

Corporate influence and the academic computer
science discipline. [1: Business dealings, and
debates at Stanford CS]

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abstract

Stanford's "regular" computer science faculty, in this study, are experimental subjects of a sociological work focusing on the corporatization of their profession and science.

All 60-some current "regular faculty" of computer science at Stanford were submitted to a sociological analysis in this work.

The Death of Archimedes depicts a soldier raising a sword with fatal intent while the mathematician polymath continues his work unshaken, undisturbed.

In computer science, the death of Archimedes never happens.

This is because, in that final moment, the scientist and their allegorical enemy come to some agreement instead. Gold against corrupt, tainted knowledge.

Street smart and MIT or Stanford educated, world traveled and seasoned in worldly affairs, as adroit in business dealings as in debates, only the sky is the limit with individuals as ambitious as the ones found here :

Their institution is closer to Disneyland, (a comparison found often in disillusioned descriptions by their best alumni), than any dreamed up and nostalgic Cambridge or Oxford of the early 20th c.. Their buildings are named "Gates", "Knight" and even "Nvidia" rather than Newton, their professors and administrators have no shame about paid-for chairs called "Sequoia Capital" or "Canon USA", leaving little doubt about exactly what kind of business, or "hustles" these brave new world academics entertain and regularly engage in. Day-light teachers, moonlight entrepreneurs.

The regular faculty of computer science at Stanford, unbeknownst to them, are less Archimedes than gangster rappers : just as their lyrics purport, from 50 Cent to Rick Ross, "*they stay hustlin'*".

Stanford's motto ('The wind of freedom blows') must of course be understood in a Libertarian sense : for the wind of free market ideology blows strong at Stanford, outdoing fatal cold winters and ideas of Chicago.

At that most peculiar institution, only surpassed perhaps by MIT in that regard, the future of the capitalistic university, and of education within capitalism can be observed with a 30 or 50 year advance delay, before its destructive effects reach - one should say, 'trickles down' to - other institutions.

Abbreviations found in this work :

G = Google
F = Facebook
MS = Microsoft
HP = Hewlett Packard
DEC = Digital Equipment Corporation
AMZ = Amazon
JANEst = Jane Street
Pr. = Professor
fo. = founder
con. = consultant
f. = fellowship
sch. = scholarship
Mill. = Million(s), implied US Dollars
x/y = company acquired / acquiring company

(the convention was retained that corporations, when abbreviated, are capitalized)

	Sponsored chairs, positions	Corp. funding	Corp	Corporate employment	PhD
Sara Achour	[Assistant]		x	Qualcomm, HP	MIT
Maneesh Agrawala	Forest Baskett Professor (Sun)		x	MS	Stanford
Alex Aiken	Alcatel-Lucent Professor		x	IBM	Cornell
Nima Anari	[Assistant]	G award, MS fellowship	x	G, F, MS, JANEst	Berkeley
Clark Barrett	[Associate]		x	G, Intel, MS	Stanford
Gill Bejerano	[Assistant]	MS, Packard fellowship			Hebrew Univ.
Michael Bernstein	STMicroelectronics Faculty	G award, MS fellowship	x	F	MIT
Jeannette Bohg	[Assistant]				KTH
Dan Boneh	[Professor]	Packard fellowship	x	Voltage Sec./Cisco [founder]	Princeton
Adam Bouland	[Assistant]		x	QC Ware [‘advisor’]	MIT
Emma Brunskill	[Assistant]	G award, MS fellowship			MIT
Moses Charikar	Donald E. Knuth Professor	c. half Mill. from many	x	Google	Stanford
Ron Dror	[Associate]		x	D. E. Shaw	MIT
Zakir Durumeric	[Assistant]	G awards, fellowship	x	Censys [founder]	Michigan
Dawson Engler	[Associate]		x	Coverity [founder], DEC	MIT
Stefano Ermon	[Associate]	MS f., Bloomberg grant			Cornell
Kayvon Fatahalian	[Associate]	G, F, AMZ, Apple, ...*			Stanford
Ron Fedkiw	[Professor]	Packard f., Intel sch.			UCLA
Chelsea Finn	[Assistant]	MS f., Intel award	x	Google Brain	Berkeley
Mike Genesereth	[Professor]		x	CommerceNet [founder]	Harvard
Noah Goodman	[Associate]				Texas Austin
Carlos Guestrin	[Professor**]	IBM fellowship	x	Apple, Turi [founder]	Stanford
Leonidas Guibas	Paul Pigott Professor	G, AMZ, Apple, MS...***	x	DEC, Xerox	Stanford
Patrick Hanrahan	CANON USA Professor		x	Tableau [founder], Pixar	Wisconsin
Tatsu Hashimoto	[Assistant]		x	MS	MIT
John Hennessy	[Professor]		x	G, Silicon Graphics	Stony Brook
Mark Horowitz	Yahoo Founder’s Professor		x	Rambus Inc. [founder]	Stanford
Doug James	[Professor]		x	Pixar	British Columbia
Dan Jurafsky	Jackson Eli Reynolds Professor				Berkeley
Sachin Katti	[Associate]	Packard fellowship	x	Intel	MIT
Oussama Khatib	Weichai Professor				Sup’Aero
Fred Kjoelstad	[Assistant]	G award, Intel f.	x	Accenture, ARM	MIT
Christos Kozyrakis	[Professor]	G, IBM, MS			Berkeley
Anshul Kundaje	[Assistant]		x	IBM	Columbia
Monica Lam	[Professor]		x	Tensilica/Cadence, Moka5	Carnegie Mellon
James Landay	Rajaraman Harinarayan Pr. (AMZ)	c. 5 Mill. from dozens	x	Intel, MS	Carnegie Mellon
Jure Leskovec	[Associate]	MS fellowship			Carnegie Mellon
Philip Levis	[Associate]	MS f., Foundation Capital	x	Kumu Networks [founder]	Berkeley
Fei-Fei Li	Sequoia Capital Professor	G award, MS f., IBM etc.	x	Google [Vice President]	Caltech
Percy Liang	[Associate]	MS fellowship	x	G, MS	Berkeley
Karen Liu	[Associate]	G award			Washington
Tengyu Ma	[Assistant]	IBM fellowship	x	F (Meta AI), MS	Princeton
Chris Manning	Thomas M. Siebel Professor	IBM, Samsung, Toyota etc.	x	G	Stanford
David Mazieres	[Professor]		x	DEC, Bell Labs, many [fo.]	MIT
Nick McKeown	Kleiner Perkins, Mayfield, Sequoia Pr.	HP, Intel scholarships	x	HP, Intel, Nemo/Cisco [fo.]	Berkeley
John Mitchell	Mary and Gordon Crary Family Pr.				MIT
Subhasish Mitra	[Professor]	IBM, Intel awards	x	G, Intel, Cadence etc. [con.]	Stanford
Kunle Olukotun	Cadence Design Professor		x	Afara Websystems/Sun [fo.]	Michigan
John Ousterhout	L. Bosack and S. Lerner Pr. (Cisco)		x	Sun, Electric Cloud [fo.]	Carnegie Mellon
Chris Piech	[Assistant]				Stanford
Balaji Prabhakar	VMWare Founders Professor				UCLA
Chris Re	[Associate]	‘Robert Noyce’ f. (Intel)	x	”investor”, Lattice/Apple	Washington
Omer Reingold	Rajeev Motwani Pr. (G, Sequoia)	Rothschild award	x	MS, Samsung	Weizmann Insti
Mendel Rosenblum	Cheriton Family Professor (G)		x	VMware [founder]	Berkeley
Aviad Rubinstein	[Assistant]				Berkeley
Dorsa Sadigh	[Assistant]	G, AMZ, JPMorgan award	x	MS	Berkeley
Mehran Sahami	James and Ellenor Chesebrough Pr.		x	G	Stanford
Aaron Sidford	[Assistant, Management and CS]				MIT
Li-Yang Tan	[Assistant]				Columbia
Caroline Trippel	[Assistant]	Nvidia f.	x	F	Princeton
Greg Valiant	[Associate]		x	MS	Berkeley
Jennifer Widom	Fletcher Jones Professor	c. 5 Mill. (Boeing + CIA)	x	IBM, Xerox	Cornell
Keith Winstein]Assistant]	G, F awards	x	Ksplice/Oracle	MIT
Mary Wootters	[Assistant]	G award	x	IBM	Michigan
Jiajun Wu	[Assistant]	AMZ, Samsung awards	x	G	MIT
Daniel Yamins	[Assistant]				Harvard
Matei Zaharia	[Assistant]		x	Databricks [fo.]	Berkeley

