Andries van Dam

Curriculum Vitae

Thomas J. Watson, Jr. University Professor of Technology and Education and Professor of Computer Science Brown University, Providence, RI 02912 phone: (401) 863-7640 , fax: (401) 863-7657

email: avd@cs.brown.edu

Education

B.S.   Engineering Sciences (with Honors), Swarthmore College, 1960

M.S.   Electrical Engineering, Moore School of Electrical Engineering, University of Pennsylvania, 1963

Ph.D.   Electrical Engineering, Moore School of Electrical Engineering, University of Pennsylvania, 1966

Dissertation topic: A Study of Digital Processing of Pictorial Data

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Research Interests

My research has concerned computer graphics, hypermedia systems, post-WIMP user interfaces, including pen-centric computing, and educational software. I have been working for four decades on systems for creating and reading electronic books with interactive illustrations for use in teaching and research.

Professional Appointments

2002-2006   Vice President for Research, Brown University

1995-   Thomas J. Watson, Jr. University Professor of Technology and Education Chair

1995-1998   Director, National Science Foundation Science & Technology Center for Computer Graphics and Scientific Visualization

1992-1995   L. Herbert Ballou University Professor Chair

1980-1986   Visiting Scientific Associate, CERN, Geneva, Switzerland

1979-1985   Chairman, Department of Computer Science, Brown University

1978-1979   Sabbatical Leave, Visiting Professor, University of Geneva, and Scientific Associate, CERN, Geneva, Switzerland

1976-1979	Professor of Computer Science and Applied Mathematics, Brown University
	Chairman, Program in Computer Science, Brown University
1975-1977	Adjunct Visiting Professor, University of Rhode Island (to teach in-house courses on Computer Graphics at Naval Underwater Systems Center, New London and Newport, Rhode Island)
1972-1976	Professor of Applied Mathematics, Brown University
1971-1972	Sabbatical Leave, Visiting Professor, University of Nijmegen, Nijmegen, Netherlands
1968-1972	Associate Professor of Applied Mathematics, Brown University
1965-1968	Assistant Professor of Applied Mathematics, Brown University

Consultancies

2011-2012	Quinn Emanuel, expert witness in patent infringement litigation on behalf of Samsung against Apple (including court appearances at the International Trade Commission June 2012 and Northern District Court of California August 2012)
2008-2011	Director, Board of Directors, GyPSii
2007-	Consulting scientist, Microsoft Research
2007-2011	Member, Technical Advisory Board, GyPSii
2005	Vincent and Elkins, Kenyon and Kenyon, expert consulting for Tecmo
2000-2001	Chairman, Technical Advisory Board, E-Quill
	Member, Board of Directors, Synomics
	Chairman, Technical Advisory Board, ThinkShare
1999-2005	Member, Board of Directors, ContextMedia, Providence, RI
1998	Technical advising, Phoam
1996-1999	Chairman, Numinous Technologies Incorporated, Seattle, WA
1995	Technical Advisory Board, Peer Group Systems, Inc. *(PGSI)*, Seattle, Washington.
1994	Brown and Baine, expert witness for Autodesk in a trade secret litigation
1993-2003	Member, Technical Advisory Board, Fraunhofer Center for Research in Computer Graphics, Inc., Providence, RI and Darmstadt, Germany
1992-1994	Member, Technical Advisory Board, Ithaca Software, Alameda, CA Redmond, WA
1990-1993	Chairman, Technical Advisory Board, ShoGraphics, Mountain View, CA
	Member, College of Computing National Advisory Board, Georgia Institute of Technology, Atlanta, GA
1990-1991	Chairman, Technical Advisory Board, Prime Computer, Inc., CAD Division, Bedford, MA

1990	Co-founder, Chief Scientist, and Chairman of Technical Advisory Board Electronic Book Technologies, Providence, RI
1988-1992	Chief Scientist, BLOC Development, Coral Gables, FL
1987-1988	Cravath, Swaine and Moore, expert witness for IBM in a patent litigation
1986-1988	Member, Technical Advisory Board, Context Corp., Beaverton, OR
1985-1988	Senior Scientist and Chairman of Technical Advisory Board, Stardent Computer, Newton, MA
1985-1987	Consulting Scientist, CADRE Technology, Providence, RI
1984-1986	Member, Scientific Advisory Board, Metagraphics, Woburn, MA
1983-1985	IBM World Trade Americas/Far East Corporation, North Tarrytown, NY
1982-1986	Member, Electronic Systems Board, Gould, Rolling Meadows, IL
1981-1983	CIT ALCATEL, Paris, France
1980-1988	President, van Dam, Inc.
1980-1985	Exxon Research and Engineering Division, Florham Park, NJ
1980-1981	Summagraphics, Bridgeport, CT
1978-1979	Prime Computer, Inc., Framingham, MA
	Bobst Graphic, Lausanne, and Hermes Precisa, Yverdon, Switzerland
1977-1978	Department of the Army
1975-1979	Software Laboratory, Raytheon Submarine Signal Division, Portsmouth, RI
1975-1977	Naval Research Laboratory, Washington, DC
1971-1977	Information Systems and Automation Division, Phillips Corp., Eindhoven, Netherlands
1970-1988	President, Text Systems, Inc., Barrington, RI
1970-1975	General Motors Research Center, Warren, MI
1970-1972	Government Intelligence Community, Washington, D
1970	Director, NCSS Providence Research Center
1965-1966	Leeds and Northrup, PA
1961-1962	RCA, Cherry Hill, NJ

Publications

Books and NRC Reports

2013

- **[Hughes et al. 2012]** John F. Hughes, Andries van Dam, Morgan McGuire, David Sklar, James Foley, Steven Feiner, and Kurt Akeley. Computer Graphics: Principles and Practice, Third Edition, Pearson Addison-Wesley, 2013.

