

Margaret M. Fleck

Computer Science

University of Illinois, Urbana-Champaign

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Current work and interests

I have taught a wide range of courses over the years and have built extensive course materials for Discrete Structures and Artificial Intelligence. I focus on building materials that are easy for students to learn from. Specifically my courses feature frequent small assignments and assessments, textbooks and notes that are easy to read, and interleaving underlying techniques with applications.

My recent research centers around understanding conversational speech, particularly unsupervised algorithms that learn word boundaries from transcribed speech. I am also interested in use of prosodic features (e.g. stress, duration) in language modelling and language acquisition.

I worked in image understanding for many years and retain an interest in that area. I also have a long-term interest in building better programming language support for AI and have implemented a hybrid LISP/C package for computer vision applications and a hybrid Scheme/C package for linguistic work. At Hewlett-Packard Labs and U. Illinois, I have worked on systems that provide guidebooks and collect annotated records of personal experiences.

On the web

Home page: <https://mfleck.cs.illinois.edu/>

Google scholar: <https://scholar.google.com/citations?user=WZxrpZQAAAAJ>

Education

B.A., Linguistics, May 1982, Yale University.

Summa cum laude, exceptional distinction in linguistics, Hadley prize (highest scholarship in social sciences). Senior thesis: “Design options for a morphological analysis system” (advisor: Judith Aissen).

M.S., Electrical Eng. and Computer Science, September 1985, Mass. Institute of Technology.

Thesis: “Local Rotational Symmetries” (advisor: J. Michael Brady).

Ph.D., Electrical Eng. and Computer Science, September 1988, Mass. Institute of Technology.

Thesis: “Boundaries and Topological Algorithms,” (advisors: J. Michael Brady and Harold Abelson).
Minor: algebraic topology.

Visiting student, Keble College, Oxford University, October 1986–August 1987.

Employment

Summer 1979: Smith College, Northampton, MA, helping set up the new VAX system at the Science Center.

Summer employee in the linguistics and robotics departments at AT&T Bell Laboratories, 600 Mountain Ave., Murray Hill, NJ:

1980, 1982: syntactic parsing research under Mitchell P. Marcus.

1981: locating syllables in speech waveforms under Mark Y. Liberman.

1983: representing Finnish morphology under Janet Pierrehumbert.

1986: depth of objects from camera motion under Michael K. Brown.

BP Junior Research Fellow, St. Cross College and Department of Engineering Science, Oxford University, September 1988 to September 1991 (supervisor: J. Michael Brady).

Assistant Professor (through Spring 1996) and Associate Professor, Department of Computer Science, University of Iowa, Iowa City, IA 52242, Fall 1991 to Spring 1997 (granted tenure).

Associate Professor, Department of Computer Science, Harvey Mudd College, Claremont, CA 91711, July 1997 to June 2000.

Researcher, Hewlett-Packard Labs, 1501 Page Mill Rd, Palo Alto, CA 94304, July 2000 to April 2004

University of Illinois, Urbana IL, Research Associate Professor/Senior Lecturer, August 2004 to present.

Fellowships and Awards

Graduate fellowship from the Fannie and John Hertz Foundation (1982–1987).

Grant from the AT&T Bell Laboratories Graduate Research Program for Women (1982–1988).

NSF CAREER development award “Finding Image Intensity Boundaries,” August 1995 through July 1999, \$135,000, IRI-9501493/IRI-9796307.

On list of teachers ranked as excellent at U. Illinois, Fall/Spring 2015, Fall/Spring 2016, Fall 2017, Spring 2018, Spring 2019, Spring 2020, Spring 2021

2019 Rose Award for Teaching Excellence, University of Illinois

Grants

GE Foundation Faculty Fellowship Grant, \$22,940, Fall 1991-summer 1992.

NSF CISE Research Instrumentation Grant, “Vision and Simulation Projects at the University of Iowa,” \$150,000, April 1992 through September 1993, [with Joe Kearney and David Forsyth], CDA-9121985.

NSF Research Initiation Award, “Finding Boundaries in Variable Scale Images” \$110,000, July 1992 through June 1996, IRI-9209728.

NSF Research Experience for Undergraduates, site grant, \$225,000, [with Joe Kearney], February 1994 through July 1997, CDA-9322132.

Author, successful departmental proposal to the U. Iowa Computing Fee Committee (1993) for a new undergraduate teaching laboratory.

NSF grant “Wide-angle Symmetry,” July 1995 through June 1999, \$187,000, IRI-9420716/IRI-9796311.