1. Corporate influence

Corporate influence in academic computer science is unlike anything seen in most disciplines (English, History, Mathematics...), making it closer to uncertain new disciplines like 'Business', 'Marketing' or 'Journalism' (many whose 'professors' come from the private sector, with backgrounds distant from traditional academia and research).

The phenomenon described - of corporations' influence on computer science - puts a heavy dent in computer scientist's aspiration and claims to mimic mathematicians at an epistemological level as members of a pure science, a purely scientific discipline.

In their real lives, computer scientists spend as much time mingling with Google, Facebook or Microsoft as with calculus, vector algebra and number theory (depending on their sub-areas, graphics to cryptography); but in their heads, they imagine and fashion themselves the new Archimedes and Galilei of our age, completely dedicated to the pursuit of knowledge, free from all influence : kings, religions, new religions, new kings and queens - in the fictions that they build for themselves, they battle all of them culminating in a glorious victory ...

Computer scientists, opinionated on all matters from economics to sociology as they are, will now answer and protest : "But, PROVE to us that our papers were wrong! We took the money, but it had no influence." But, it is not an issue of right or wrong, it is a multi-leveled issue consisting of, at least the following dimensions :

- i.* What areas -of computer science- where resources, time, and energy invested in? This question raises the other, more interesting one : Which areas could have been investigated, but were not, because they were not funded?
- ii.* Among topics and themes researched : How were they approached, from what perspective? Likewise, which aspects of the topics studied were, hence left aside?
- iii.* What social benefit, what contribution to wider society did the research undertaken represent or provide?
- iv.* Whose interests are ultimately being served?

Further, it is likely that computer scientists having spent many years in the private technology sector (be it at Google, Facebook or trading company Jane Street) retain not only mental habits formed there (i.e. software products used, internal programming practices and guidelines, etc.) but also friends and co-workers and generally an influence network stemming from that corporate environment. Does this influence their teaching or grading or behavior in academia, or are these professors born anew - tabula rasa, so to speak - once entering or re-entering the Ivory tower? We prefer to make the more realistic hypothesis that their ties to the corporate world has an impact - the degree of which can be discussed and argued.

As an example, among the many activities of the, psychologist, Dr. Goodman one is given as " *AI Tutors to Help Prepare Students for the 21st Century Workforce*" [CV, grants section] – which does not sound much like science, and instead what work agencies are doing.