2005

- [**Sanders & van Dam 2005**] Kathryn E. Sanders and Andries van Dam. Object-Oriented Programming in Java: A Graphical Approach, Addison-Wesley, 2005.

2001

- [**Earnshaw et al. 2001**] Rae Earnshaw, Richard Guedj, Andries van Dam, and John Vince (Eds.). Frontiers of Human-Centered Computing, OnLine Communities and Virtual Environments. Springer Verlag, London, 2001.

1999

- [**Snyder et al. 1999**] Lawrence Snyder, Alfred V. Aho, Marcia C. Linn, Arnold H. Packer, Allen B. Tucker Jr., Jeffrey D. Ullman, and Andries van Dam. "Being Fluent with Information Technology", Report of the Committee on Information Technology Literacy, Computer Science and Telecommunication Board of the National Research Council, National Academy Press, 1999.

1995

- [**Connor et al. 1995**] D. Brookshire Connor, David Niguidula, and Andries van Dam. Object Oriented Programming in Pascal. Addison-Wesley, 1995.
- [**Durlach et al. 1995**] Nathaniel Durlach, Steve Bryson, Norman Hackerman, John N. Hollerbach, James R Lackner, J. Michael Moshell, Randy Pausch, Richard W. Pew, Warren Robinett, Joseph Rosen, Mandayam A. Srinivasan, James J. Thomas, Andries van Dam, Elizabeth Wenzel, Andrew Witkin, Eugene Wong, and Michael Zyda. Virtual Reality: Scientific and Technological Challenges. National Research Council Report, National Academy Press, 1995.
- [**Foley et al. 1995**] James D. Foley, Andries van Dam, Steven K. Feiner, and John F. Hughes. Computer Graphics: Principles and Practice, Second Edition in C. Addison-Wesley, 1995.

1993

- [**Foley et al. 1993**] James D. Foley, Andries van Dam, Steven K. Feiner, John F. Hughes, and Richard L. Phillips. Introduction to Computer Graphics. Addison-Wesley, 1993.

1992

- [**Hartmanis et al. 1992**] Juris Hartmanis, Ruzena Bajcsy, Ashok K. Chandra, Andries van Dam, Jeff Dozier, James Gray, David Gries, A. Nico Habermann, Robert R. Johnson, Leonard Kleinrock, M. Douglas McIlroy, David A. Patterson, Raj Reddy, Klaus Schulten, Charles Seitz, and Victor Vyssotsky. Computing the Future: A Broader Agenda For Computer Science and Engineering, Committee to Assess the Scope and Direction of Computer Science and Technology, National Research Council Report, National Academy Press, 1992.

1990

- [**Foley et al. 1990**] James D. Foley and Andries van Dam and Steven K. Feiner and John F. Hughes. Computer Graphics: Principles and Practice. Addison-

Wesley, 1990.

1987

- [**Niguidula & van Dam 1987**] David A. Niguidula and Andries van Dam. Pascal on the Macintosh: A Graphical Approach. Addison-Wesley, 1987.

1984

- [**Foley & van Dam 1984**] James D. Foley and Andries van Dam. Fundamentals of Interactive Computer Graphics. Addison-Wesley (The Systems Programming Series), 1984.

1984

- [**van Dam et al. 1968**] Andries van Dam, D. Huffman, E. E. David, and J. Ullman. The Man-Made World. McGraw-Hill Book Company, 1968.

Articles

2012

- **[van Dam 2012]** Andy van Dam. "In Memoriam: Carl Machover, 1927-2012", IEEE Computer Graphics and Applications, pp. 6-8, July-August 2012.

2010

- **[van Dam et al. 2010]** Andy van Dam, Jim Foley, John Guttag, Pat Hanrahan, Chris Johnson, Randy Katz, Henry Kelly, Peter Lee, and David Shaw. CRA-E White Paper: Creating Environments for Computational Researcher Education, Computing Research Association, 2010.

2008

- [**Zeleznik et al. 2008**] Robert Zeleznik, Timothy Miller, Andries van Dam, Joseph J. LaViola, Jr., Chuanjun Li, Dana Tenneson, and Christopher Maloney. "Applications and Issues in Pen-Centric Computing" in IEEE Multimedia October-December 2008.
- [**LaViola et al. 2008**] Joseph LaViola, Prabhat, Andrew Forsberg, David H. Laidlaw, and Andries van Dam. "Virtual Reality-Based Interactive Scientific Visualization Environments" in Interactive Visualization: A State-of-the-Art Survey. Springer Verlag, 2008.

2005

- [**Head et al. 2005**] James W. Head, Andries van Dam, Samuel Fulcomer, Andrew Forsberg, Prabhat, George Rosser, and Sarah M. Milkovich. "ADVISER: Immersive Scientific Visualization Applied to Mars Research and Exploration" in Photogrammetric Engineering and Remote Sensing, 71(10), pp. 1219-1225, October 2005.
- [**van Dam 2005**] Andries van Dam. "Visualization Research Problems in Next-Generation Educational Software" in IEEE Computer Graphics and Applications, 25(5), pp. 88-92, September/October 2005.

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- [**Welch et al. 2005**] Greg Welch, Ruigang Yang, Sascha Becker, Adrian Ilie, Dan Russo, Jesse Funaro, Andrei State, Kok-Lim Low, Anselmo Lastra, Herman Towles, Bruce Cairns, M.D., Henry Fuchs, and Andries van Dam. "Immersive Electronic Books for Surgical Training." IEEE Multimedia, 12(3), pp. 22-35, July-September 2005.

