DANIEL D. GARCIA

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EDUCATION

MASSACHUSETTS INSTITUTE OF TECHNOLOGY — Cambridge, MA

B.S. in Computer Science, 1990
B.S. in Electrical Engineering, 1990

UNIVERSITY OF CALIFORNIA, BERKELEY — Berkeley, CA

M.S. in Computer Science, 1995
Ph.D. in Computer Science, 2000. Specialization: computer graphics and scientific visualization. Brian Barsky, advisor.

TEACHING AWARDS

- Outstanding Graduate Student Instructor in Computer Science (1992)
- Electrical Engineering and Computer Science Outstanding Graduate Student Instructor (1997)
- Computer Science Division Diane S. McEntyre Award for Excellence in Teaching (2002)
- Highest course "teaching effectiveness" rating of any CS lower division instructor, ever (6.6, tied with 1 other) (2004)
- Computer Science Division Information Technology Faculty Award for Excellence in Undergraduate Teaching (2005)
- UC Berkeley "Everyday Hero" Award (2005)
- Highest course "teaching effectiveness" rating of any CS lower division instructor, ever (6.7, tied with 1 other) (2006)

TEACHING INTERESTS

Core CS introductory curricula (CS39n, CS3, CS61[abc]), CS teaching techniques (CS30[12]), self-paced programming (CS3s, CS9[a-h], CS47[abc]), game theory ("GamesCrafters" CS198, Math274), computer animation ("UCBUGG" CS198, CNM190, CS39a), Macintosh software development for OS X ("MS-DOS X" CS198), and computer graphics (CS184).

ACADEMIC HONORS

- Eastman Kodak Minority Scholarship for Academic Excellence (1986-1989)
- National Consortium for Graduate Degrees in Engineering (GEM) Fellowship (1989-1992)
- Irving and Lucile Smith Scholarship (1991-1992)
- National Science Foundation Minority Graduate Fellowship (1993-1996)
- Dept. of Education Graduate Assistance in Areas of National Need Fellowship (1998-1999)

Daniel D. Garcia

TEACHING EXPERIENCE

LECTURER, UNIVERSITY OF CALIFORNIA, BERKELEY (Fa00-Sp03) ***Berkeley, CA***

LECTURER PSOE, UNIVERSITY OF CALIFORNIA, BERKELEY (Fa03-Sp06) ***Berkeley, CA***

LECTURER SOE, UNIVERSITY OF CALIFORNIA, BERKELEY (Sp06-present) ***Berkeley, CA***

Computer Science 39n **The Beauty and Joy of Computing** (Fa09)

Designed and piloted new non-majors course with fellow Lecturer SOE Brian Harvey (CS), TAs Colleen Lewis and George Wang, and other student developers. This involved co-creating 15 two-hour labs, 15 one-hour lectures, 15 homework assignments, two multi-week projects, and one term paper assignment. Introduced pair programming and added with-computer (i.e., Scratch IDE) exams. We hope this course can serve as a model and pilot for the groundbreaking new CollegeBoard Advanced Placement computing course: "Computer Science : Principles".

Computer Science 3 **Introduction to Symbolic Programming** (Fa00, Sp01, Fa01, Fa02, Sp03, Fa03, Fa08, Sp09)

Designed full online lecture notes for two different books, implemented web-based grading software, designed several new graphic fractal and MapReduce lectures, labs and assignments, designed entirely new final project "GAMESMAN: Shall We Play a Game?" incorporating game theory and basic computer graphics. It was selected as a "Nifty Assignment" and presented at the Spring 2002 SIGCSE Conference. Ratings: 6.3 (Fa02), 6.0 (Sp01), 6.0 (Fa01), 6.3 (Fa02), 5.5 (Sp03), 6.2 (Fa03), 6.3 (Fa08), 5.9 (Sp09).

Computer Science 4 **Introduction to Computing for Engineers** (Fa04)

Designed and piloted entirely new course for College of Engineering with Professor Kathy Yelick (CS) & Professor David Auslander (ME). This involved co-creating 30 two-hour labs, 30 lectures, 15 homework assignments and an end-of-semester project: a lunar lander simulation. Introduced pair programming and added with-computer (i.e., Java IDE) exams; feedback for these was almost universally positive. Ratings: 6.6 (Fa04).