One professor seemingly had had enough, who writes : " *In 1994 I left Berkeley to fulfill a long-standing desire to build commercial software. From 1994–1998 I was a Distinguished Engineer at Sun Microsystems Laboratories. In 1998 I founded Scriptics Corporation to commercialize Tcl development tools, where I was CEO until 2000. In 2002 I founded Electric Cloud [etc. etc.] In 2008 I returned to academia in the Computer Science Department at Stanford.*" [Ousterhout web site]

Madame Trippel, a former employee of Facebook, meanwhile seems to be affected by some form of schizophrenia : her Stanford Engineering departmental profile goes : " *Trippel has been recently exploring the role of architecture in enabling privacy-preserving machine learning*". Hopefully her experience at Facebook, one of the largest enemies of privacy, will be a trampoline on her learning journey so that she can do better next time...

2. Corporate influence : sponsored positions

Positions at the Associate or Assistant level are rarely if ever found sponsored, presumably because it does not have the same benefit for the companies (visibility, impact, prestige, ...).

fig. Stanford CS regular faculty : professor levels and sponsored positions

Assistant	23
Associate	14*
Professors	30
Sponsored professorships	20
Sponsored positions	21

n,t=67

*incl. Bernstein

In total, 20 out of the 30 professors that are among regular computer science faculty at Stanford occupy sponsored chairs meaning two-thirds (66.7%). Sponsors include billionaires from the technology sector, tech companies, investment firms, ... (cases include Sun, Amazon, Google, Weichai, Sequoia Capital, etc.).

fig. Origins of named chairs of Stanford CS regular faculty

	<i>likely fortune origin, affiliation...</i>
"Cheriton Family"	David Cheriton, billionaire, Stanford CS prof., early Google investor etc.
Fletcher Jones	some rich guy who liked horses and funding computer science chairs incl. Knuth's and Widom's
Paul Pigott	early 20th c. car tycoon (Pacifica), Stanford man?

3. Corporate funding disguised : philanthropy

e.g.,

SAP is often found as Hasso Plattner "foundation", named after the founder rather than the company : a common whitewashing technique, (especially favored by offspring, wives and relatives wanting to put some distance between themselves and the original business, as well as the often little elegant world of commerce in general).

An alternative strategy consists in not naming the patriarch (and soon enough matriarch) founder of the company, instead calling the philanthropy e.g. "Cheriton Family" or "Noyce family". This is done for the same reasons, and is quite revealing : creating distance between the inheritors and the - it must be assumed - dirty hands, and dirty dealings of the Father-founder. Through these tactics whatever dark underbelly and unscrupulousness behind the company and fortune, a new untouched pristine reputation is created for the philanthropic organization led by wives, children, sisters, golden-spoon fed daughters with movie star and maybe even artistic(!) aspirations, failed sons, etc.

Hence, so called "Robert Noyce (family)" awards are Intel fortune derived. The cheery sounding "Biohub", with which many Stanford Faculty are associated (e.g. Leskovec) is another whitewashing campaign by Chan Zuckerberg, derived from Facebook's dirty business. Destruction here, "biohub" and "Chan Zuckerberg Initiative" elsewhere (where Madame Zuckerberg can play modern day Princess and entertain her self-delusions as white gloved good-doer with clean hands). Wu Tsai philanthropy (expressed in various institutes) also came up.

Prof. Dr. Landay's CV in particular pages 1 and 2 as well as 48 to 51 give an astounding insight into the many lives and roles of academic computer scientists today : bottom gutter hustlers, part captains of industry, part professors, part secretary, part businessmen and -women, ethical capitalists and visionaries and "disrupters" - and a bit of actual, independent research with whatever time and distracted energy and mental space left...

4. Academic groups, laboratories as free labor, networking and infrastructure for professor-led start-ups

Academic groups and labs as free labor and infrastructure for professor-led start-ups seems to be a rampant practice among computer scientists : students, which they are supposed to "advise", become workers, while the university is used as already paid for infrastructure (Internet, servers, rooms, etc.) – and it is largely unclear what benefit the university, especially public and publicly-funded even if partially, gets out of all of this. Professors on the other hand make potential multimillion deals with next to no initial investments – which, from our naive perspective, sounds like a capitalist's dream come true.

It is a practice that is seldom talked about or made explicit, (for obvious legal, commercial and otherwise reasons), but glimpses of it can be had through the Professors' various web presence : Christopher Re, exempli gratia, writes for instance: "*companies I advise or invest [are listed] in here, many of which involve former members of the lab.*" hyper-linked to the following :

With the [Factory](#), I'm working to help build companies including [Arbo](#), [Artera](#), [Galileo](#), [Greenstone](#), [Modular AI](#), [Numbers Station](#), [Opaque](#), [Predibase](#), [Rivos](#), [SambaNova](#), [Snorkel](#), [Voltron Data](#), and [Vori](#). I am fortunate to participate as an advisor or investor in some amazing companies including [Actively](#), [Adept](#), [Agita Labs](#), [AI21](#), [Curie](#), [DataChat](#), [Datometry](#), [Evidently](#), [Exotanium](#), [Gantry](#), [MeasureMe](#), [Moonhub](#), [OtterTune](#), [Ponder](#), [Prosimo](#), [Ramp](#), [Thistle](#), and others. Along with some great partnerships on companies above, I advise [GV](#). I've been fortunate to participate in companies that have exited Lattice Data, Inductiv, [Pixie Labs](#) (now part of New Relic) and [Sentropy](#) (now part of Discord).

https://cs.stanford.edu/people/chrismre/startup_advising.php (Busy as he is, one hopes he still finds the time for research and fulfillment of the minimal ideals of, independent, not-profit oriented, science.)