2004

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2003

- [**Spalter & van Dam, 2003**] Anne Morgan Spalter and Andries van Dam. "Problems with using components in educational software" in Computers & Graphics 27(3), pp. 329-337, 2003.
- [**van Dam 2003**] Andries van Dam. "Grand Challenge 3. Provide a Teacher for Every Learner" in Grand Research Challenges in Information Systems. AnitaJones and William Wulf, editors, pp. 17-22, Computing ResearchAssociation,2003. URL: www.cra.org/reports/gc.systems.pdf
- [**van Dam et al. 2002a**] Andries van Dam, David H. Laidlaw, and Rosemary Michelle Simpson. "Experiments in Immersive Virtual Reality for Scientific Visualization" in Computers & Graphics 26(4), pp. 535-555, 2002.
- [**van Dam et al. 2002b**] Andries van Dam, Henry Fuchs, Sascha Becker, Loring Holden, Adrian Ilie, Kok-Lim Low, Anne Morgan Spalter, Ruigang Yang, and Greg Welch. "Immersive Electronic Books for Teaching Surgical Procedures" in Proceedings of Pre-ICAT CREST Symposium on Telecommunication, Teleimmersion, and Telexistence, December 3, 2002. The University of Tokyo, Tokyo, Japan.

2001

- [**van Dam 2001a**] Andries van Dam. "User interfaces: disappearing, dissolving, and evolving" in Communications of the ACM (CACM), 44(3), pp. 50-52, 2001.
- [**van Dam 2001b**] Andries van Dam. "Reflections on Next-Generation Educational Software", in Enseigner L'Informatique: Melanges en Hommage a Bernard Levrat, Christian Pellegrini and Alain Jacquesson editors, Georg Editeur, pp. 153-166, 2001.

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- [**Forsberg et al. 2000**] Andrew S. Forsberg, David H. Laidlaw, Andries van Dam, Robert M. Kirby, George E. Karniadakis, and Jonathan L. Elion. "Immersive virtual reality for visualizing flow through an artery" in Proceedings of IEEE Visualization 2000, pp. 457-460, 2000.
- [**van Dam 2000**] Andries van Dam. "Beyond WIMP" in IEEE Computer Graphics and Applications, 20(1), pp. 50-51, 2000.
- [**van Dam et al. 2000**] Andries van Dam, Andrew S. Forsberg, David H. Laidlaw, Joseph J. LaViola Jr., and Rosemary Michelle Simpson. "Immersive VR for Scientific Visualization: A Progress Report" in IEEE Computer Graphics and Applications, 20(6), Nov/Dec, pp. 26-52, 2000.

1999

- [**Brown et al. 1999**] Judith R. Brown, Andy van Dam, Rae Earnshaw, Jose Encarnacao, Richard Guedj, Jennifer Preece, Ben Shneiderman, and John Vince. "Human-Centered Computing, Online Communities, and Virtual Environments" in IEEE Computer Graphics and Applications, 19(6), pp. 70-74, November 1999.
- [**DeRose & van Dam 1999**] Steven J. DeRose and Andries van Dam. "Document Structure and Markup in the FRESS Hypertext System" in Markup Languages 1(1), pp. 7-32, 1999.
- [**Gould et al. 1999**] Daniel L. Gould, Rosemary M. Simpson, and Andries van Dam. "Granularity in the Design of Interactive Illustrations" in Proceedings of ACM SigCSE '99, pp. 306-310, 1999.
- [**Simpson et al. 1999**] Rosemary M. Simpson, Anne M. Spalter, and Andries van Dam. "Exploratories: An Educational Strategy for the 21st Century" in Proceedings of ACM SIGGRAPH '99, Conference Abstracts and Applications, pp. 43-45, 1999.
- [**van Dam 1999**] Andries van Dam. "Education: the unfinished revolution" in ACM Computing Surveys, 31(4es), p. 36, 1999.

1998

- [**van Dam 1998a**] Andries van Dam. "Interview" in IEEE Annals of the History of Computing 20(2), pp. 81-84,1998.
- [**van Dam 1998b**] Andries van Dam. "The Shape of Things to Come"in ACM SIGGRAPH Computer Graphics Newsletter, 32(1), 1998.

1997

- [**Bazik et al. 1997**] John Bazik, Roberto Tamassia, Stephen P. Reiss, and Andries van Dam. "Software Visualization in Teaching at Brown University" Chapter 25 in Software Visualization: Programming as a Multi-Media Experience, MIT Press, pp. 383-398, 1998.
- [**van Dam 1997a**] Andries van Dam. "Some Personal Recollections on Graphics Standards" in ACM SIGGRAPH Computer Graphics Newsletter Standards Pipeline Column, February 1997.
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1995

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1994

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- [**Gomez et al. 1994**] Julian E. Gomez, Rick Carey, Tony Fields, Andries van Dam, and Dan Venolia. "Why is 3-D interaction so hard and what can we really do about it?" in Proceedings of ACM SIGGRAPH '94, pp. 492-493, 1994.
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1993

- [**van Dam 1993**] Andries van Dam. "VR as a Forcing Function: Software Implications of a New Paradigm" in Proceedings of IEEE Symposium on Research Frontiers in Virtual Reality, SPIE pp. 570-576, October 1993.