Computer Science 3s, 9[a-h], 47[abc] **Self-paced Programming Courses** (Sp05, Fa05, Sp06, Fa06, Sp07, Sp08, Fa08, Sp09, Fa09)

Team-taught with Lecturer Mike Clancy (Sp05, Fa05). Authored new CS9a (Matlab) projects and revised several others. Designed (with TA Ka-Ping Yee and Mike Clancy) new CS9h Python course and revised CS9g (Java) course with new exams and projects. Designed & launched a novel pacing system to encourage students to complete their work on time. All student interaction is with paid undergraduate and graduate tutors; there are no faculty ratings.

Computer Science 61a **Structure and Interpretation of Computer Programs** (Sp01, Sp02)

Team-taught with Lecturer Brian Harvey (Sp01). Archived some chalkboard figures drawn during the semester to EPS graphic format for inclusion in a future reader. Ratings: 4.9 (Sp01), 5.7 (Sp02)

Computer Science 61b **Data Structures and Advanced Programming** (Fa03)

Team-taught with Professor Kathy Yelick (Fa03). Instituted "just in time learning", which involved several novel pedagogical concepts: peer instruction, reading quizzes and "ConcepTests" during lecture. Designed a new project (`malloc` simulation) and a new module (Domineering) for end-of-semester game project. Rating: 6.0 (Fa03)

Computer Science 61c **Machine Structures** (Fa01, Fa02, Sp04, Fa04, Sp05, Fa05, Fa06, Sp07, Sp08)

Team-taught with Professor David Patterson (Fa01, Fa02). Designed many new assignments and projects. Instituted "just in time learning", which involved several novel pedagogical concepts: peer instruction, reading quizzes and lecture "ConcepTests". Presented results to faculty. Ratings: 6.1 (Fa01), 6.3 (Fa02), 6.2 (Sp04), 5.9 (Fa04), 6.4 (Sp05), 6.4 (Fa05), 6.7 (Fa06), 6.3 (Sp07), 6.6 (Sp08)

Computer Science 301 **Teaching Techniques for Computer Science** (Sp01, Sp02, Sp03)

Team-taught with Professor Brian Barsky (Sp03). Gave course much-needed face-lift with GSI Andy Begel (Sp01). Created lecture notes, online roster, videotaping, `cgi-bin` programs for automatic, online journal entry & editing for teaching reflection. Introduced faculty guest lectures. Ratings: 6.3 (Sp01), 6.5 (Sp02), 5.5 (Sp03), 5.9 (Sp08)

Computer Science 98/198 **UC Berkeley Undergraduate Graphics Group (UCBUGG)** (Fa01-Sp05, DeCal-run Fa05-present)
Founded this novel course in Fa01. In eight semesters, supervised over 50 undergraduates through many graphics projects: generating and animating 2D & 3D fractals, building dynamic scene graphs using SLIDE, and using Maya and POV-ray animation software. Supervised design of "Berkeley-Stanford CS Day" logo. Directed several Maya CG animations: "Zoom into Gates Hall", "ThePlay3D", "Jumbotron", "Manakin Love", "Rube", and "The Plagues". Invited many CG industry guests to give guest lectures and share their work and real-world experiences. Alumni work for Pixar, Dreamworks, Sony Pictures Imageworks & Walt Disney Studios. `http://ucbugg.berkeley.edu/`

Computer Science 98/198 **Macintosh Student Developers for OS X (MS-DOS X)** (Fa01-Sp05, DeCal-run Fa05-present)
Founded this novel course in Fa01. In eight semesters, supervised over 50 undergraduates with Macintosh OS X programming. Met weekly and facilitated design and implementation of semester-long projects culminating in polished applications and utilities. Several alumni work for Apple, Inc. `http://msdosx.berkeley.edu/`