Mehran Sahami, exempli gratia, long-time Google employee, is a man of fewer words instead preferring more elegant, and likely prudent phrasing : "*I also continue to maintain a foot in the start-up world by serving on advisory boards to various companies.*" [Sahami web site]

5. Education

fig. Educational origins, i.e. PhD, of Stanford's Computer Science regular faculty

MIT	14
Berkeley	12
Stanford	11
Carnegie Mellon (CMU)	4
Cornell	3
Michigan	3
Princeton	3
two each [8]	Columbia, Harvard, UCLA, Washington (Seattle)
one each [9]	British Columbia, Caltech, Hebrew University, KTH, Stony Brook, Sup'Aero, Texas Austin, Weizmann Institute, Wisconsin

n,t=67

fig. Educational origins, i.e. PhD, of Stanford's Computer Science regular faculty : geographical distribution

North America	63 (94%)
— USA	62 (92%)
Europe	2
Israel	2

n,t=67

fig. Educational origins, i.e. PhD, of Stanford's Computer Science regular faculty : US private and public univ.

Private	40 (65%)
Public	22

n,t=62

Stanford's faculty have for alma mater institutions known for entertaining extremely close ties to corporations, starting with Stanford itself, MIT of course, Carneggie Mellon. All private institutions, with a large component of profit orientation.

A minority, approx. a third of Stanford's regular CS faculty, have obtained a PhD from public institutions - among these many come from Berkeley, (30%), leaving the rest distributed across less high ranking public US colleges at a maximum rate of 3 each.

1 individual is from the Univ. of Michigan but, there, had door-opening advising (Halderman, himself a Princeton man). UCLA is linked to a computer science affiliated professor whose PhD is listed as "applied mathematics" [UCLA being a current world center for mathematics]. Texas Austin is linked, likewise, to a PhD in mathematics but from someone who identifies with psychology (as a discipline).

A pattern observed further is undergraduate at e.g. MIT or Harvard followed by Stanford or vice versa, (in order to claim both), as in the case of Horowitz or Hashimoto - or some variation involving other premium, prestige universities.

6. Misc. notes

Fred Kjoelstad and Fred Kjolstad appear twice, bringing down the number of regular faculty at time of writing to 67.

Sloan awards, (which depending on category can be around 100K USD), so numerous were ignored : we concentrated on funding closest or most relevant to computer science and technology). Okawa Foundation is another.

Absence of information in categories related to corporate funding or employment does not signify absence of activity or participation necessarily, it could mean the data was not available (as readily as in the case of other individuals).

A note that will only be of interest to researchers doing work on computer science from a sociological and/or historical perspective : a commonly overlooked source for biographical information is the list of publications - through which, indirectly, and with only a little extra work, data such as educational and professional affiliations can be derived.

Ref.

<https://cs.stanford.edu/directory/faculty>

- "Biz Break: Hewlett-Packard buys Cupertino's Voltage Security..." *The Mercury News*, Feb. 9 2015.

- Forbes.com Hanrahan profile ("Patrick Hanrahan cofounded data analytics company Tableau in 2003. Salesforce acquired Tableau in June 2019 in a \$15.7 billion")

- "Pixar Pioneers Win \$1 Million Turing Award", *NYT* March 18th 2020. [Catmull and Hanrahan]

- "Donald Knuth. Fletcher Jones Professor of Computer Science, Emeritus" <https://engineering.stanford.edu/people/donald-knuth>

NB. Generally, information were obtained either directly on Stanford's website or through it (via hyperlink) - unless otherwise indicated.

* "Our work has been supported by the National Science Foundation [ref. nr.] and by INTEL, NVIDIA, QUALCOMM, GOOGLE, ADOBE, FACEBOOK, ACTIVISION, APPLE, AMAZON (...)" [Stanford page Fatahalian]

** "His previous positions include the Amazon Professor of Machine Learning at the Computer Science & Engineering Department of the University of Washington, the Finmeccanica Associate Professor at Carnegie Mellon University, and the Senior Director of Machine Learning and AI at Apple" [Stanford page Guestrin]

*** "He has also been awarded grants or given gifts by several corporations, including Adobe, Agilent, Amazon, Apple, Autodesk, Google, HTC, Microsoft, Qualcomm, Toshiba, and Toyota." [CV of Guibas]