1992

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- [**Snibbe et al. 1992**] Scott S. Snibbe, Kenneth P. Herndon, Daniel C. Robbins, D. Brookshire Conner, and Andries van Dam. "Using Deformations to Explore 3D Widget Design" in Proceedings of ACM SIGGRAPH '92, pp. 351-352, 1992.
- [**van Dam 1992**] Andries van Dam. "Escaping Flatland in User Interface Design" in Proceedings of the ACM SIGGRAPH 1992 Symposium on Interactive 3D Graphics, SI3D '92, pp. 9, 1992.

1991

- [**Marcus & van Dam 1991**] Aaron Marcus and Andries van Dam. "User Interface Design" in IEEE Computer, 24(9), pp. 49-57, 1991.
- [**Zeleznik et al. 1991**] Robert C. Zeleznik, D. Brookshire Conner, Matthias M. Wloka, Daniel G. Aliaga, Nathan T. Huang, Philip M. Hubbard, Brian Knep, Henry Kaufman, John F. Hughes, and Andries van Dam. "An Object-Oriented Framework for the Integration of Interactive Animation Techniques" in Proceedings of ACM SIGGRAPH '91, pp. 105-112, 1991.

1990

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1989

- [**Upson et al. 1989**] Craig Upson, Thomas Faulhaber, David Kamins, David Laidlaw, David Schlegel, Jeffrey Vroom, Robert Gurwitz and Andries van Dam. "The Application Visualization System: A Computational Environment for Scientific Visualization" in IEEE Computer Graphics and Applications, 9(7), pp. 30-42, July 1989.
- [**van Dam 1989**] Andries van Dam. "Trends in Computer Graphics" in Proceedings of SIAM Conference on Parallel Processing for Scientific Computing (PPSC '89), pp. 454, 1989.

1988

- [**van Dam 1988**] Andries van Dam. "Hypertext '87 Keynote Address" in Communications of the ACM (CACM) 31(7), pp. 887-895, July, 1988.
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1987

- [**van Dam 1987**] Andries van Dam. "Solids Modeling and Rendering on Workstations -- A Pictorial Overview" in Computer Physics Communications #45, North-Holland Publishing Company, 1987.

1986

- [**van Dam 1986**] Andries van Dam. "Computing in 1984" in Electrical Engineering: The Second Century Begins, ed. Harlow Freitag, IEEE Press, 1986.

1985

- [**Yankelovich et al. 1985**] Nicole Yankelovich, Norman K. Meyrowitz, and Andries van Dam. "Reading and Writing the Electronic Book" in IEEE Computer Magazine 18(10), pp. 15-30, October 1985.

1984

- [**van Dam 1984**] Andries van Dam. "An Interview with Andries van Dam" in Communications of the ACM (CACM) 27(7), pp. 638-648, July 1984
- [**van Dam 1984**] Andries van Dam. "Computer Software for Graphics" in Scientific American 251(3), pp. 102-113, September 1984.
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- [**van Dam 1984**] Andries van Dam. "The Electronic Classroom: Workstations for Teaching" in International Journal of Man-Machine Studies, 21(4), pp. 353-363, October 1984.

1983

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- [**Yau et al. 1983**] Stephen S. Yau, Robert W. Ritchie, Warren Semon, J. F. Traub, Andries van Dam, Stanley Winkler. "Meeting the Crisis in Computer Science" in Communications of the ACM (CACM), 26(12). pp. 1046-1050 December 1983.
- [**Yau et al. 1983**] Stephen S. Yau, Robert W. Ritchie, Warren Semon, J. F. Traub, Andries van Dam, and Stanley Winkler. "Meeting the Crisis in Computer Science" in IEEE Computer 16(12), pp. 83-87, December 1983.

1982

- [**Feiner et al. 1982**] Steven Feiner, Sandor Nagy, and Andries van Dam. "An Experimental System for Creating and Presenting Interactive Graphical Documents" in ACM Transactions on Graphics, 1(1), pp. 59-77, 1982.
- [**Meyrowitz & van Dam 1982**] Norman K. Meyrowitz and Andries van Dam. "Interactive Editing Systems: Part I and Part II" in ACM Computing Surveys 14(3), pp. 321-415, 1982.
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1981

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- [**Gurwitz et al. 1981**] Robert F. Gurwitz, R. Fleming, and Andries van Dam. "MIDAS: A Microprocessor Instructional Display and Animation System" in IEEE Transactions on Education 31(1), pp. 306-310, 1981.
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1979

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- [**van Dam 1979**] Andries van Dam. "Graphics Standards and Standard Packages," in Proceedings of SEAS Spring Technical Meeting, 1979.
- [**van Dam 1979**] Andries van Dam. "Vector Graphics Today" in Proceedings of SEAS Spring Technical Meeting, 1979.

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- [**Michener & van Dam 1978**] James C. Michener and Andries van Dam. "A Functional Overview of the Core System with Glossary" in ACM Computing Surveys 10(4), pp. 381-387, 1978.
- [**Newman & van Dam 1978**] William M. Newman and Andries van Dam. "Recent Efforts Towards Graphics Standardization" in ACM Computing Surveys, 10(4), pp. 365-380, 1978.
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- [**van Dam & Stankovic 1978**] Andries van Dam and John Stankovic. "Guest Editor's Introduction, Special Issue on Distributed Processing" in IEEE Computer, 11(1), p. 14, January 1978.