Computer Science 98/198 **Undergraduate Game Theory Research (GamesCrafters)** (Fa01-present)
Founded this novel group in Fa01. Since then, supervised over 250 undergraduates through many combinatorial & computational game theory projects. Most students coded game modules into the GAMESMAN software system that "solves" games for playing and analysis. Some advanced students implemented intuitive Tcl/Tk and Javascript graphical interfaces to supplement the default text interface. Others added architectural enhancements to the primary brute-force search engine, allowing for more efficient solving, analysis, and the ability to cache the game databases locally. Solved games whose value was not previously known, including famed "Three dot" by Edward DeBono who had designed the game to be a draw, but is in fact a 1st-player win! `http://gamescrafters.berkeley.edu/`

Center for New Media 190 **Advanced Digital Animation** (Fa06, Sp07, Fa08, Sp09)
Founded this novel course in Fa06 with Art Practice Prof Greg Niemeyer. Intended as a one-year course for advanced students who wish to work in visual effects, animation or entertainment industries. It guided them through the production process in an environment similar to that of a production house. Welcomed guest lecturers from Pixar, PDI/Dreamworks, LucasFilm & Electronic Arts who shared their experiences with the class. Student teams of 6-10 produce a 30-second short film at the completion of the course. In Sp07, two shorts ("Elephant Love" and "Top Dog") were produced, screened at Pixar and PDI/Dreamworks and received acclaim. In Sp09, students produced two 1080p high definition films: "Rumble in the Roses" and "Runaway". These were screened at Pixar, PDI/Dreamworks and LucasFilm, again to acclaim. Ratings: 6.1 (Fa08), 4.8 (Sp09) `http://cloud.cs.berkeley.edu/~cnm/`

GRADUATE STUDENT INSTRUCTOR (GSI), UNIVERSITY OF CALIFORNIA, BERKELEY ***Berkeley, CA***

Computer Science CS3s, CS9[a-f] **Self-paced Programming Courses** (Fa92, Sp93, Sp94)
Helped students one-on-one with programming assignments; administered quizzes.

Computer Science 39a **Introduction to Computer Animation** (Sp94, Sp95, Fa95, Fa96, Fa97)
Developed novel freshman seminar in Sp94 with Professor Brian A. Barsky. Gave lectures; created and graded assignments and final projects. Won departmental Outstanding GSI award in Fa97 (*last* semester as a GSI).

Computer Science 184 **Foundations of Computer Graphics** (Fa92, Sp93, Fa93, Fa94, Sp96, Fa96, Fa97)
Taught lectures & discussion sections, wrote & graded assignments, projects and exams; created first course web page; designed scripts for automating web submissions. Won Outstanding GSI award in Fa92 (*first* semester as a GSI).

Computer Science 294 **Graduate Survey in Virtual Reality** (Sp97)
Provided technical support and graded final projects and presentations.

RESEARCH INTERESTS

Computer Science Education
Investigate novel techniques and applications for improving CS instruction, especially introductory courses.
Build archive of "Kinesthetic Learning Activities (KLAs)", to tap active learning. `http://ws.cs.ubc.ca/~kla/`
Collect and share great teaching tips. `http://www.cs.berkeley.edu/~ddgarcia/teaching/tips/`

Build Technology that Educators of Computing Hail (TECH) archive. http://plonetest.acm.org/techtools/
Help build ENSEMBLE NDSL pathway for computing education. http://www.computingportal.org/
Build system to deliver synchronized EECS lecture webcasts and notes. http://wla.berkeley.edu/
Create CS Illustrated. http://www.cs.berkeley.edu/~ddgarcia/teaching/csillustrated/
Infuse parallelism (Scheme MapReduce, Java MapReduce, MPI and pthreads) into introductory CS courses: http://www.eecs.berkeley.edu/Pubs/TechRpts/2008/EECS-2008-34.html

Combinatorial and Computational Game theory

Automatically determine and summarize a two-person, perfect-information game's ideal strategy. Continue to build tools that make solving games efficient, playing enjoyable and analysis easy. Continue to use this framework for positive undergraduate software engineering experiences. http://gamescrafters.berkeley.edu/

Computer Graphics

Remain current with the state of the art in computer graphics, scientific visualization and computer animation.