A list of individual references follows,

Sara Achour <https://www.linkedin.com/in/sara-achour-76ab099>
Maneesh Agrawala http://www.macfound.org/site/c.1kLXJ8MQKrH/b.5458001/k.92B8/Maneesh_Agrawala.htm
Alex Aiken <https://theory.stanford.edu/~aiken/>
Nima Anari <https://nimaanari.com/static/nima-anari-cv-2ddc6f284b91027e2df76c4944b36f74.pdf> [12 pp.]
Clark Barrett <https://theory.stanford.edu/~barrett/cv.pdf> [22 pp.]
James Landay https://www.landay.org/_files/ugd/e549d4_6b15f9b92510420dbe1571f425bb5b5d.pdf [cv-2021-04.pdf, 53 pp.]
Gill Bejerano <http://bejerano.stanford.edu/Bejerano.cv.pdf> [11 pp.]
Michael Bernstein <https://hci.stanford.edu/msb/files/msb-cv.pdf> [16 pp.]
Jeannette Bohg <https://web.stanford.edu/~bohgf/>
Dan Boneh packard.org/what-we-fund/science/packard-fellowships-for-science-and-engineering/fellowship-directory/boneh-da
Adam Bouland <https://theory.stanford.edu/~abouland/CV.pdf> [5 pp.]
Emma Brunskill https://cs.stanford.edu/people/ebrun/brunskill_cv_June_2020.pdf [16 pp.]
Moses Charikar https://cap.stanford.edu/profiles/viewCV?facultyId=70217&name=Moses_Charikar [16 pp.]
Ron Dror https://cap.stanford.edu/profiles/viewCV?facultyId=52823&name=Ron_Dror [17 pp.]
Zakir Durumeric https://zakird.com/dl/durumeric_cv.pdf [10 pp.]
Dawson Engler <https://web.stanford.edu/~engler/> ; <https://pdos.csail.mit.edu/~engler/cv.ps> [5 pp.]
Stefano Ermon <https://profiles.stanford.edu/stefano-ermon> ; <https://cs.stanford.edu/~ermon/#>
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Ron Fedkiw <http://physbam.stanford.edu/~fedkiw/> ; <https://med.stanford.edu/profiles/8064>
Mike Genesereth <http://ginapp.stanford.edu/people/genesereth/genesereth.html>
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Leonidas Guibas https://cap.stanford.edu/profiles/viewCV?facultyId=8099&name=Leonidas_Guibas [5 pp.]
Patrick Hanrahan <http://www-graphics.stanford.edu/~hanrahan/> ; <https://profiles.stanford.edu/patrick-hanrahan>
Tatsu Hashimoto <https://thashim.github.io/index.html#resume>
John L. Hennessy <https://hennessy.stanford.edu/biography/curriculum-vitae/>
Mark Horowitz <https://profiles.stanford.edu/mark-horowitz>
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Oussama Khatib <http://khatib.stanford.edu/> ; <https://profiles.stanford.edu/oussama-khatib>
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Christos Kozyrakis <https://web.stanford.edu/~kozyraki/>
Anshul Kundaje <https://sites.google.com/site/anshulkundaje/>
Monica Lam <https://suif.stanford.edu/%7Elam/cv.htm>
Jure Leskovec <https://cs.stanford.edu/people/jure/>
Philip Levis <http://csl.stanford.edu/~pal/> ; profiles.stanford.edu/philip-levis ; [linkedin.com/in/philip-levis-b2376036](https://www.linkedin.com/in/philip-levis-b2376036)
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Percy Liang profiles.stanford.edu/percy-liang ; cs.stanford.edu/~плиang/ ; microsoft.com/en-us/research/people/v-pelia/
Karen Liu <https://profiles.stanford.edu/c-karen-liu> ; <https://ai.googleblog.com/2017/02/google-research-awards-2016.html>
Tengyu Ma cs.princeton.edu/news/article/tengyu-ma-receives-ibm-fellowship-award ; <https://www.facebook.com/tengyu.ma> ;
Chris Manning https://cap.stanford.edu/profiles/viewCV?facultyId=8117&name=Christopher_Manning [38 pp.]
David Mazieres <https://www.scs.stanford.edu/~dm/cv.pdf> [10 pp.]
Nick McKeown stanford.edu/~nickm/Nick%20McKeown%20CV%202017%20-%20Google%20Docs.pdf [17 pp.] ; intel.com/content/www/us/en/
John Mitchell <https://profiles.stanford.edu/john-mitchell>
Subhasish Mitra <https://web.stanford.edu/~subh/> ; web.stanford.edu/~subh/honors.htm ; [linkedin.com/in/subhasish-mitra-38077b1](https://www.linkedin.com/in/subhasish-mitra-38077b1)
Kunle Olukotun <https://profiles.stanford.edu/kunle-olukotun> ; <http://www.udcnigeria.com/company>
John Ousterhout <https://web.stanford.edu/~ouster/cgi-bin/home.php> ; <https://profiles.stanford.edu/john-ousterhout>
Chris Piech <https://stanford.edu/~cpiech/bio/index.html>
Balaji Prabhakar <https://profiles.stanford.edu/balaji-prabhakar>
Chris Re <https://cs.stanford.edu/people/chrimre/> ; <https://www.macfound.org/fellows/class-of-2015/christopher-r>
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Matei Zaharia <https://cs.stanford.edu/~matei/#publications>

Appendix

- James Landay, CV, pp. 1-2 and 48-51
- Jennifer Widom, CV ["November 2020"], pp. 1-2 and 5-6
- Moses Charikar, CV, pp. 1-3
- Chelsea Finn, CV, p. 1
- Hanrahan "Canon USA" professor
- Hennessy various corporate activities
- Fei-Fei Li Stanford profile page

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RESEARCH INTERESTS

Human-Computer Interaction (HCI), Ubiquitous Computing, User Interface Design Tools, Automated Usability Evaluation, End-User Programming.