1977

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- [**Stankovic et al. 1977**] John Stankovic, Andries van Dam, and Lynn DeNoia. "Trends in Distributed Data Processing in North America" in Proceedings of SEAS Spring Technical Meeting, April 1977.
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1976

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1973

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- [**Stockenberg et al. 1973**] John E. Stockenberg, Paul C. Anagnostopoulos, Ralph E. Johnson, Robert G. Munck, and Stabler, G. M., and Andries van Dam. "Operating system design considerations for microprogrammed mini-computer satellite systems" in Proceedings of 1973 National Computer Conference and Exposition, pp. 555-562, 1973.
- [**van Dam & Stabler 1973**] Andries van Dam and George M. Stabler. "Intelligent Satellites for Interactive Graphics" in Proceedings 1973 National Computer Conference and Exposition, pp. 227-238, 1973.
- [**van Dam & Stabler 1973**] Andries van Dam and George Stabler. "Some Aspects of Satellite Graphics" in Proceedings of IEEE NEREM Conference, November 1973.

1972

- [**Bergeron et al. 1972**] R. Daniel Bergeron, John D. Gannon, Diane P. Shecter, Frank Wm. Tompa, and Andries van Dam. "Systems Programming Languages" in Advances in Computers 12, pp. 175-284, Academic Press, 1972.
- [**van Dam 1972**] Andries van Dam. "Some Implementation Issues Relating to Data Structures for Interactive Graphics" in International Journal of Computer and Information Sciences, Plenum Press, August 1972.
- [**van Dam & Tompa 1972**] Andries van Dam and Frank Wm. Tompa. "Software Data Paging and Segmentation for Complex Systems" in Information Processing

Letters 1(3), pp. 80-86, North-Holland Publishing Company, 1972.

1971

- [**Bergeron et al. 1971**] R. Daniel Bergeron, John D. Gannon, and Andries van Dam. "Language for Systems Development" in Proceedings of ACM SIGPLAN Symposium on Languages for Systems Implementation, pp. 50-72, October 1971.
- [**Elliott et al. 1971**] W. David Elliott, Warren A. Potas, and Andries van Dam. "Computer assisted tracing of text evolution" in Proceedings of the AFIPS Fall Joint Computer Conference, pp. 533-540, 1971.
- [**Rice & van Dam 1971**] David E. Rice and Andries van Dam. "An Introduction to Information Structures and Paging Considerations for On-line Text Editing Systems" in Advances in Information Systems Science 4, Plenum Press, 1971.
- [**Schiller et al. 1971**] William L. Schiller, Robert L. Abraham, Richard M. Fox, and Andries van Dam. "A microprogrammed intelligent graphics terminal" in IEEE Transactions on Computers, C-20(7), pp. 975-982, July 1971.
- [**van Dam 1971**] Andries van Dam. "Microprogramming for Computer Graphics" in ACM SIGGRAPH 7(3), Winter 1971.
- [**van Dam 1971**] Andries van Dam. "Satellite Computer Graphics" in Proceedings of 1971 SEAS Conference, September 1971.
- [**van Dam & Rice 1971**] Andries van Dam and David E. Rice. "On-line Text Editing: A Survey" in ACM Computing Surveys 3(3), pp. 93-114, September 1971.

1970

- [**van Dam 1970**] Andries van Dam. "An Introduction to Interactive Computer Graphics," in Proceedings of Delft Symposium on Interactive Computer Graphics (October 1970).
- [**van Dam 1970**] Andries van Dam. "Human Factors of Computer Input and Output Devices" in Proceedings of SID Symposium, 1970.
- [**van Dam 1970**] Andries van Dam. "Introduction to Picture Modeling (Data Structures)," in Proceedings of SPSE-NMA-SID Seminar on Computer Handling of Graphical Information, 1970.
- [**van Dam & Bergeron 1970**] Andries van Dam and R. Daniel Bergeron. "Software Capabilities of the Adage Graphics Terminal" in Proceedings of Computer Graphics '70, Brunel University, England, 1970.
- [**van Dam & Michener 1970**] Andries van Dam and James C. Michener. "Storage Tube Graphics: A Comparison of Terminals" in Proceedings of Computer Graphics '70, Brunel University, England, 1970.
- [**van dam & Rice 1970**] Andries van Dam and David E. Rice. "Computers and Publishing: Writing, Editing and Printing" in Advances in Computers 10, pp. 145-174, Academic Press, 1970.

1969

- [**Carmody et al. 1969**] Steven Carmody, Walter Gross, Theodor H. Nelson, David Rice, and Andries van Dam. "A Hypertext Editing System for the /360" in Faiman and Nievergelt (eds.) Pertinent Concepts in Computer Graphics:

Proceedings of the Second University of Illinois Conference on Computer Graphics, pp. 291-330, University of Illinois Press, 1969.

- **[van Dam & Sullivan 1969]** Andries van Dam and P. Sullivan. "Computers" in Encyclopedia Puritanical Yearbook of Science and Technology (1969).

1968

- **[van Dam & Evans 1968]** Andries van Dam and David Evans. "Data Structure Programming System" in Proceedings IFIP Congress, Edinburgh, pp. 557-564, 1968.

1967

- **[van Dam & Evans 1967]** Andries van Dam and David Evans. "A Compact Data Structure for Storing, Retrieving and Manipulating Line Drawings" in Proceedings of AFIPS 1967 Spring Joint Computer Conference, pp. 601-610, 1967.
- **[van Dam & Michener 1967]** Andries van Dam and James C. Michener. "Hardware Developments and Product Announcements" in Second Annual Review of Information Science and Technology, John Wiley & Sons, 1967.
- **[Wile et al. 1967]** David S. Wile, Robert G. Munck, and Andries van Dam. "The Brown University Student Operating System" in Proceedings of 1967 National ACM Conference, pp. 427-439, 1967.

1966

- **[van Dam 1966]** Andries van Dam. "Computer Driven Displays and Their Use in Man/Machine Interaction" in Advances in Computers 6, pp. 239-290, Academic Press, 1966.

