faculty Development Award 1984 – 1986;

National Science Foundation Presidential Young Investigator 1984 – 1989;

I.E.E.E. Certificate of Appreciation for Associate Editorship of Database Engineering Newsletter;

Best Presentation Award: 19th A.C.M./I.E.E.E. Design Automation Conference (June 1982);

I.B.M. Predoctoral Fellowship; Sigma Xi; Phi Beta Kappa; Phi Kappa Phi; Cornell Regents Scholarship; Cornell College Scholar

#### Professional Society Memberships:

Association for Computing Machinery (Fellow); Institute of Electrical and Electronics Engineers (Fellow); American Association for the Advancement of Science (Fellow); American Society for Engineering Education (ASEE);

Employment and Appointments:

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- 1. July 1989 Present: Full Professor (1996-Present, the United Microelectronics Corporation Distinguished Professor in EECS), Computer Science Division, Electrical Engineering and Computer Sciences Department, University of California, Berkeley, Berkeley, CA.
- 2. Co-founder and Co-Director (with David Patterson), Reliable Adaptive Distributed Systems Laboratory (RADLAB), 2006-2011.
- 3. Founding Director, California Institute for Science and Innovation, Center for Information Technology Research in the Interest of Society (CITRIS), 2000-2001.
- 4. July 1996 June 1999: Chairman, Electrical Engineering and Computer Science Department, University of California, Berkeley, Berkeley, CA.
- 5. Special Faculty Assistant to the President of the University of California for Instructional Technology, UC Office of the President, 1995-1996.
- 6 January 1993 December 1994: Program Manager and Deputy Director, Computer Systems Technology Office, Advanced Research Projects Agency, Department of Defense, Arlington, VA.
- 7. July 1985 June 1989: Associate Professor, Computer Science Division, Electrical Engineering and Computer Sciences Department, University of California, Berkeley, Berkeley, CA.
- 8. July 1983 June 1985: Assistant Professor, Computer Science Division, Electrical Engineering and Computer Sciences Department, University of California, Berkeley, Berkeley, CA.

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- 9. July 1981 June 1983: Assistant Professor, Computer Sciences Department, University of Wisconsin-Madison, Madison, WI.
- 10. October 1980 July 1981: Computer Scientist, Computer Corporation of America, Inc., Cambridge, MA. Leader of MULTIBASE Design Team: research in heterogeneous and distributed database management.
- 11. July 1980 October 1980: Computer Scientist, Bolt, Beranek, and Newman, Inc., Cambridge, MA. Participated in product development of an Office Information System. Designed and implemented its database management component.
- 12. July 1977 June 1980: Research Assistant, University of California, Berkeley, CA. Conducted research on database design and schema translation.
- 13. July 1978 Sep. 1978: Academic Associate, I.B.M. Research Laboratory, San Jose, CA. Conducted a performance evaluation of a prototype relational database system.
- 14. Oct. 1976 June 1977: Teaching Assistant, University of California, Berkeley, Berkeley, CA. Conducted discussion sections in compiler construction and assembly language programming.
- 15. Sep. 1973 June 1976: Time-Sharing Consultant, Cornell University, Ithaca, NY.
- 16. Summer 1976: Programmer/Analyst, Pfizer, Inc., New York, NY.
- 17. Summers 1973–5: Programmer/Analyst, City of New York, New York, NY.

Professional Activities:

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Corporate Board Directorships: 1. Ubicom Corporation, Sunnyvale, CA, 2000-2004; Alysis Technology (formerly known as IA Corporation, NASDAQ: ALYS), Emeryville, CA, 1998-2001; Acquired by Pitney Bowes Corporation; NYSE: PBI); Concentric Networks (NASDAQ: CNCX), San Jose, CA, 1999-2000. Acquired by Nextlink Corporation (Renamed XO Communications, NASDAQ: XOXO); Technical Advisor Boards: 2. ConeXtend Corporation, Palo Alto, CA, 2012-Present; Ensim Corporation, Sunnyvale, CA, 1999-Present; FastForward Networks, San Francisco, CA, 1998-2001 (Acquired by Inktomi; in turn acquired by Yahoo); GlobArc, San Mateo, CA, 1999 (Acquired GeoCast, 1999, now defunct); Metricom (NASDAQ: MCOM, delisted), Los Gatos, CA, 2000-2001; Netboost, Mountain View, CA, 1998-1999 (Acquired Intel Corporation, 1999); Packeteer (NASDAO: PKTR), Cupertino, CA, 1996-2000, (IPO: 1999); Proxinet, Emeryville, CA, 1999 (Acquired Puma Systems, 1999, NASDAQ: PUMA); SkyFlow, Berkeley, CA, 2000-2002 (Winner, Haas Business School Business Plan Competition, 2000); Verity (NASDAQ: VRTY), Sunnyvale, CA, 2000-2005 (Acquired Autonomy Corporation, 2006, NASDAQ: AUTN): Government and University Advisory Boards: 3. Member, Advisory Board, Land & Liveability International Advisory Panel (L2 IAP), Government of Singapore. Member, Vice Chair, And Chair, Information Science and Technology (ISAT) Study Group, Defense Advanced Research Projects Agency, 2008-2012; Chair and Member, Scientific Advisory Board, Institute for Information and Communications Research (I2R), Singapore, (2002-2008); Chair, Scientific Advisory Board, Helsinki Institute for Information Technology, Helsinki, Finland, (2003-Present); Member, Computer Systems and Telecommunications Board (CSTB), National Academy of Engineering, 2004-2009; Member, Vice Chair, and Chair, Section 5 Peer Selection Committee, National Academy of Engineering, 2008-2011; University of California President's Council on the Department of Energy Laboratories and Science and Technology Panel, 1999-2005; Member, United States Airforce Scientific Advisory Board, 1997-1999; Member, Board of Directors, Computing Research Association, 1996-1998; Member, Department of Defense JASON Study Group, 1995-1999; Member, NSF CISE Advisor Board, 1995 - 1998;