EDUCATION

- 12/1996 **Carnegie Mellon University**, Pittsburgh, PA
Ph.D. in Computer Science
Thesis: *Interactive Sketching for the Early Stages of User Interface Design*
Advisors: Brad Myers and James Morris
- 12/1993 **Carnegie Mellon University**, Pittsburgh, PA
M.S. in Computer Science
- 05/1990 **University of California**, Berkeley, CA
B.S. in Electrical Engineering/Computer Science with High Honors

EMPLOYMENT

- 10/2016-PRESENT
08/2014-PRESENT **Stanford University**, Computer Science Department, Stanford, CA
Anand Rajaraman and Venky Harinarayan Professor in the School of Engineering Professor
Teach courses related to user interface design. Perform and advise research in the areas of human-computer interaction and ubiquitous computing.
- 08/2013-07/2014 **Cornell NYC Tech**, Information Science Department, New York, NY
Professor
Helped to start new university campus. Taught courses related to user interface design. Performed and advised research in the areas of human-computer interaction and ubiquitous computing. Created cross-NYC organization for HCI and Design researchers and practitioners.
- 09/2010-07/2013
08/2003-08/2010 **University of Washington**, Computer Science & Engineering, Seattle, WA
Short-Dooley Professor
Associate Professor
Taught courses related to user interface design, development, and evaluation. Performed research in of human-computer interaction, user interface design tools, and ubiquitous computing. Founded and led DUB, cross-campus interdisciplinary HCI+DESIGN collaboration with 35 faculty members and over 100 students.
- 08/2009-12/2011 **Microsoft Research**, Beijing, China
Visiting Faculty Researcher
Helped build new human-computer interaction research group. Recruited and hired group manager and team members. Carried out research in activity-based computing. Helped develop broader HCI research community in Beijing and China.
- 02/2011-06/2011 **Tsinghua University**, Computer Science Department, Beijing, China
Visiting Professor
Developed and co-taught User Interface Technology course to Masters students.

- 09/2006-01/2010
08/2003-08/2006
- Intel Corporation**, Intel Labs Seattle, Seattle, WA
Strategic Consultant
Laboratory Director
Managed leading ubiquitous computing research laboratory. Responsible for developing research direction as well as management of staff and \$6.5M annual budget. Led technology transfer to Intel. Lab dominated the field in research impact and number of publications at the top-two ubicomp conferences during my tenure.
- 07/2002-07/2003
01/1997-06/2002
- University of California**, EECS Department, Berkeley, CA
Associate Professor
Assistant Professor
Taught courses related to user interface design, development, and evaluation. Performed research in the areas of human-computer interaction, user interface design tools, and ubiquitous computing.
- 02/1999-08/2003
- NetRaker Corp**, Sunnyvale, CA
CTO, Chief Scientist: Co-founded leading company delivering online usability and market research. Responsible for overseeing design of the key features in products as well as hiring staff and obtaining funding. Acquired by KeyNote Systems in 2004.
- Consultant**
01/1997-PRESENT Advise companies on user interface design and software implementation.
- | | |
|--|---|
| Baidu USA, Sunnyvale, CA | Klipp, Colussy, Jenks, DuBois, Denver, CO |
| Dawnlight, Palo Alto, CA | Microsoft Corporation, Redmond, WA |
| Intel Corporation, Seattle, WA | Pangea Systems, Oakland, CA |
| Fuji-Xerox Palo Alto Labs, Palo Alto, CA | Propel Software, Santa Clara, CA |
| Fish & Richardson, Redwood City, CA | SkyFlow, Berkeley, CA |
| Google, Mountain View, CA | WilmerHale LLP, Washington, DC |
| Hewlett Packard Inc., Palo Alto, CA | |
- 06/1992-08/1992
- Xerox Corporation**, Palo Alto Research Center, Palo Alto, CA
Research Intern: Investigated user interface problems encountered when running applications on large (5-foot diagonal) pen-based displays. Designed and built new interface components to solve these problems and an application incorporating them.
- 06/1991-08/1991
- Digital Equipment Corporation**, Paris Research Laboratory, France
Summer Research Intern: Designed and implemented Rockit, a software system that identifies graphical constraints in a scene and allows the user to quickly and easily apply the desired constraints. Led to three conference publications.
- 06/1990-08/1990
- Go Corporation**, Foster City, CA
Software Engineering Intern: Designed and implemented bug entry database for the company's pen-based computer. Design included user interface to network database, as well as extension of a commercial database to support additional features.
- 06/1989-08/1989
- Ardent Computer**, Sunnyvale, CA
Member of Technical Staff: Designed and developed ECAD library manager to maintain consistency among different libraries and projects. Programmed CAD utilities for logic designers. Ran test simulations for verification of ASIC designs.
- 06/1987-08/1987
01/1988-08/1988
- Software Publishing Corporation**, Mountain View, CA
Software Engineering Intern: Designed and implemented PFS: Professional File 2.0 window manager, facilitating custom application development. Created utility for designer to finalize details of UIs. Implemented Lotus 1-2-3 data import/export.

