

Ike Nassi

Curriculum Vitae

27-Mar-2017

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CTO, TidalScale 1694 Dell Ave. Campbell, CA 95008	Direct: +1-650-535-2181 Main: +1-650-535-2204
https://www.soe.ucsc.edu/people/inassi http://www.nassi.com/ike.html http://www.tidalscale.com	Email: inassi@ucsc.edu Email: ike@nassi.com Email: ike.nassi@tidalscale.com

Industry Positions

2012-present	TidalScale, Inc. , Founder, Chairman, and CTO
2012-2016	CEO, Director
2016-2017	EVP, CTO, Chairman
2012-present	UC Santa Cruz , Adjunct Professor
2005-2011	SAP AG (Executive VP and Chief Scientist)
2005-2007	Senior Vice President, Head of Research, North America
2005-2007	co-Head, SAP Global Research
2006-2009	Head of Research, North America and China
2007-2011	Executive Vice President and Chief Scientist
2008-2010	Head of Global Business Incubator
2006-2011	Head of Sponsored Academic Research
2010-2011	Head of Technology Infrastructure Practice, SAP Research
2001-2005	Firetide, Inc. , Founder
2001-2002	CEO, CTO, Head of Product Operations, Chairman of the Board
2003-2004	CTO, Executive Vice President Product Operations, Chairman
2004-2005	CTO, Member of the Board
2000-2001	Cisco Systems (through acquisition of InfoGear) Director of Engineering, Managed Appliances and Services Business Unit

- 1997-2000 **InfoGear Technology** – CTO & Executive Vice President,
Product Operations
- 1989-2007 **Apple Computer, Inc.**
1989-2003 Advanced Technology Group, Director of Engineering
 Founder, Advanced Technology Lab, Cambridge, MA
2003-2004 Vice President, Development Products, Cupertino, CA
2004-2005 Vice President, System Software
2005-2007 Senior Vice President, AppleSoft, Corporate Officer
- 1984-1989 **Encore Computer, Inc.**
1984-1986 Vice President, Languages and Tools
1986-1989 Vice President, Research
1985-1989 DARPA Principal Investigator
- 1983-1984 **Visual Technology, Inc.**, Vice President, Software
- 1982-1983 **Ontel Corporation**, Vice President, Engineering
- 1976-1982 **Digital Equipment Corporation**
1976-1977 Sr. Software Engineer and Manager, Languages and Tools
1977-1982 Consulting Engineer & Manger Corporate Research
- 1974-1976 **SofTech, Inc.**, Principal Software Engineer

Academics

- 2015-present **UC Santa Cruz**, Center for Research in Open Systems Software
2012-present **UC Santa Cruz**, Adjunct Professor, Computer Science
2011-2012 **UC Santa Cruz**, Research Assistant, Computer Science
2010-present **MIT Computer Science and Artificial Intelligence Lab**,
 Research Affiliate,
2008-1011 **MIT Sloan School, Center for Digital Business**, Advisory Board
2009-2010 **MIT Computer Science and Artificial Intelligence Lab**,
 Visiting Scientist
1997-1997 **University of California, Berkeley**, Visiting Scholar, EE&CS,
1994-1996 **Stanford University**, Visiting Scholar, Computer Science,
1990-1993 **MIT Laboratory for Computer Science**, Research Affiliate,
1974-1979 **Boston University**, Met. College, Computer Science, Instructor,
1972-1973 **SUNY Farmingdale**, Instructor, Data Processing,

Boards of Directors, Advisory Boards & Committees

- 2012-2015 **SkyEra**, Advisory Board
2012-2014 **Center for Technology Advancement**, Advisory Board
2012-present **Watermark**, Advisory Board

2008-present	IEEE Computer Society , Industry Advisory Board
2008-2011	Northwestern University , EE&CS Advisory Board
2009-2011	Stony Brook University , Advisory Board Center for Wireless and Information Technology
2008-2011	Peking University , Advisory Board, School of Engineering
1995-present	Computer History Museum , Founding Trustee
2009-2015	Firetide, Inc. , Senior Advisor
2001-present	Viewpoints Research Institute Advisor
2009-2011	Anita Borg Institute for Women and Technology , Trustee
2006-2007	University of Arizona , Eller School of Management, Advisory Board
1989-1995	DARPA Information Systems and Technology Board
1995-1996	Taligent, Inc. , Board of Directors, - Joint Venture, IBM and Apple
1990's	Federal Networking Council Advisory Committee
1990's	Component Integration Laboratories , Board of Trustees,
1980's-1990's	Computer Museum , Board of Overseers
1990's	U.S. Council on Competitiveness , Technical Advisory Committee,