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Panelist, N.S.F. Computer Engineering Section, Research Initiation Grants Program, 1984-5; MIPS Division Advisory Committee, 1989-1992;

Associate Editor, A.C.M. Computing Surveys, 1982 -1985;

*I.E.E.E. Technical Committee on Database Engineering Newsletter*, 1981 – 1984;

- 4. Editorships:
  - Area Editor, IEEE Transactions on Network Management, 2007-2010;

Area Editor, ACM - Baltzer Mobile Networks (MONET) Journal, 1999-2004;

Guest Editor, *I.E.E.E. Transactions on Computers*, Special Issue on Architectural Support for Programming Languages and Operating Systems, September 1988;

I.E.E.E. Technical Committee on Database Engineering Newsletter, Special Issue on Design Database Management II, (June 1984);

I.E.E.E. Technical Committee on Database Engineering Newsletter, Special Issue on Design Database Management, (June 1982);

- Referee, IBM Systems Journal, A.C.M. Computing Surveys, A.C.M. Transactions on Computer Systems, A.C.M. Transactions on Database Systems, I.E.E.E. Transactions on Computers, I.E.E.E. Transactions on Computer-Aided Design, I.E.E.E. Transactions on Software Engineering, I.E.E.E. Transactions on Circuits and Systems, I.E.E.E. Design and Test Magazine, I.E.E.E. Software Magazine, Information Systems, N.S.F. Computer Science Section, N.S.F. Computer Engineering Section, Department of Energy, Prentice-Hall, Inc., Addison-Wesley, Inc., Macmillian, Inc.
- 6. Member, Technical Advisory Board, CAD Framework Initiative, 1988-1989.
- 7. Member, Defense Sciences Study Group, Institute for Defense Analysis, Alexandria, Va, 1987-1990.
- 8 Session Organizer, "VLSI CAD Database Systems," Spring COMPCON Conference, San Francisco, CA, (March 1984).
- Panel Organizer, "Reduced Instruction Set Computers: A Revolution in the Microprocessor Marketplace," IEEE International Solid State Circuits Conference, Anaheim, CA, (February 1986);
  "James Device Data Marketplace," A CM 192 Conference, Data and Conference, Conferenc
  - "Issues in Design Data Management," A.C.M. '82 Conference, Dallas, Texas, (October 1982);
- General Committee Co-Chairman, IEEE Symposium on Self-Aware, Self-Organizing Systems, San Francisco, California, (September 2009); General Committee Co-Chairman, Second ACM Mobile Computing and Networking Conference, Rye, NY, (November 1996);
- 11. Program Committee Chairman, Bodega Bay Workshop on Next Generation Storage Systems, Bodega Bay, CA, (May 1989); International Symposium on Architectural Support for Programming Languages and Operating Systems, Palo Alto, CA, (September 1987).
- 12. Program Committee Memberships:

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International Green Computing Conference (IGCC'12), San Jose, CA (June 2012); International Green Computing Conference (IGCC'11), Orlando, FL (July 2011); OSDI'10, Vancouver, Canada, (October 2010); International Green Computing Conference (IGCC'10), Chicago, IL (August 2010); SASO'09 San Francisco, CA, (September 2009); IM'2009, New York, NY, (June 2009); HotPower'08, San Diego, CA, (December 2008); Sysml'08, San Diego, CA, (December 2008); IWSOS'08, Vienna, Austria, (December 2008); IWSOS'07, Lake District, England, (September 2007); ACM SIGCOMM Conference, Karlsruhe, Germany, 2003; WOSBIS'98, Dallas, TX, (October 1998); Symposium on Architectural Support for Programming Languages and Operating Systems, 1997; WOSBIS'97, Budapest, Hungary, (October 1997); WOSBIS'96, Rye, NY, (November 1996); ACM Mobile Computing and Networking Conference, Berkeley, CA, (November 1995); ACM Multimedia '95, San Francisco, CA, (November 1995); International Symposium on Computer Architecture, San Diego, CA, (May 1993); ASPLOS-5, Boston, MA, (October 1992); Eighteenth Very Large Database Conference, Vancouver, BC, (August 1992); ACM SIGMOD Conference, San Diego, CA, (May 1992); ACM SIGMOD Conference, Portland, OR, (May 1989); CalTech VLSI Conference, Pasadena, CA, (March 1989); Transaction Machine Architecture Workshop, Lake Arrowhead, CA, (September 1988); Second Conference on Computer-Supported Cooperative Work, Portland, OR, (Sept. 1988); Fourteenth Very Large Database Conference, Long Beach, CA, (August 1988), ACM SIGMOD Conference, Chicago, IL, (May 1988); ACM SIGMOD Conference, San Francisco, CA, (May 1987); IEEE International Solid State Circuits Conference, Anaheim, CA, (February 1986); IEEE International Conference on Computer-Aided Design: ICCAD'85, Santa Clara, CA, (November 1985); IEEE International Conference on Computer Design: VLSI in Computers'85, Port Chester, NY, (October 1985); Eleventh Very Large Database Conference, Stockholm, Sweden, (August 1985);

ACM SIGMOD Conference, Austin, TX, (May 1985); Tenth Very Large Database Conference, Singapore, Malayasia, (August 1984); ACM SIGMOD Conference, San Jose, CA, (May 1983); ACM SIGMOD

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