COMMITTEE SERVICE

- CS committee to add teaching as a CS outside minor – Surveyed grads; presented results (1997)
- CS technology-for-teaching installation of PRS feedback devices in 306 Soda, 2050 VLSB (2003)
- CS committee to revise lower-division to improve programming skills (2003-2004)
- COE committee to review jr. transfer files for undergraduate admissions (2002, 2005, 2007)
- COE subcommittee to design & pilot new CS course (CS4) for COE common first year curriculum (2003-2005)
- COE computing and computer science education committee (2003-2007)
- EECS Undergraduate Study committee (2005-2007)
- COE CITRIS headquarters building cyber cafe and instructional audio/video needs committees (2004-2009)
- Letters & Science computer science group advising sessions & summer CalSO seminars (2001-present)
- CS grad student review committee photo coordinator (unofficial, 2002-present)
- EECS audio/video czar (2002-present)
- EECS Undergraduate Advising (2003-present)
- COE CITRIS headquarters building construction time-lapse movie archiving (2004-present)
- EECS Computing, Networking & Instructional Labs committee (2005-present)

PROFESSIONAL SOCIETIES

- International Society for Optical Engineering, SPIE (1999)
- Eta Kappa Nu Electrical Engineering Honor Society (1990-present)
- Association of Computer Machinery (1988-present)

PROFESSIONAL SERVICE

- ACM SIGGRAPH student volunteer (1995-1998)
- ACM SIGCSE student volunteer (2000)
- ACM Education Council, technology and tools task force chair (2006-present)
- ACM Education Board (2007-present)
- ACM SIGCSE doctoral consortium discussant (2007)
- ACM SIGCSE student conference aide co-coordinator (2008)
- ACM SIGCSE New Teaching Faculty Roundtable (NTFR) co-coordinator (2009)
- Berkeley Foundation for Opportunities in Information Technology (BFOIT) faculty co-advisor (2007-present)

COMPUTER LANGUAGES & TOOLS

C, Scheme & Common Lisp, Python, Tcl/Tk, Java, csh, *nix, html, Javascript, Perl, Matlab, Mathematica & Basic. Fluent in Photoshop, Illustrator, Premiere, After Effects & web design tools. Mac power-user for 20+ years.

INVITED TALKS

- *Employing Web Technology in Classes* at Berkeley Multimedia Research Center retreat (1997)
- *Technology in Education* at "Teaching Psychology in the 21st Century" workshop (1997)
- *How to be an Outstanding Graduate Student Instructor* for CS301 (CS GSI Teaching Techniques) course (1993-1998)
- *Computer Science Workshop* for GSI orientation and teaching conference (1999)
- *Keynote* for Berkeley Foundation for Opportunities in Information Technology (BFOIT) session (2001-2002, 2006)
- *The History of Computer Graphics* fireside chat at Foothill residence hall (2002)
- *Keynote* for Computer Science Business Association's "Introduction to CS" session (2002)
- *Keynote* for Berkeley's Coalition for Diversity engineering session (2003)
- *Keynote* for Center for Undergraduate Matters prospective minority engineering recruiting (2002, 2005)
- *An Introduction to Combinatorial Game Theory* for Eta Kappa Nu honor society general meeting (2002, 2005)
- *Faculty Address* at College of Letters & Science Computer Science commencement (2004)
- *Graphics, Game Theory and Genealogy* at Sandia National Labs (2004, 2006)
- *Peer Instruction w/Clickers in CS61C* at UC Berkeley "Teaching, Learning and Technology" Symposium (2007)
- *DART Opportunities for CS Students* at UC Berkeley "Teaching, Learning and Technology" Symposium (2007)
- *Computer Science keynote* for College Board AP annual conference (2007)
- *Teaching Tips, Best Practices and Other Initiatives to Improve CS Education* at University of Melbourne, La Trobe University, RMIT University, and as the keynote for the Fourth Melbourne Computing Education Conventicle (2007)
- *200 Students Can't Be Wrong! GamesCrafters, a Computational Game Theory Group* at University of Melbourne (2007)
- *Hashing* guest lecture in CS70 : Discrete Mathematics for Computer Science (2008)
- *Twenty Top Time-Tested TA Teaching Tips* at UC Berkeley Teaching Conference for International GSIs (2008)
- *Infusing Concurrency into the Intro CS Undergraduate Curricula* at the Intel Developer Forum (2008)
- *What is Digital Media* guest lecture in Berkeley Art Museum/Pacific Film Archives Digital Cultures 0101 (2008)
- *Computer Science & GamesCrafters* guest lecture in E92: Perspectives in Engineering, BFOIT (2008)

PUBLICATIONS AND PRESENTATIONS

Book Chapters

1. Garcia, Daniel D. Xdom: A Graphical, X-based Front-End for Domineering, *Games of No Chance*, Richard J. Nowakowski, editor. Cambridge University Press, 1996, pp. 311-313.