NSF Research Experience for Undergraduates, site grant, \$241,295 [with Jim Cremer and Joe Kearney], March 1997 through February 2000, CDA-9619957.

Groupscope, \$1,697,500, Scott Poole et al. [8 of us on the grant], NSF, Summer 2010 to Summer 2014.

“Teaching Computing at Scale”, Aug 2012-July 2014 U. Illinois College of Engineering Strategic Instructional Innovations Program (SIIP), \$200,000, [with L. Angrave, C. Heeren, L. Pitt, C. Zilles]

“Revising the CS Introductory Programming Sequence,” July 2020 to June 2022 U. Illinois College of Engineering Strategic Instructional Innovations Program (SIIP), \$18,500, [with G Challen, G. C. Evans, M. Nowak, M. Woodley, C. Zilles]

Journal papers

Margaret M. Fleck (1981) “Tzotzil Numeral Root Morphology,” *Journal of Mayan Linguistics* 3/1, pp. 5–24.

Margaret M. Fleck (1988) “Representing Space for Practical Reasoning,” *Image and Vision Computing* 6/2, pp. 75–86.

Margaret M. Fleck (1991) “A Topological Stereo Matcher,” *Intern. Journ. Comp. Vision* 6/3, pp. 197–226.

Margaret M. Fleck (1992) “Some Defects in Finite Difference Edge Finders,” *IEEE Trans. Patt. Analy. Mach. Intell.* 14/3, pp. 337–345.

Margaret M. Fleck (1992) “Multiple Widths Yield Reliable Finite Differences,” *IEEE Trans. Patt. Analy. Mach. Intell.* 14/4, pp. 412–429.

Margaret M. Fleck (1996) “The Topology of Boundaries,” *Artificial Intelligence* 80, pp. 1–27.

Folberg, Robert, Margaret Fleck, Mary G. Mehaffey, Margaret Meyer, Suzanne Bentler, Robert Woolson, Jacob Pe’er (1996) Mapping the Location of Prognostically Significant Vascular Patterns in Ciliary Body and Choroidal Melanomas, *Pathology Oncology Research* 2/4, pp. 229-236.

David Forsyth and Margaret Fleck (1999) “Automatic Detection of Human Nudes,” *International Journal of Computer Vision* 32/1, pp. 63-77.

Margaret Fleck, Marcos Frid, Tim Kindberg, Eamonn O’Brian-Strain, Rakhi Rajani, Mirjana Spasojevic (2002) “From Informing to Remembering: Ubiquitous Systems in Interactive Museums,” *IEEE Pervasive Computing* 1/2, pp. 13-21

Refereed Conference Papers

Margaret M. Fleck and Mark Y. Liberman (1982) “Test of an Automatic Syllable Peak Detector,” 104th Meeting of the Acoustical Society of America, abstract in *Journal of the Acoustical Society of America*, supplement to vol. 72, pp. S78–S79.

Mitchell Marcus, Don Hindle, Margaret M. Fleck (1983) “D-Theory: Talking about Talking about Trees,” *Proceedings of the 21st Annual Meeting of the Association for Computational Linguistics*, pp. 129–136.