Independent Consulting

2001-2002	Required Technology, Inc. (columnar databases)
2001-2002	Replicus Software, Inc. (distributed mesh file systems)
2001-2003	Allegis Capital, Inc. (venture capital)
2001-2003	Vanguard Ventures (venture capital)
2002-2003	PalmSource, Inc. (operating systems for handheld devices)

Patents

US 7,305,459	Wireless Service Point Networks
US 7,522,731	Wireless Service Points Having Unique Identifiers for Secure Communications
US 8,108,234 (new)	System and Method for Deriving Business Processes
US 8,843,415 (new)	Secure Software Service Systems and Methods
US 9,191,435 (new)	Selective Data Migration or Remapping of Virtual Processors to Provide Required Data Accessibility to Processor cores
(In-process) (new)	Hierarchical Dynamic Scheduling
(In-process) (new)	Network Attached Memory Using Selective Resource Migration

Awards & Honors

2016	Senior Member, IEEE
2005	Distinguished Alumni , Computer Science Department, Stony Brook University
1991	Testimony before US House of Representatives re: Emerging Technologies Act of 1991
1983	Certificate for Distinguished Service , US Department of Defense

Student Ph.D. Committees:

David L. Black **CMU** - Student of Rick Rashid.
 *“Scheduling Support for Concurrency and Parallelism in the
 Mach Operating System”*

Michael Sevilla **UCSC Ph.D. Candidate, COMPUTER SCIENCE**

Memberships: **Senior Member ACM, Senior Member IEEE**

Research Funding:

2011-present **SAP** – Performance Analysis for Big Data, **\$200,000**
1986-1989 **DARPA** – Hierarchically Structured Multiprocessors, **\$23,500,000**

List of Products Released (in chronological order):

1. BCPL compiler for PDP-15
2. Jovial/J3B compiler for IBM 4Pi/AP 101 (special project)
3. Jovial/J3B avionics compiler for Litton 4516D (used in the B-1 bomber)
4. Jovial/J3b avionics compiler for Delco Magic 362F (used in the F-16 fighter)
5. Vax-11 Software Engineering Manual w/ Transportability Guidelines
6. Vax-11 Bliss Compiler
7. Bliss Portable Compiler
8. Bliss for PDP-10/20
9. Bliss for PDP-11
10. Vax-11 Debug
11. Vax-11 Runoff
12. Bliss Pretty-Print
13. Vax-11 Autodial
14. Vax-11 Ada Compiler
15. Vax-11 Ada multithreading run-time system
16. Vax-11 String instruction definitions
17. Vax-11 Run Time Library
18. Ontel Terminal Emulator
19. Ontel Amigo Personal Computer
20. Visual Technology Personal Computer
21. Visual Technology Portable Computer

22. Visual Technology Multi-user Xenix System
23. Encore Resolution Graphics Terminal
24. Encore Fortran compiler
25. Encore Pascal compiler
26. Encore C compiler
27. Encore Multimax multiprocessor
28. Encore Parallel Ada
29. Encore Parallel Debugger
30. Encore Parallel Ada Run-time
31. Encore Ultramax hierarchical multiprocessor
32. Rely-Drive high capacity disk subsystem for Mac Plus
33. Macintosh Common Lisp
34. Macintosh Dylan
35. Macintosh MPW (developer tools suite)
36. Macintosh Apple Interconnection Kit
37. Mac-Mach (Mach on PowerPC Macintosh)
38. Mac OS Releases (various releases on Motorola 68K and PowerPC ... 7.5/7.6/7.8, etc.)
39. InfoGear iPhone
40. InfoGear iPhone-2
41. InfoGear/Cisco Voyager (unreleased wireless webpad)
42. Firetide indoor wireless mesh router (various versions)
43. Firetide outdoor wireless mesh router (various versions)
44. SAP Enterprise Supercomputer (type 1)
45. SAP Enterprise Supercomputer (type 2)

Invited Public Presentations and Panel Discussions:

46. How to Build a Software-Defined Server, and How Best to Use It, Supercomputing Frontiers 2017, Singapore
47. TidalScale: Software - Defined Servers, STAC Summit, November 2016
48. Comparing a Virtual Supercomputer with a Cluster for Spark *in-memory* Computations, Spark/ML Conference, NYC, April 2016
49. Mantle: A Programmable Metadata Load Balancer for the Ceph File System, Sevilla, M, Watkins, N, Maltzahn, C, Nassi, I, Brandt, SA, Weil, SA, Farnum, G, Fineberg, S, SC '15: Proceedings of the 2015 ACM/IEEE conference on Supercomputing, 11/2015