Journal Articles

1. Barsky, Brian A.; Klein, Stanley A.; and Garcia, Daniel D. Gaussian Power with Cylinder Vector Field Representation for Corneal Topography Maps, *Optometry and Vision Science*, Vol. 74, No. 11, Nov, 1997.

2. Klein, Stanley A. and Garcia, Daniel D. Line of Sight and Alternative Representations of Aberrations of the Eye, *Journal of Refractive Surgery*, Vol. 16, Sep/Oct 2000.

3. Ginat, David; and Garcia, Daniel D. Ordering Patterns and List Inversions, *Journal of CS Education*, Nov 2003.

Conference and Workshop Presentations

1. Barsky, Brian A.; Klein, Stanley A.; and Garcia, Daniel D. Gaussian Power, Mean Sphere, and Cylinder Representations for Corneal Maps with Applications to the Diagnosis of Keratoconus, Association for Research in Vision and Ophthalmology,

Fort Lauderdale, FL, April 21-26, 1996. Abstract in *Investigative Ophthalmology & Visual Science*, Vol.37, No. 3, February 15, 1996, pp. 5558.

2. Kumpf, Roger W.; Barsky, Brian A.; and Garcia, Daniel D. Scientific Visualization Techniques for Displaying Corneal Shape, Mopane 1996: *Refraction and Keratometry: The Mathematics and Statistics*, Mopane, South Africa, August 3-5, 1996.

3. Garcia, Daniel D. and Barsky, Brian A. The OPTICAL Project at UC Berkeley: Computer Aided Cornea Modeling and Visualization (video in the Electronic Theatre), *SIGGRAPH* '96, New Orleans, LA, August 4-9, 1996.

4. van de Pol, Corina; Klein, Stanley A.; Garcia, Daniel D.; and Barsky, Brian New Representations of Corneal Refractive Error and Aberrations, *Optical Society of America*, Long Beach, CA, October 1997.

5. Garcia, Daniel D. and Barsky, Brian A. Corneal Astigmatism and Fluorescein Patterns: The OPTICAL Project at UC Berkeley, video which won first prize for scientific visualization at the *1997 SIGGRAPH Amateur and Student Computer Animation / Design Contest*, San Francisco, CA, October 21, 1997.

6. Garcia, Daniel D.; Barsky, Brian A.; and Klein, Stanley A. CWhatUC: A Visual Acuity Simulator, *Proceedings of SPIE* / IS&T Symposium on Electronic Imaging: Science and Technology, San Jose, CA, January 24-30, 1998.

7. Garcia, Daniel D.; Barsky, Brian A.; and Klein, Stanley A. The OPTICAL Project at UC Berkeley: Simulating Visual Acuity, *Medicine Meets Virtual Reality: 6 (Art, Science, Technology: Healthcare (r)Evolution)*, San Diego, CA, January 28-31, 1998.

8. van de Pol, Corina; Tran, Henry H.; Garcia, Daniel D.; and Klein, Stanley Three-Dimensional Analysis of Corneal Image Forming Properties: A Monocular Diplopia Example, presented at *Vision Science and Its Applications* Meeting, Santa Fe, NM, February 6-9, 1998.

9. Garcia, Daniel D.; Barsky, Brian A.; and Klein, Stanley A. Wavefront Coherence Area for Predicting Visual Acuity of Post-PRK and Post-PARK Refractive Surgery Patients, *Proceedings of SPIE/IS&T* Symposium on Electronic Imaging: Science and Technology, San Jose, CA, January 23-29, 1999.