- Margaret M. Fleck (1986) "Local Rotational Symmetries," *Proc. of the IEEE Conf. on Computer Vision and Pattern Recognition*, pp. 332–337.
- Margaret M. Fleck (1987) "Representing Space for Practical Reasoning," *Proceedings of the Tenth International Joint Conference on Artificial Intelligence*, pp. 728–730.
- Margaret M. Fleck (1987) "Representing Space for Practical Reasoning," *Proc. of the Third Alvey Vision Conference*, pp. 275–284. [Slightly different from previous paper.]
- Brady, M. and Cameron, S. and Durrant-Whyte, H. and Fleck, M. and Forsyth, D. and Noble, A. and Page, I. (1987) "Progress towards a System that can Acquire Pallets and Clean Warehouses," *Proc. of the Fourth International Symposium on Robotics Research*, Santa Cruz, California, pp. 359–374.
- Margaret M. Fleck (1989) "Spectre: An Improved Phantom Edge Finder," *Proc. of the Fifth Alvey Vision Conference*, pp. 127–132.
- Margaret M. Fleck (1990) "Multiple Widths Yield Reliable Finite Differences," *Proc. Third International Conference on Computer Vision*, pp. 58–61.
- Margaret M. Fleck (1990) "Classifying Symmetry Sets," *Proc. British Machine Vision Conference*, pp. 297–302.
- Margaret M. Fleck (1992) "Texture: Plus ça change...", *Proceedings of the European Conference on Computer Vision*, Lecture Notes in Computer Science 588, Springer-Verlag, Berlin, pp. 151–159.
- Margaret M. Fleck (1994) "Practical edge finding with a robust estimator," *Proc. of the IEEE Conf. on Computer Vision and Pattern Recognition*, pp. 649–653.
- Daniel E. Stevenson and Margaret M. Fleck (1995) "Robot Aerobics: Four Easy Steps to a More Flexible Calibration," *Intern. Conf. on Computer Vision 1995*, pp. 34–39.
- Margaret Fleck, David Forsyth, and Chris Bregler (1996) "Finding Naked People," 1996 *European Conference on Computer Vision* pp. 593–602.
- J. Pe'er, M. G. Mehafeey M. G., M. Fleck, M. Meyer, S. E. Bentler, R. Woolson, R. Folberg (1996) "Significance of quantifying and localizing vascular networks in choroidal and ciliary body melanomas," presented at the annual conference of the Association for Research in Vision and Ophthalmology (ARVO), abstract in *Investigative Ophthalmology and Visual Science* 37/3, S207.
- Forsyth, D.A., Malik, J., Fleck, M.M., Greenspan, H., Leung, T., Belongie, S., Carson, C. and Bregler, C., "Finding pictures of objects in large collections of images," *Proc. ECCV 96 International Workshop on Object Representation in Computer Vision*, Cambridge UK, 1996, p. 335–361.
- Daniel E. Stevenson and Margaret M. Fleck (1996) "Nonparametric Correction of Distortion," *IEEE Workshop on Applications of Computer Vision 1996*, pp. 214–219 .
- David A. Forsyth and Margaret M. Fleck (1996) "Identifying nude pictures," *IEEE Workshop on the Applications of Computer Vision 1996*, pp. 103–108.
- Jitendra Malik, David Forsyth, Margaret Fleck, Hayit Greenspan, Thomas Leung, Chad Carson, Serge Belongie, and Chris Bregler, "Finding Objects in Image Databases by Grouping," *International Conference on Image Processing (ICIP) 1996*.
- Forsyth, D.A., Malik, J., Fleck, M.M., Leung, T., Bregler, C., Carson, C. and Greenspan, H., " Finding pictures of objects in large collections of images", *Proceedings of the Clinic on Library Applications of Data Processing*, 1996.

Daniel E. Stevenson and Margaret M. Fleck (1997) “Programming Language Support for Digitized Images or, The Monsters in the Closet,” 1997 Usenix conference on Domain-Specific Languages, pp. 271–284.

David A. Forsyth and Margaret M. Fleck (1997) “Body Plans,” IEEE Conference on Computer Vision and Pattern Recognition 1997, pp. 678-683.

Forsyth, D.A. and Fleck, M.M., “Finding People and Animals by Guided Assembly,” Proc. Intern. Conf. on Image Processing 1997, vol. III, pp. 5-9.

Chung, M.G., M.M. Fleck, and D.A. Forsyth (1998) “Jigsaw Puzzle Solver using Shape and Color,” 4th Intern. Conf. Signal Proc. 1998 (October 12-16, 1998) pp. 877-880.

Chung, M.G., M.M. Fleck, and D.A. Forsyth (1998) “New puzzle assembly,” SPIE International Symposium on Multispectral Image Processing (ISMIP’98), Wuhan, China (Oct. 21-23, 1998), SPIE Vol. 3545.

Margaret Fleck, Marcos Frid, Tim Kindberg, Eamonn O’Brien-Strain, Rakhi Rajani, Mirjana Spasojevic (2002) “Rememberer: A Tool for Capturing Museum Visits,” UbiComp 2002, pp. 48-55

Margaret Fleck (2008) “Lexicalized Phonotactic Word Segmentation,” Annual Meeting of the Association for Computational Linguistics, pp. 130-138. (accept rate 25%)

Tim Mahrt, Jui-Ting Huang, Yoonsook Mo, Margaret Fleck, Mark Hasegawa-Johnson and Jennifer Cole (2011) “Optimal Models of prosodic prominence using the Bayesian Information Criterion,” Interspeech 2011 (accept rate 59%)

Tim Mahrt, Jennifer Cole, Margaret Fleck and Mark Hasegawa-Johnson (2012) “Modelling speaker variation in cues to prominence using the Bayesian information criterion,” Speech Prosody 2012.