50. Advances in Virtualization In Support of In-Memory Big Data Applications, I. Nassi, High Performance Transaction Systems 2015, September 2015
51. SupMR: Circumventing Disk and Memory Bandwidth Bottlenecks for Scale-up MapReduce, Sevilla, M, Nassi, I, Ioannidou, K, Brandt, SA, Maltzahn, C, May 2014, LSPP'14
52. Software Scaled Computing: Resizing the Computer to Fit the Application, TTI/Vanguard Conference on "Reprogramming Programming", Washington DC, September 2014
53. A Framework for an In-depth Comparison of Scale-up and Scale-out, Sevilla, M, Nassi, I, Ioannidou, K, Brandt, SA, Maltzahn, C, DISCS '13 (in conjunction with SC 2013), 11/2013
54. Graduate Leadership forum, UCSC, "Entrepreneurship and Social Impact", June 2012
55. UCSC presentations on "Enterprise Supercomputers", System Research Lab, Database Group, System Storage Research Center (2012, various dates)
56. High Performance Transactions Systems Conference, "Enterprise Supercomputers", October 24, 2011
57. MITRE Corporation, "Enterprise Supercomputers", McLean VA & Bedford MA (telecast), October 13, 2011
58. TTI/Vanguard, "Real" Real Time Conference, "Enterprise Supercomputers", Paris, July 12, 2011
59. SAP Closing keynote, SAP Research Day, July 5, 2011, "Catching the Wave: Tackling the Inflection Point in Enterprise Computing"
60. Microsoft Research "Enterprise Supercomputers", June 17, 2011
61. MIT/CSAIL on "Enterprise Supercomputers", June 1, 2011
62. MIT/Sloan on "Enterprise Supercomputers", June 1, 2011
63. Invited Keynote Presentation -Third Symposium of the HyperTransport™ Center of Excellence "Coherent Shared Memory Revisited" Mannheim, University of Heidelberg, February 8-9th, 2011
64. "Transactional Intent" with Shel Finkelstein, Thomas Heinzl, Rainer Brendle, Ike Nassi and Heinz Roggenkemper. 5th Biennial Conference on Innovative Data Systems Research (CIDR '11) January 9-12, 2011, Asilomar, California, USA.
65. Invited presentation – "It's Groundhog Day all over again!" JHTC, July 13, 2010
66. Invited Keynote Presentation – "Web Services: Meeting the Software Challenge of Future HW and Global Business Trends" (July 11 2007) 2007 IEEE Congress on Services (Joint Conference: IEEE International conference on Web Services (ICWS 2007) and IEEE International Conference on Services Computing (SCC 2007))
67. Panel Discussion – "Innovating with Partners in China: Negotiation, Collaboration, and IP Strategies for New Product Development" (March 28-29, 2007) The Management Roundtable (<http://www.ManagementRoundtable.com>)
68. "Induction of Alan Kay" into the Computer Resellers News Hall of Fame (November 2006)

69. "Issues in Wireless Mesh Networking", Distinguished Alumni Lecture, 35th Anniversary of the Founding of Stony Brook University's Computer Science Department (May 2005)
70. "The Advantage of Invisibility and Cooperation in Wireless Mesh Networks", IEEE 802.11 TGs, Atlanta (March 2005)
71. "Wireless Mesh Networks", Red Herring 100 conference, Monterey (December 2004)
72. Panel: Wireless Mesh Networks, WiFi Planet conference, San Jose (November 2004)
73. Panel: Wireless Mesh Networks, Next Generation Networks (November 2004)
74. Webinar (Unstrung): Introduction to Wireless Mesh Networks (July 2004)
75. Webinar: (Unstrung): Wireless Mesh Networks (June 2004)
76. Panel: "Putting Hotspots to Work", CeBIT America (May 2004)
77. Panel on Mesh Networking, Eye for Wireless Conference, San Francisco (April 2004)
78. "Emergence of Wireless Mesh Networking", O'Reilly Emerging Technology Conference, San Diego (February 2004)
79. Panel on Wireless Mesh Networking, WiFi Planet, December 2003
80. "The Emergence of Wireless Local Area Mesh Networks", TTI Vanguard Conference on Resiliency, Brussels (July, 2002)
81. Embedded Processor Forum, panel on Internet Appliances (June, 2000)
82. Spring Internet World (1998)
83. Fortune Magazine Information Technology Conference, panel on Internet Appliances (1998)
84. PC-Expo (1998)
85. Apple Technology Forum, Beijing (1994)
86. Keynote - Apple Worldwide Developers Conference (1994, 1995, 1996)
87. IBM T.J. Watson Research Center (March 1993)
88. Rochester Apple Developer's Association (January 1993)
89. Bay Area MADA (May, 1992)
90. Invited Presentation on Advanced Technology at Apple (1992), Harvard Business School
91. U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Telecommunications and Finance. Testimony on HR 531, "Emerging Telecommunications Act of 1991" (March 12, 1991)
92. Boston Computer Society Mac MegaMeeting (1990)
93. C-3 Technology Assessment Conference, Defense Communications Agency and the National Security Industrial Association (1989)
94. SDIO Parallel Processing Users Group (1987, 1988)