10. Barsky, Brian, A.; Chen, Billy P.; Berg, Alexander C.; Moutet, Maxence; Garcia, Daniel D.; Klein, Stanley A. Incorporating Camera Models, Ocular Models, and Actual Patient Eye Data for Photo-Realistic and Vision-Realistic Rendering, Abstract in the 5th International Conference on Mathematical Methods for Curves and Surfaces, Oslo, NORWAY, June 29-July 4, 2000.

11. Ginat, David; Garcia, Daniel D.; Bergin, Joseph; Astrachan, Owen. Colorful Illustrations of Algorithmic Design Techniques and Problem Solving (Special Session), *SIGCSE 2001*, Charlotte, NC, February 23, 2001.

12. Ginat, David; and Garcia, Daniel D.; Mathematical Games as an Aid for CS Instruction (Birds of a Feather), *SIGCSE 2001*, Charlotte, NC, February 23, 2001.

13. Klein, Stanley A.; Barsky, Brian A.; and Garcia, Daniel D. Computer Simulation of Vision-Based Synthetic Images using Hartmann-Shack-Derived Wavefront Aberrations, *Association for Research in Vision and Ophthalmology 2001 conference*, Fort Lauderdale, FL, May 3, 2001

14. Garcia, Daniel D.; Ginat, David; Gasarch, William I. Aha! An Illuminating Perspective (Special Session), *SIGCSE 2002*, Northern Kentucky, KY, February 28, 2002.

15. Garcia, Daniel D.; Levine, David B.; Estell, John K.; Reed, David; Zelinski, Julie. Nifty Assignments (Special Session), *SIGCSE 2002*, Northern Kentucky, KY, March 2, 2002.

16. Barsky, Brian A.; Bargteil, Adam W.; Garcia, Daniel D.; and Klein, Stanley A., Introducing Vision-Realistic Rendering, *Eurographics Rendering Workshop*, Pisa, June 26-28, 2002.

17. Garcia, Daniel D.; Ginat, David; and Henderson, Peter. Everything You Always Wanted To Know About Game Theory* (*but were afraid to ask) (Special Session), *SIGCSE 2003*, Reno, NV, February 20, 2003.

18. Begel, Andrew; Garcia, Daniel D.; and Wolfman, Steven A. Kinesthetic Learning in the Classroom (Special Session), *SIGCSE 2004*, Norfolk, VA, March 5, 2004.

19. Dougherty, John P.; Garcia, Daniel D.; Horton, Thomas B.; Rodger, and Susan H. Teaching Faculty Positions (Panel), *SIGCSE 2004*, Norfolk, VA, March 5, 2004.

20. Ginat, David; Astrachan, Owen; Garcia, Daniel D.; and Guzdial, Mark. "But it looks right!": The Bugs Students Don't See (Special Session), *SIGCSE 2004*, Norfolk, VA, March 5, 2004.

21. Begel, Andrew; Garcia, Daniel D.; and Wolfman, Steven A. Kinesthetic Learning in the Classroom (Workshop), *SIGCSE 2005*, St. Louis, MO, February 23-27, 2005.

22. Ginat, David; Anderson, Richard; Garcia, Daniel D.; and Rasala, Richard. Randomness and Probability in the Early CS Courses (Special Session), *SIGCSE 2005*, St. Louis, MO, February 23-27, 2005.

23. Garcia, Daniel D. One size fits all?! One size fits none!, *Integrative Computing Education & Research (ICER) – West NSF Workshop*, Palo Alto, CA, January 27-28, 2006.

24. Cortina, Thomas J; Garcia, Daniel D.; and Slater, Don. Teaching Track Faculty in CS (Birds of a Feather), *SIGCSE 2006*, Houston, TX, March 1-4, 2006.

25. Garcia, Daniel D.; Astrachan, Owen; Parlante, Nick; and Reges, Stuart. Teaching Tips We Wish They'd Told Us Before We Started (Panel), *SIGCSE 2007*, Covington, KY, March 7-10, 2007.

26. Forbes, Jeffrey; and Garcia, Daniel D. "…But What Do the Top-Rated Schools Do?" A Survey of Introductory Computer Science Curricula (Special Session), *SIGCSE 2007*, Covington, KY, March 7-10, 2007.