Tim Mahrt, Jennifer Cole, Margaret Fleck and Mark Hasegawa-Johnson (2012) “F0 and the Perception of Prominence,” Interspeech 2012. (accept rate 52%).

Refereed conferences/workshops without proceedings

Gorman, K., Cole, J., Hasegawa-Johnson, M., and Fleck, M. (2007). Automatic detection of turn-taking cues in spontaneous speech based on prosodic factors. Annual Meeting of the Linguistics Society of America.

Tim Mahrt, Jui-Ting Huang, Yoonsook Mo, Jennifer Cole, Mark Hasegawa-Johnson and Margaret Fleck (2011) “Feature Sets for the Automatic Detection of Prosodic Prominence,” New Tools and Methods for Very-Large-Scale Phonetics Research, Univ. of Pennsylvania, January 2011.

Margaret M. Fleck (2021), “Primates in Zoomworld”, Illinois Computer Science Summer Teaching Workshop, August 2021.

Miscellaneous publications

Margaret M. Fleck (1997) “Equal Employment Opportunity in the Age of the Internet,” Computing Research News, Jan 1997.

Invited talks

Margaret Fleck, “Edge Finding, Cartooning and Topological Image Matching,” Mini-Symposium on Model Based Image Coding sponsored by the Rank Prize Funds, Broadway, England, 1988.

Margaret Fleck, “Wide-angle Imaging Geometry,” US-Czech workshop (NSF funded), Prague, Czech Republic, 1995.

Margaret Fleck, “Wide-angle Imaging,” ALCATECH workshop, Sjallands Odde, Denmark, 1996.

Forsyth, D.A.; Fleck, M.M. “Finding people and animals by guided assembly,” Proceedings, Imagina conference, p.70-77 1997. (Given by Forsyth.)

Online Textbooks

Margaret Fleck and Sarel Har-Peled (2009), Lecture notes of CS 273: Introduction to the Theory of Computation and CS 373: Theory of Computation (345pp) (<https://mfleck.cs.illinois.edu/cs373-notes.pdf>).

Margaret M. Fleck (2012-2017) *Building Blocks for Theoretical Computer Science*, (272pp) plus 78 study problems with annotated solutions (<https://mfleck.cs.illinois.edu/building-blocks/index.html>).

Margaret Fleck (2021) Lecture notes for CS 440: Artificial Intelligence (201pp) (<https://mfleck.cs.illinois.edu/AI-course/cs440-notes-fall21.pdf>).

Software releases and patents

Envision (1997) hybrid lisp/C system for computer vision programming (<https://mfleck.cs.illinois.edu/envision/envision.html>).

Schwa 1.0 (2005) hybrid scheme/C language for natural language research (<http://mfleck.cs.illinois.edu/schwa/index.html>).

Philippe Debaty, Margaret Fleck, Patrick Goddi (2009) “System for Communicating a story mail between communications devices that extends voice mail,” United States Patent 7558561 B1.

Mark Hasegawa-Johnson and Margaret Fleck (2008 and 2017) ISLEX Dictionary (<https://mfleck.cs.illinois.edu/isle-dictionary-from-uiuc.tar.gz>).

Technical Reports not subsumed by above

Sang-Kyun Kim, Margaret Fleck, and David Forsyth (1994) “Reliable Color Labelling,” Technical Report 94-11, Computer Science. U. of Iowa.

Margaret Fleck (1994) “Shape and the Wide-Angle Image,” Technical Report 94-04, Computer Science. U. of Iowa.

Margaret M. Fleck (1995) “Perspective Projection: the Wrong Imaging Model,” Technical Report 95-01, Computer Science, University of Iowa.

Margaret M. Fleck (2003) “Personal Naming Environments,” Technical Report HPL-2003-108, Hewlett-Packard Laboratories (<https://hplabs.itcs.hp.com/techreports/2003/HPL-2003-108.html>).

Margaret M. Fleck (2004) “Eavesdropping on Storytelling,” Technical Report HPL-2004-44, Hewlett-Packard Laboratories (<https://hplabs.itcs.hp.com/techreports/2004/HPL-2004-44.html>).