1965

- **[van Dam 1965]** Andries van Dam. "Teacher Training for the Age of Automation" in Automation Yearbook, 1965.

1964

- **[Ashler et al. 1964]** Daniel Ashler, Andries van Dam, and Daniel Prener. "Computer and Information Sciences Program for High School Students" in Proceedings ACM 19th Annual Conference, pp. K1.3-1--K1.3-5, 1964.
- **[van Dam & Evans 1964]** Andries van Dam and David Evans. "SHIRTDIF -A System for the Storage Handling and Retrieval of Technical Data in Image Format" in Proceedings of American Documentation Institute (later ASIS), 1964.

Invited Lectures since 2000

2012

Invited Speaker, "Expanding the User Experience through Pen and Touch Computing", Microsoft WHiPS (May)

Invited Speaker, "Expanding the User Experience through Pen and Touch Computing",

Microsoft Faculty Summit (July)

2011

Invited Speaker, "User Interfaces: Evolution and Revolution", Wells Fargo (April)

Invited Speaker, " User Interfaces: Evolution and Revolution - Part One", Microsoft Research Asia (April)

Invited Speaker, " User Interfaces: Evolution and Revolution - Part Two", Microsoft Research Asia (April)

Invited Speaker, "NUI - Natural User Interfaces - A New Frontier for the Digital Humanities", University of Siena, Italy (October)

Invited Speaker, "Pen and Touch Computing in Context", Sharp Laboratories, America (November)

2009

Invited Speaker, "The Promise of Pen and Touch Computing", TUD, Germany (December)

Invited Speaker, "The Promise of Pen and Touch Computing", Fraunhofer, Germany (December)

2008

Invited Speaker, "A Conversation with Joel Orr with Andries van Dam and Alan Kay", Program for the Future, Collective Intelligence (December)

Invited Speaker, "Panel of 1968 [Mother of All] Demo Participants", Engelbart & the Dawn of Interactive Computing, SRI (December)

Invited Speaker, "When is the Pen Mightier Than the Keyboard", ETH Zurich (November)

Distinguished Lecturer, "When is the Pen Mightier Than the Keyboard", Datalogisk Institut, Aarhus Universitet (May)

Invited Speaker, "As We May Work", Enterprise 2.0 (April)

Distinguished Lecturer, "When is the Pen Mightier Than the Keyboard", SCI University of Utah (March)

Invited Speaker, "When is the Pen Mightier Than the Keyboard", Sun Microsystems (January)

Invited Speaker, "When is the Pen Mightier Than the Keyboard", Google (January)

2007

Keynote, "When is the Pen Mightier Than the Keyboard", Georgia Tech GVU 15th Anniversary, 2007 (October)

Distinguished Lecturer, "When is the Pen Mightier Than the Keyboard", Wheaton College, 2007 (September)

Distinguished Lecturer, "When is the Pen Mightier Than the Keyboard", Purdue University, 2007 (August)

Invited Speaker, "When is the Pen Mightier Than the Keyboard", MS Faculty Summit, 2007 (July)

Distinguished Lecturer, "When is the Pen Mightier Than the Keyboard", MSR China, 2007 (May)

Distinguished Lecturer, "When is the Pen Mightier Than the Keyboard", Amsterdam CWI, 2007 (April)

Invited Speaker, "A Radical Approach to Teaching Object-Oriented Programming", CCSCNE, 2007 (April)

Distinguished Lecturer, "When is the Pen Mightier Than the Keyboard", UCLA, 2007 (March)

2006

Invited Speaker, "When is the Pen Mightier Than the Keyboard ", TTI Vanguard, The Advanced Technology Forum for Senior Executives, 2006 (December)

Distinguished Lecturer, "When is the Pen Mightier Than the Keyboard", Adobe, 2006 (December)

Invited Speaker, "The Microsoft Center for Research on Pen-Centric Computing", Microsoft Faculty Summit, 2006 (July)

Distinguished Lecturer, "Immersive Virtual Reality in Scientific Visualization", Waterloo University, 2006 (April)

Distinguished Lecturer, "Immersive Virtual Reality in Scientific Visualization", Simon Fraser University, 2006 (March)

2005

Distinguished Lecturer, "Immersive Virtual Reality in Scientific Visualization", The College of William and Mary, 2005 (December)

Distinguished Lecturer, "Immersive Virtual Reality in Scientific Visualization", University of Texas, Dallas, 2005 (November)

Invited Speaker, "Scientific Visualization Research at Brown University", PNNL Fellow Lecture Series, 2005 (July)

Invited Speaker, "Next Generation Educational Software: Why We Need It and a Research Agenda for Getting It", Sun Microsystems, 2005 (May)

Invited Speaker, "Visualization at Brown: Scientific and Education Research", CIO, 2005 (April)

Invited Speaker, "Immersive Virtual Reality for Scientific Visualization", NYU, 2005 (February)

2004

Invited Speaker, "Immersive Virtual Reality for Scientific Visualization", Department of Energy, 2004 (December)

Invited Speaker, "Next Generation Educational Software: Why We Need It & A Research Agenda for Getting It", Foundation for the Future of Higher Education Aspen

Symposium, 2004 (September)

Invited Speaker, "Interaction as Human-centered Computing: Problems, Progress, and Prospects", Digication 2004 (May)

Keynote Speaker, "Distributed Computing for Graphics: Then and Now", ICDCS 2004 (March)

2003

Distinguished Lecturer, "Visualization: New Dimensions, New Domains, Old Questions", Brown University, TCASCV (Technology Center for Advanced Scientific Computing and Visualization) (November)