- 95. San Diego SIGAda (1988)
- 96. Bay Area SIGAda (1988)
- 97. Colloquium, Iowa State University (1989)
- 98. Boston SICPLAN (1987)
- 99. National Computer Conference (1987)

Technical Publications

- 100. Programming an Application When Memory Size Is No Longer A Constraint, to appear, IEEE Computer
- 101. Blog Post: [Application Programming When Memory Is No Longer A Constraint](#)
- 102. Blog Post: SAP Chief Scientist: "In-Memory Computing is Like Groundhog Day All Over Again, <http://news.sap.com/2011/01/18/in-memory-computing-it's-groundhog-day-all-over-again>
- 103. "Transactional Intent", Shel Finkelstein, Thomas Heinzl, Rainer Brendle, Ike Nassi, and Heinz Roggenkemper, 5th Biennial Conference on Innovative Data Systems Research (CIDR '11), January 2011
- 104. Y. Karabulut and I. Nassi: "Secure Enterprise Service Consumption for SaaS Technology Platforms", 1st IEEE Workshop on Information and Software as Services, Shanghai, China, March 2009
- 105. "The Challenges of Application Service Hosting", Ike Nassi, Joydip Das, and Ming-Chien Shan, Lecture Notes in Computer Science, Springer Verlag 4607/2007, Web Engineering, Pages 545-549.
- 106. "Secure Scripting Based Composite Application Development: Framework, Architecture, and Implementation" by Dinkelaker, Johnstone, Karabulut, and Nassi. In Proceedings of the 3rd International Conference on Collaborative Computing: Networking, Applications, and Worksharing, sponsored by the IEEE Computer Society, et al. New York, Nov. 12-15, 2007.
- 107. "Government Agency Interoperation in Security Applications" by N. Adams et al, Chapter 14, Handbooks in Information Systems Volume 2, National Security. Elsevier 2007. Edited by H. Chen et al.
- 108. "The Challenges of Application Service Hosting", with Ming-Chien Shan. International Conference on Web Engineering 2007, July 2007, Como Italy.
- 109. "Semantics-based Threat Structure Mining", Adam et al, Proceedings of the 2006 international conference on Digital Government Research
- 110. Preface to the book "Dylan, An Object Oriented Dynamic Language". Apple Computer Inc. (1992).
- 111. Symmetric Parallel Processing, w/ Ilya Gertner, in the book "Aerospace Software Engineering", Chris Anderson, ed. Volume 136 Progress in Astronautics and Aeronautics (1991)

112. "A Preliminary Report on the UltraMax", DARPA Conference on Mathematical and Scientific Computing, 1987, (Syracuse University)
113. "An Analysis of Continuous Time Simulation on a Shared Memory Multiprocessor", with S. Mainwaring, Encore Technical Report 87-001
114. "The Encore Multimax: A Multiprocessor Computing Environment", with Moore, O'Neil, Siewiorek, in 32-Bit Microprocessors, Nikkei Datapro Books II (1986)
115. "The Encore Continuum: A Complete Distributed Workstation-Multiprocessor Computing Environment", with G. Bell, H. Burkhardt, S. Emmerich, A. Anzelmo, R. Moore, D. Schanin, and C. Rupp, Proceedings of the National Computer Conference, pp. 147-155, 1985
116. Liberty Net, An Architectural Overview, IEEE Comcon, 1982
117. "What is Ada?", with R. Brender, June 1981 IEEE Computer
118. "A Critical Look at the Process of Tool Development: An Industrial Perspective", in Software Development Tools, Riddle and Fairley (eds.), Springer Verlag, 1980
119. "Efficient Implementation of Ada Tasks", with A. N. Habermann, DEC Technical Report, 1980 (Tech. Rept. CMU-CS-81-147, Carnegie Mellon University, Pittsburgh, PA, June, 1981)
120. "VAX-11 Software Engineering Manual", January 1977
121. "Operational Equivalence and a Hierarchy of Control Languages", Eighth Annual Princeton Systems Conference on Information Sciences and Systems, 1974
122. Nassi, I.R. and Akkoyunlu, E.A. "Verification Techniques for a hierarchy of Control Structures", Technical Report #26, Dept. of Computer Science, SUNY Stony Brook, January 1974, 48 pp
123. Control Structure Semantics for Programming Languages, Ph.D. thesis, 1974
124. "Structured Flowcharts", with B. Shneiderman, SIGPLAN Notices, 1973