Internal Service

University of Iowa

- Hiring Committee (1991-92, 1993),
- Undergraduate Committee (1991-92, 1992-93, 1996-97)
- Curriculum Committee (1993-94, 1995-96)
- Research Committee (1995-96)
- Faculty Assembly (1993-96)
- Faculty Senate (1996-97)
- Hiring Committee, Department of Mathematics (1996-97)

Harvey Mudd College

- Student-Faculty/Commencement-Speaker committee (Fall 1998 to Spring 2000)
- Emergency Response Committee (Spring and Fall 1998)
- Search and Rescue Team (Summer 1998 to Fall 1999)
- Computer Science Colloquium organizer (Spring 1998 to Spring 1999)
- Co-advisor for the CS-Math major (1998-2000)
- CS Freshman Coordinator (Fall 1999)

Office Safety Committee, HP labs (2001-04)

U. Illinois departmental

- 30 qualifying committees (2006-2021)
- Intro Sequence revision committee (2006-2007)
- Teaching evaluation and improvement (2006-2014)
- Departmental coordinator of TA training and management, Fall 2006 to Spring 2010
- Managed the department's proctored exam room, 2013-2019
- Coordinator of the CS proficiency exams, Spring 2012 to Spring 2018; Co-coordinator Spring 2020 to present
- Undergraduate Study (2006-2014, 2020-present)
- Ad hoc Governance Committee Fall 2015 to Fall 2016
- Faculty undergraduate mentor 2007 to present
- Student Awards committees, 2006 to Spring 2019 (chair from Fall 2017)
- Undergraduate Awards committees, Fall 2019 to Spring 2021 (chair 2019-2020)
- Faculty co-mentor for Women in Computer Science Fall 2017-Spring 2020

- Academic Appeals Committee (formerly Student grievance committee), Spring 2011 to Spring 2018 (chair from Fall 2013)
- Capricious Grading committee, Fall 2020 to present
- Instructional Designer Steering Committee (Fall 2019)
- Four adhoc and hiring committees (2017-21)
- Associate Director of Undergraduate Programs (Fall 2020 to present)

College and Campus

- Academic Integrity Committee, Grainger Engineering College (starting Spring 2022)
- Campus Moodle Advisory Group (Spring 2021 to present)

External Service

Conference program committees:

- American Association for Artificial Intelligence 1997,2022
- International Conference on Robotics and Automation 1997
- Computer Vision and Pattern Recognition 1998, 1998, 1999, 2000 (area chair)
- World Wide Web Conference 2003
- ACM Special Interest Group on Computer Graphics and Interactive Techniques (SIGGRAPH) 2003, 2007
- Association for Computational Linguistics 2011-2019
- Empirical Methods in Natural Language Processing 2009, 2013, 2014, 2020
- International Conference on Semantic Computing 2009, 2010, 2017-2021
- International Joint Conference on Natural Language Processing 2017
- North American Association for Computational Linguistics 2019
- Association for Computational Linguistics/International Joint Conference on Natural Language Processing 2021
- Association for Computational Linguistics Rolling Review 2021

National Science Foundation grant review panels

- Research Initiation Award panel, Robotics and Machine Intelligence Program (1993)
- Regular grant panel, Robotics and Machine Intelligence Program (1995)
- Concept paper review panel, Combined Research-Curriculum Development Program (1996)
- CAREER panel, Robotics and Machine Intelligence Program (1997)
- Regular grant panel, Robotics and Machine Intelligence Program (1998)

Other grant reviewing

- UK National Institute for Health Research proposal review (2018)

Journal Reviewing

- Image and Vision Computing (pre-1994, 1998)
- International Journal of Computer Vision (pre-1994, 1998)
- IEEE Transactions Systems, Man, and Cybernetics (pre-1994)
- Computer Vision, Graphics, and Image Processing (pre-1994)
- IEEE Transactions on Image Processing (pre-1994)
- Artificial Intelligence (pre-1994)
- Vision Research (1994)
- Electronics Letters (1998)
- Image and Vision Computer Journal (1998)
- International Journal of Computer Vision (1998)
- IEEE Multimedia 2003
- IEEE Transactions on Pattern Analysis and Machine Intelligence (pre-1994, 2004, 2005)
- Computer Vision and Image Understanding 2004
- Journal of Computational and Graphical Statistics 2005
- EURASIP Journal on Embedded Systems 2005
- Pervasive Computing 2009
- Journal of Child Language 2009
- ACM Computing Surveys 2011
- Asian Language Information Processing 2014
- Journal of the Association for Information Science and Technology (JASIST) 2016
- Journal of the Acoustical Society of America 2021

Course development and online textbooks

Courses developed or revised significantly

- 22C:162 Computer Vision I (University of Iowa) new lab-based computer vision course (1992-1996)
- CS 273 Theory of Computation (University of Illinois) first offering (Spring 2006, joint with Lenny Pitt)
- CS 173 Discrete Structures (University of Illinois) new textbook, video lectures, on-line homework and exams (Fall 2008 to Spring 2021)
- CS 440 (Artificial Intelligence), video lectures, lecture notes, new topic sequence, autograded programming assignments Fall 2018-Fall 2021