Keynote Speaker, with Anne Morgan Spalter, "Modeling and Visualization: The Role of Computer Graphics", IVLA (International Visual Literacy Association), (October)

Distinguished Lecturer, "User Interfaces: Disappearing, Dissolving, and Evolving", UCSB (June)

Plenary Speaker, "Beyond Today's Web-based Educational Content", HICSS-36 2003 (January)

2002

Invited Speaker, "Immersive Electronic Books for Teaching Surgical Procedures", CREST Symposium on Telecommunication, Teleimmersion, and Telexistence 2002 (December)

Distinguished Lecturer, "Immersive Virtual Reality for Scientific Visualization", University of Maryland, (November)

Keynote Speaker, "Next Generation Educational Software", EdMedia 2002 (June)

Distinguished Lecturer, "Immersive VR for Scientific Visualization: A Progress Report", ETH Zurich, Switzerland (February)

Invited Speaker, "Immersive VR for Scientific Visualization: A Progress Report", University of Michigan, (January)

2001

Keynote Speaker, " User Interfaces: Disappearing, Dissolving, and Evolving", Celebration of Professor Jose Encarnacao's 60th Birthday, Darmstadt, Germany (May)

Invited Speaker, "Immersive VR for Scientific Visualization: A Progress Report", MIT Media Lab, Cambridge, MA (March)

2000

Keynote Speaker, "Immersive Virtual Reality for Scientific Visualization: A Progress Report", VR2000, New Brunswick, NJ (March)

Keynote Speaker, " Exploratories: Web-based Interactive Environments for Teaching and Learning", SigCSE2000, Austin, Texas (March)

Service to the Profession

2009	Panelist, NSF Science and Technology Center, Pre-Proposal Panel (January)
2008-2010	Chair, Computing Research Association Education (CRA-E) committee
2008-	Member, Advisory Board, Marian Koshland Science Museum
2008-	Member, Board of Advisors, WGBH/ACM New Image of Computing (NIC) initiative
2007	Chair, ACM Karl V. Karlstrom Outstanding Educator Award committee
2007	Chair, Brandeis University External Review Committee
2007	Member, Editorial Board of Computers and Graphics, Pergamon Press
2007-	Member, National Research Council CSTB Healthcare Informatics committee
2005-	Member, ACM Karl V. Karlstrom Outstanding Educator Award committee
2002-2005	IEEE James H. Mulligan, Jr. Education Medal committee
1998-2002	Member, NSF CISE advisory committee
1998	Member, DOE ASCII Data and Visualization Corridors initiative advisory committee
	Member, National Research Council CSTB Information Technology literacy committee
1997	ACM97 Chairman, 1997 Symposium on Interactive 3D Graphics, Providence, RI (April)
1994-1998	Member, Editorial Board, IEEE Transactions on Visualization and Computer Graphics (TVCG), (August)
1994	Member, Editorial Board, SIGGRAPH Books Series with ACM Press Books, and Addison-Wesley Publishing Company (January) Co-founder, NSF Science and Technology Center for Computer Graphics
	and Scientific Visualization, Summer Workshop on Geometric Modeling and Computer Graphics, Brown University, Providence, RI (June/July)
	Course Panelist, Developing Advanced Virtual Reality Applications, SIGGRAPH '94, Orlando, FL (July)
	Course Panelist, Research Frontiers in Virtual Reality, SIGGRAPH '94, Orlando, FL (July)
	Course Panelist, Why is 3D Interaction So Hard, and What Can we Really Do About it?, SIGGRAPH '94, Orlando, FL (July)
	Program Committee Member, 1995 Symposium on Interactive 3D Graphics, Monterey, CA (November)
1993	Member, National Research Council, Committee on Virtual Reality Research and Development
	Program Committee, Senior Reviewer SIGGRAPH '93, Anaheim,

California (August)

Course Panelist, Implementing Virtual Reality, SIGGRAPH '93, Anaheim, California (August)

Co-founder, A New Seminar for Secondary Mathematics Teachers The Mathematics of Computer Graphics, Brown University, Providence, RI (April/May)

Co-founder, NSF Science and Technology Center for Computer Graphics and Scientific Visualization, Summer Workshop on Geometric Modeling and Computer Graphics, Brown University, Providence, RI (June/July)

Panelist, The Role of New Information Technology in a Modern Curriculum, University of California at Irvine, Irvine, CA (July)

1992	Program Committee, Senior Reviewer SIGGRAPH '92, Chicago, IL (July)
	Program Committee, Third Eurographics Workshop on Object-Oriented Graphics, Champery, Switzerland (October)
1991	National Science Foundation, Chairman, Workshop on Research Infrastructure (July)
1990-1992	Member of Study Committee to Assess the Scope and Direction for Computer Science and Technology, Computer Science and Telecommunications Board, National Research Council Commission on Physical Sciences, Mathematics, and Applications
1990	Chairman, Ad Hoc working group on Graphics Application Frameworks
1989-1991	Member, Nominating Committee, ACM
1989	Advisory Editor, Journal of Visual Languages and Computing, Academic Press
1987-1988	Member, Advisory Board, SIGGRAPH
1987	Program Committee, 1988 CERN Summer School
1985-1986	Chairman, Software Systems Award Committee, ACM
1986-1988	Member, Computer Science and Technology Board, National Research Council, National Academy of Sciences
1986	Invited Lecturer, Asia Regional College on Microprocessors, Hefei, PRC
1985-1987	Chairman, Computing Research Board, (renamed Computing Research Association)
	Chairman, PHIGS+ Computer Graphics Working Group
1985	Chairman, Visiting Committee to evaluate computer science concentration and computing services, Swarthmore College, Swarthmore, PA (April)
1983-1984	Member, CSNet Executive Board
1983-1985	Member of review board for Foxboro's Bristol Fellowship program
1983-1991	Member, Computer Science Board (renamed Computing Research Association)
1983	Co-director and lecturer, School on Microprocessors, Institute for