27. Slater, Don and Garcia, Daniel D. Teaching Track Faculty in CS (Birds of a Feather), *SIGCSE 2007*, Covington, KY, March 7-10, 2007.

28. McGettrick, Andrew; Garcia, Daniel D.; Roberts, Eric; and Stephenson, Chris. Rediscovering the Passion, Beauty, Joy and Awe : Making Computing Fun Again (Special Session), *SIGCSE 2008*, Portland, OR, March 12-15, 2008.

29. Boustedt, Jonas; Tenenberg, Josh; Eastman, Caroline M.; Gestwicki, Paul; McCartney, Robert; Anderson, Scott D.; Garcia, Daniel D.; and Menzin, Margaret. It Seemed Like a Good Idea at the Time (Special Session), *SIGCSE 2008*, Portland, OR, March 12-15, 2008.

30. Slater, Don; and Garcia, Daniel D. Teaching Track Faculty in CS (Birds of a Feather), *SIGCSE 2008*, Portland, OR, March 12-15, 2008.

31. Garcia, Daniel D., Ishida, Valerie and Johnson, Maggie. Technology and Tools for Computing Educators (Birds of a Feather), *SIGCSE 2008*, Portland, OR, March 12-15, 2008.

32. Johnson, Matthew; Liao, Robert H.; Rasmussen, Alexander; Sridharan, Ramesh; Garcia, Daniel D. and Harvey, Brian. Infusing Parallelism into Introductory Computer Science using MapReduce (Poster), *SIGCSE 2008*, Portland, OR, March 12-15, 2008.

33. Chen, Yanpei; Fong, Patricia C.; Hong, Jerry; Mahajan, Deepa; Okita, Cynthia; Poll, David Eitan; Roytman, Alan; Sadgat, Ofer and Garcia, Daniel D. 200 Students Can't Be Wrong! GamesCrafters, a Computational Game Theory Undergraduate Research and Development Group at UC Berkeley (Paper). *AAAI Spring Symposium 2008: "Using AI to motivate greater participation in Computer Science",* Stanford, CA, March 26-28, 2008.

34. Yim, Ketrina; Garcia, Daniel D. and Ahn, Sally. Computer Science Illustrated (Poster), *SIGCSE 2009*, Chattanooga, TN, March 4-7, 2009.

35. Brusilovsky, Peter; Carpenter, Steve; Cassel, Lillian; Delcambre, Lois; Edwards, Steve; Fan, Patrick; Fox, Edward; Furuta, Richard; Garcia, Dan; Hislop, Greg; Johnson, Maggie; Maier, David; Perez-Quinones, Manuel; Seidman, Steve; Shipman, Frank; Stephenson, Chris; Topi, Heikki and York, Bryant; Ensemble: Creating a National Digital Library for Computing Education (Poster), *SIGCSE 2009*, Chattanooga, TN, March 4-7, 2009.

36. Garcia, Daniel D.; Cutler, Robb; Dodds, Zachary; Roberts, Eric; and Young, Alison. Rediscovering the Passion, Beauty, Joy and Awe : Making Computing Fun Again, continued (Special Session), *SIGCSE 2009*, Chattanooga, TN, March 4-7, 2009.

37. Garcia, Daniel D. and Zelenski, Julie. New Teaching Faculty Roundtable (NTFR) (Pre-symposium event), *SIGCSE 2009*, Chattanooga, TN, March 4-7, 2009.

38. Slater, Don; and Garcia, Daniel D. Teaching Track Faculty in CS (Birds of a Feather), *SIGCSE 2009*, Chattanooga, TN, March 4-7, 2009.

39. Garcia, Daniel D.; Bailes, Don and Fincher, Sally. Technology that Educators of Computing Hail (TECH) (Birds of a Feather), *SIGCSE 2009*, Chattanooga, TN, March 4-7, 2009.

Non-Refereed Technical Reports

1. Garcia, Daniel D. SPAM: Spline-parameterized adjustable motion, In Procedural Modeling, *EECS UC Berkeley Technical Report CSD-94-860*, December 1994.