Courses taught

University of Iowa

- 22C:19 Discrete Structures (Fall 1991, Spring 1992, Fall 1993, Spring 1995, Fall and Spring 1996)
- 22C:21 Algorithms and Data Structures (Spring 1993)
- 22C:162 Computer Vision 1 (Fall 1993, 1993, 1995, 1996)
- 22C:262 Computer Vision II (Spring 1993, 1994, 1996, 1997)

Harvey Mudd College

- CS 5 Structured Programming and Problem Solving (Fall 1998, Fall 1999)
- CS 70 Data Structures (Fall 1997, Spring 1998, Fall 1999, Spring 2000)
- CS 132 Compiler Design (Spring 1999)
- CS 151 Artificial Intelligence (all 1998, Spring 2000)
- CS 153 Computer Vision (Spring 1998)

University of Illinois

- CS 173 Discrete Structures (Fall 2008 until Spring 2018, Spring 2019, Spring 2020, Spring 2021)
- CS 273 Theory of Computation (Spring 2006 through Spring 2008)
- CS 440 Artificial Intelligence (Fall 2018, Fall 2019, Fall 2020, Fall 2021)

Student supervision

PhD theses:

- Min Gyo Chung (University of Iowa, 1996) “Integration of Color into Partial Boundary Matching: via Solving Pictorial Jigsaw Puzzle”
- Dan Stevenson (University of Iowa, 1997) “Envision: A Portable Image Programming Environment”
- Sang-Kyun Kim (University of Iowa 1997) “An Efficient Road Sign Detection and Recognition Algorithm”

MS theses:

- University of Iowa: Marty Christensen (joint with John Huntley in English, 1994), Ramesh Raskar (1995), Kerri Price (1996), Todd Brandau (1997, joint with Jon Simon and Joe Kearney)
- University of Illinois: Cassandra Jacobs (2016), Flora Xiao (2019)

MS-level projects

- University of Iowa, MS final projects: Bubpha Thongphasuk (1995), Ramakrishna R. Chada (1994), Jeff Martin (1996, joint), Todd Brandau (June 1997, joint with Jon Simon and Joe Kearney)

- University of Iowa, Ph.D. qualifying projects: Bhavesh Mehta (1993), Dan Stevenson (1995), Sang-Kyun Kim (joint with David Forsyth, 1995), Marie Roch (1995), Pete Sauerbrei (1996)
- University of Illinois, qual project (linguistics): Nicole Wong (2011)

Undergraduate reading courses, Harvey Mudd College:

- Robin Clark (1998), Kelsey Anderson (1998), Bill Williams (1998)

Undergraduate projects

- University of Iowa: Matthew Schaub (1992), Svetlana Yarmitskaya (1993), Karissa Hobert (1994), Lisa Freeburg (1994-95, honors thesis), Amy Josefczyk (1995), Marcus Cooley (1996), Louise Van der Merwe (1996)
- Harvey Mudd College: Matthew Dharm (1998), Michael Balloni (1998), Brooks Davis (1998), Jeff Hartline (1998), Andrew Bernat (1998), Kim Wallmark (1998), Virginia Stoll (1998)
- HP Laboratories: Caroline Gattein (2001)
- University of Illinois: Alek Storm (2001), Charles Erwin (2012)

Student group projects, Harvey Mudd College (4-5 students each)

- Optivus clinic (1997-98)
- Robotics/National Semiconductor clinic (1997-98, joint with Anthony Bright)
- Legato clinic (1998-99)
- Robotics team (1998-99, joint with Carl Baumgaertner)
- Disney clinic (1999-2000)

Reader on theses

PhD theses

- University of Iowa, Computer Science: Stuart Hansen (1993), Jim Jones (1997)
- University of Iowa, Mathematics: Yan Chen (1994), Aaron Trautwein (1995) Doug Bullock (1995), Monica Meissen (1997), Eric Rawdon (1997)
- University of Illinois: Laehoon Kim (2010, ECE), Art Kantor (2010), Alina Khasanova (2012, linguistics)

Master's theses

- University of Iowa, 1991-1996: Don Whalen, Marty Kuhn, Jeffray Chungath (Biomed Eng), Shaheen Bahauddin, Xiaowen Li, Nicolae Duta