	Theoretical Physics, Trieste (April)
	Organizer of research symposium to mark the retirement of Marvin Denicoff of ONR (December)
	Member, Editorial Board of Computers and Graphics, Pergamon Press
1982	Invited lecturer, CERN Summer School in Computing, Zinal, Switzerland (August)
1981-1986	Associate Editor, ACM Transactions on Graphics
1981	Co-director and lecturer, School on Microprocessors, Institute for Theoretical Physics, Trieste (September)
1980-1986	Visiting Scientific Associate, CERN, Geneva, Switzerland
1980	Invited lecturer, CERN Summer School in Computing, Athens, Greece (September)
1979	Program Organizer and Chairman of SEAS Spring Technical Meeting on Graphic Man-Machine Interaction Methodology (May)
	Invited participant in IFIP WG5.2 Seillac Workshop on Interaction Methodology (May)
1978	Guest editor of IEEE Computer, Special Issue on Distributed Processing (January)
	Guest editor of ACM Computing Surveys, Special Issue on Computer Graphics Standards (December)
1977	Panel Chairman, "Computer Graphics," IFIP Congress 77, Toronto
1976, 1977	Organizer and chairperson, Distributed Processing Workshops I and II, Brown University
1976-1978	Member of ACM SIGGRAPH Graphics Standard Planning Committee and co-designer of the proposed "Core" Graphics Standard
1976	Invited participant to IFIP WG5.2 Seillac Workshop on Graphics Standards
	Session Chairman, ACM SIGGRAPH 3rd Annual Conference on Computer Graphics, Interactive Techniques and Image Processing
1974	Session Chairman, ACM SIGGRAPH NBS Workshop on Machine-Independent Graphics
	Member of Editorial Board and Contributor, The Encyclopedia of Computer Science
	Session Chairman, ACM SIGGRAPH Conference on Computer Graphics and Interactive Techniques
1973-1977	Member of Editorial Advisory Board, Computers and Graphics
1972	Conference organizer, IFIP Working Conference on Graphic Languages, Vancouver, B.C.
1971-1981	Editor, Computer Graphics and Image Processing
1971	Session Chairman, "Computer-Aided Design," IFIP Congress 71,

Ljubljana, Yugoslavia

1969-1970   Consulting editor for Auerbach Corporation's Graphics Data Processing Reports

1968-1970   Co-founder, board member and lecturer, ACM SIGGRAPH, Special Interest Group on Computer Graphics

1968   Session Chairman,"Data Structures for Computer Graphics," FJCC, San Francisco

1967-1978   Consulting editor in Computer Science, Holt, Rinehart and Winston

1967-1970   Co-founder, Board member and lecturer, ACM Professional Development Seminar Series

1967-1969   Contributor, Engineering Concepts Curriculum Project of the ACM Commission on Engineering Education (principal author of five chapters in The Man-Made World)

1967   Co-founder of ACM SICGRAPH

Academic Honors, Fellowships, Honorary Society Honors

2015   Swarthmore Alumni Council Eugene M. Lang '38 Impact Award

2008   Honorary Ph.D. from the Department of Computer Science at ETH Zurich

2007   Honorary Ph.D. from the Faculty of Mathematics, University of Waterloo.

2005   Co-Chairman of the Rhode Island Governor's Science and Technology Advisory Council (STAC)

2004   American Association for the Advancement of Science Fellow Award

2003   Honorary General Chair of IEEE ICDCS 2003

                            Chairman of the Rhode Island Governor's Science and Technology Council

                            Board Member of the Mayor's Providence Economic Development Partnership Council

2002   CRA (Computing Research Association) Distinguished Service Award

                            Brown University Sheridan Award for Teaching

2000   ACM SIGCSE Award for Outstanding Contribution to Computer Science Education

                            American Academy of Arts & Sciences Fellow Award

1999   IEEE James H. Mulligan, Jr. Education Medal

1998-2004   Trustee of RISD (Rhode Island School of Design)

1996   Elected to the National Academy of Engineering

                            Honorary Ph.D. from Swarthmore College

1995   Named to the Thomas J. Watson, Jr. University Professor of Technology and Education Chair

                            Honorary Ph.D. from Darmstadt Technical University in Germany

1994   IEEE Fellow Award

ACM Fellow Award

1993	ACM Karl V. Karlstrom Outstanding Educator Award
1992-1995	Named to the L. Herbert Ballou University Professor Chair
1991	SIGGRAPH Steven A. Coons Award for Outstanding Creative Contributions to Computer Graphics
1990	1990 NCGA Academic Award
1988	State of Rhode Island Governor's Science and Technology Award
1984	IEEE Centennial Medal
1974	Society for Information Display's "Special Recognition Award"
1971-1972	Fulbright Fellowship
1966	Ph.D. Degree, Electrical Engineering, Moore School of Electrical Engineering, University of Pennsylvania.
1963	M.S. Degree, Electrical Engineering, Moore School of Electrical Engineering, University of Pennsylvania.
1960	IEEE (IRE) Delaware Valley Section "Student of the Year" Award; Sigma Tau, Sigma Xi
	B.S. Degree with Honors, Swarthmore College

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