GOVERNMENT & UNIVERSITY RESEARCH GRANTS

- 2020 **Alfred P. Sloan Foundation**, \$1,000,000, 07/01/20-06/30/21
Genie: An Open Privacy-First Virtual Assistant, with PI Prof. Monica Lam and others
- 2020 **Stanford Center for Integrated Facility Engineering**, \$80,000, 10/01/20-09/30/21
Hybrid Physical-Digital Spaces: Transforming the Design, Operation, and Experience of Built Environments to Promote Health and Wellbeing, with co-lead-PI Sarah Billington, Civil & Environmental Engineering Department, Stanford
- 2020 **Hasso Plattner Forderungstiftung, fGmbH**, \$100,000, 10/01/20-09/30/21
Designing Intelligent Systems with Situated Feedback Based on Dynamic Mental Models
- 2020 **Stanford RISE**, \$50,000, 08/15/20-08/14/21
Hybrid Physical-Digital Spaces: Transforming the Design, Operation, and Experience of Built Environments to Promote Health and Wellbeing, with co-lead-PI Sarah Billington, Civil & Environmental Engineering Department, Stanford
- 2019 **Hasso Plattner Forderungstiftung, fGmbH**, \$109,000, 10/01/19-09/30/20
Artistic Vision: Providing Contextual Photography Guidance for Rapid In-Camera Iteration
- 2019 **National Science Foundation**, \$3,000,000, 04/01/19-03/31/23 (Landay: ~\$400,000)
CNS Core: Large: Autonomy and Privacy with Open Federated Virtual Assistants, with PI Prof. Monica Lam and others
- 2018 **National Science Foundation**, \$452,435, 10/01/18-09/30/23
Collaborative Research: Scaling the Early Research Scholars Program, with Dr. Cynthia Lee
- 2018 **Toyota Research Institute**, \$900,000, 09/01/18-08/31/20
An Engagement Learning Approach to Generating Massive Labeled Datasets for Training AI Systems, with co-lead-PIs Fei-Fei Li and Michael Bernstein
- 2018 **Stanford Catalyst for Collaborative Solutions**, \$925,926, 07/01/18-06/30/20 (Landay: ~\$250,000)
Hybrid Physical+Digital Spaces for Enhanced Sustainability and Wellbeing, with co-lead-PI Sarah Billington, Civil & Environmental Engineering Department, Stanford
- 2018 **Stanford Catalyst for Collaborative Solutions**, \$1,481,482, 07/01/18-06/30/20 (Landay: \$92,300)
Motivating Mobility and Health on a Global Scale, with PI Scott Delp, Bioengineering
- 2018 **Stanford Artificial Intelligence Lab**, \$46,296, 07/01/18-06/30/20 (Landay: \$0)
Learning Behavior Change Interventions at Scale, with PI Michael Bernstein
- 2018 **Hasso Plattner Forderungstiftung, fGmbH**, \$125,000, 10/01/18-09/30/19
From Design Thinking to Computational Thinking: An Early Stage Design Tool for Supporting Child Programmers' Problem Definition and Ideation
- 2017 **Stanford Woods Institute for the Environment**, \$49,976, 09/01/17-06/30/19
Motivating Pro-Environmental Behavior Change Through Ambient Narratives
- 2017 **Stanford Center for Digital Health**, ~\$25,000, 05/01/17-04/31/18
Harnessing Mindset in Health Technology Narratives (110 Apple watches), with Prof. Alia Crum, Psychology Department, Stanford University
- 2017 **Hasso Plattner Forderungstiftung, fGmbH**, \$137,000, 09/01/17-08/31/18
ParaPower: Evaluating Parallel Prototyping Tools and Practices for Novice Designers

- 2016 **Hasso Plattner Forderungstiftung, fGmbH**, \$130,000, 09/01/16-08/31/17
Understanding, Capturing and Reusing Successful Design Practices
- 2016 **Toyota Research Institute**, \$1,800,000, 02/01/16-02/28/18 (Landay: \$627,904)
Human behaviors and interaction for in-car experiences, with Profs. Agrawala & Bernstein, Stanford University
- 2011 **National Science Foundation**, \$544,180, 09/01/11-08/31/14
Interaction Economics: Instruments that Measure Social-Computational Systems, with Professor Claus Pörtner, Seattle University
- 2009 **National Science Foundation**, \$160,879, 08/15/09-07/31/12
Collaborative Research: Mobilizing Information Technology Systems to Motivate Reduced Energy Consumption and Greenhouse Gas Emissions, collaboration with Professors Jennifer Mankoff and H. Scott Matthews at Carnegie Mellon University
- 2009 **National Science Foundation**, \$497,438, 08/01/09-07/30/12
TC:SMALL: Informing Users of their Privacy in Practice, co-PI with Professor David Wetherall
- 2008 **University of Washington Royalty Research Fund (RRF)**, \$38,000
Beyond speech recognition: Harnessing Power of Voice for Effective Control of Computer Interfaces, co-PI with Prof. Jacob O. Wobbrock
- 2008 **University of Washington Technology Gap Innovation Fund (TGIF)**, \$49,922
A Semi-Private Internet via Shared Knowledge Tests, co-PI with Prof. James Fogarty
- 2008 **NISH**, \$5,000
Award for VoiceDraw project with Susumu Harada and Jacob Wobbrock
- 2007 **National Science Foundation IIS-0742877**, \$142,281
SGER: End-user Sketching of Games and Simulations
- 2003 **National Science Foundation**, \$1,240,000, 10/01/03-09/30/08
ITR: The Vocal Joystick: Voice-based Assistive Technology for Individuals with Motor Impairments, co-PI with Professor Jeff Bilmes
- 2002 **National Science Foundation**, \$2,300,000, 09/15/02-08/31/08
ITR: Human-Centered Design of Context Aware Computing: Scalability, Usability, Privacy
- 2002 **UC MICRO Program**, \$45,000
Design and Simulation Tools for Context-Aware Computing
- 2000 **National Science Foundation**, \$499,269
Action Agenda: Electronic Problem Based Long Life Learning for the Campus of the Future, co-PI with Professor Anthony Joseph
- 2000 **National Science Foundation**, \$270,000
The Designers' Outpost: A Task-centered Tangible Interface for Web Site Info. Design
- 2000 **UC MICRO Program**, \$29,531
Multimodal Tools for Creating Informal Presentations and Specifying Animations
- 1999 **National Science Foundation CAREER Award**, \$300,000
Informal Tools for Multimodal User Interface Design
- 1999 **UC Berkeley Hellman Family Faculty Fund Award**, \$25,000
Computer-aided Drawing for the Visually Impaired
- 1999 **Center for Innovative Learning Technologies (CILT) Seed Grant**, \$14,950
Palms Together: Collaborative use of Multiple Baby-faced Displays