2. Zhang, Gene; Carr, Sean; Iyengar, Sameer; Edelstein, Hava; Liu, Albert and Garcia, Daniel D. The Weiner Lecture Archives : An Ontology-Driven Interface for Viewing Synchronized Lectures and Notes, *EECS UC Berkeley Tech. Rep. UCB/EECS-2007-135*, Nov. 2007.

3. Johnson, Matthew; Liao, Robert H.; Rasmussen, Alexander; Sridharan, Ramesh; Garcia, Daniel D. and Harvey, Brian. Infusing Cluster Computing into Introductory Computer Science Curriculum, *EECS UC Berkeley Tech. Rep.,* Nov. 2007.

Theses

1. Garcia, Daniel D. Serial-Parallel Software Simulation, *B.S. Thesis*; Massachusetts Institute of Technology, May, 1990.

2. Garcia, Daniel D. GAMESMAN: A finite, two-person, perfect-information game generator, *M.S. Thesis*; University of California, Berkeley, May, 1995.

3. Garcia, Daniel D. CWhatUC : Software Tools for Predicting, Visualizing and Simulating Corneal Visual Acuity, *Ph.D. Thesis*; University of California, Berkeley, May, 2000.

Theses Supervised

1. Huddleston, Jeremy. Advanced Digital Animation Curriculum Development: An Interdisciplinary Approach, *MS Thesis*, EECS Dept, University of California, Berkeley, May, 2009.

2. Yim, Ketrina. Computer Science Illustrated, *MS Project*, EECS Dept, University of California, Berkeley, May, 2009.

3. Bryce Lee. Interface Design and Implementation of a Collaborative Observatory for Natural Environments. *MS Project* (2nd reader*)*, EECS Dept, University of California, Berkeley, May, 2008.

Daniel D. Garcia

GRANTS AWARDED

1. **UCB Course Improvement Grant, CS301 (2001), A half-semester TA, Dan Garcia PI**
   Together with TA Andrew Begel, created lecture notes, online roster, videotaping, `cgi-bin` programs which allowed for automatic, online journal entry & editing for teaching reflection.

2. **UCB Committee on Teaching Instructional Minigrant (2004), $500 cash, Dan Garcia PI**
   Purchased royalty-free music & sound effects (on CD-ROM and DVD-ROM) for computer graphics and animation pieces.

3. **HP Technology-for-Teaching Initiative (2004), $17.5K cash and $53K equipment, Dan Garcia PI**
   Designed CS4 around a 20-laptop "HP mobile lab". Created a novel lab space with small tables for 6-8 students to sit together and work on a problem concurrently. Students participated in engaging laptops-closed group lab activities completed together, facing each other. Instituted "pair programming" – pairs of students shared a single laptop, and "with-computer exams" – students used the Java IDE and API reference docs when working on these questions.

4. **UCB Townsend for the Humanities GROUP Award (2006), $5K cash, Dan Garcia co-PI, Greg Niemeyer co-PI**
   Together with Art Professor Greg Niemeyer and Pixar, designed novel CNM190 "Advanced Digital Animation" course.

5. **UCB Committee on Teaching Instructional Minigrant (2008), $3.6K cash, Dan Garcia PI**
   Funding to support "Computer Science Illustrated" project; labor and materials.

6. **Bears Breaking Boundaries Contest for Curricular Innovation (2009), $1K cash, Dan Garcia PI**
   Funding to support "CS39N : The Beauty and Joy of Computing" course development.

7. **Lockheed Martin Curricular Innovation (2009), $50K cash, Dan Garcia co-PI, Brian Harvey co-PI**
   Funding to support "CS39N : The Beauty and Joy of Computing" course development.

8. **Apple, Inc. (2009), $150K equipment, Dan Garcia PI**
   Donation of 30 Mac Pro workstations + displays for EECS / CITRIS.

REFERENCES

Senior Lecturer Michael Clancy
`clancy@cs.berkeley.edu`
(510) 642-7017

Lecturer SOE Brian Harvey
`bh@cs.berkeley.edu`
(510) 642-8311

Professor David Patterson
`pattrsn@cs.berkeley.edu`
(510) 642-6587

Lecturer SOE Babak Ayazifar
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