1998 **UC MICRO Program**, \$16,603
Informal Web page Design

1998 **UC Berkeley Junior Faculty Research Grant**, \$7,500
Informal User Interfaces for Classroom Teaching

INDUSTRIAL GIFTS

- 2021 **Toyota**, Unrestricted, \$10,000
- 2020 **Digital Foundry**, Support for CS147 project fair, \$3,000
- 2020 **Microsoft**, Support for CS147 project fair, \$9,500
- 2020 **Toyota**, Unrestricted, \$10,000
- 2019 **Adobe Systems**, Unrestricted, \$5,000
- 2019 **SK Telecom**, Multimodal voice project support, \$69,000 (via SAIL)
- 2019 **Toyota**, Unrestricted, \$10,000
- 2017 **TAL Education Group**, Smart Primer project support, \$1,305,000 (over 3 years)
- 2017 **Renault**, Unrestricted, \$150,000
- 2017 **Baidu**, Unrestricted, \$100,000
- 2015 **Adobe CTL**, Unrestricted. \$4,500
- 2015 **Microsoft Research**, Unrestricted. \$15,000
- 2012 **Microsoft Research**, World Lab Summer Institute 2012. \$40,000
- 2012 **Google**, World Lab Summer Institute 2012. \$25,000
- 2012 **Intel**, World Lab Summer Institute 2012. \$10,000
- 2009 **Google**, Measuring Utility of Human-Computer Interactions. \$50,000
- 2009 **Nokia Research**, Context-Aware Mobile Phones. \$5,000
- 2009 **Google**, Context-Aware Mobile Phones: Design, Prototyping, & Evaluation. \$50,000
- 2008 **Nokia Research**, Context Aware Mobile Phones. \$35,000
- 2008 **Microsoft Research**, Unrestricted. \$15,000
- 2008 **Microsoft Research**, Student travel to CHI 2008. \$6,000
- 2007 **Yahoo**, Context-Aware Mobile Phones: Design, Prototyping, & Evaluation. \$25,000
- 2007 **Microsoft Research**, Unrestricted. \$15,000
- 2002 **Xerox PARC**, Unrestricted. \$15,000
- 2001 **Hewlett-Packard**, Unrestricted. \$50,000
- 2001 **Xerox PARC**, Unrestricted. \$15,000
- 2000 **Fuji Xerox Palo Alto Laboratories**, Unrestricted. \$25,000
- 2000 **Qualcomm**, Adding History & Collaboration Support to DENIM. \$50,000
- 2000 **CubicScience**, Unrestricted. \$50,000
- 2000 **Xerox PARC**. Unrestricted, \$15,000
- 2000 **IBM**. Unrestricted, \$40,000
- 2000 **MyTurn.com**. Unrestricted, \$20,000
- 2000 **SRI**, Informal Tools for Multimodal User Interface Design. \$35,000
- 1999 **Intel**, Infrastructure Grant for innovative use of laptops in the classroom. \$200,000
- 1999 **Fuji Xerox Palo Alto Laboratories**, Unrestricted. \$15,000
- 1998 **NEC**, Informal Web Page Design. \$30,000
- 1998 **Fuji Xerox Palo Alto Laboratories**, Unrestricted. \$15,000
- 1997 **Fuji Xerox Palo Alto Laboratories**, Unrestricted. \$15,000

VITA

Jennifer Widom

Current Position

Stanford University, Frederick Emmons Terman Dean of the School of Engineering

- Fletcher Jones Professor in Computer Science and Electrical Engineering, 2008-present
- School of Engineering Senior Associate Dean for Faculty and Academic Affairs, 2014-16
- Computer Science Department Chair, 2009-14
- Professor, 2004-08
- Associate Professor, 1996-04
- Assistant Professor, 1993-96

Areas of research: Scalable graph processing; Crowdsourcing and human-assisted computation; Data provenance; Managing uncertain data; Query processing on data streams; Combining databases and the Web; Database systems for semistructured data and XML; Data transformations and warehousing; Active databases

Areas of teaching: Working with Data - Tools & Techniques; Introduction to Databases; Database System Implementation

Education

- Ph.D. in Computer Science; Cornell University, 1987
 - M.S. in Computer Science; Cornell University, 1985
 - M.S. in Computer Science; Indiana University, 1983
 - B.S. in Music with minors in Mathematics and Computer Science; Indiana University Jacobs School of Music, 1982
-

Previous Positions

- Research Staff Member, Computer Science Department, IBM Almaden Research Center; 1988-93
 - Visiting Assistant Professor, Computer Science Department, Cornell University; 1987-88
 - Summer Research Intern, Xerox Palo Alto Research Center; 1984, 1985
-

Honors and Fellowships

- Member, American Academy of Arts & Sciences, class of 2009
 - Member, National Academy of Engineering, class of 2005
 - ACM Fellow, conferred 2005
 - Guggenheim Foundation Fellow, 2000-01
-

General Awards

- EPFL-WISH Foundation Erna Hamburger Prize, 2018
 - IEEE Technical Committee of Data Engineering (TCDE), Education Award, 2018
 - ACM-W Athena Lecturer Award, 2015
 - Indiana University School of Informatics and Computing, Career Achievement Award, 2015
 - ACM SIGMOD Edgar F. Codd Innovations Award, 2007
 - IBM Research Division Award for Extensible Database Technology, 1992
-

Paper Awards

- Best Paper Runner-Up Award, 25th International Conference on Scientific and Statistical Database Management,

2013 (for *GPS: A Graph Processing System*, with S. Salihoglu)

- "Test of Time" Paper Award, 2005 ACM SIGMOD International Conference on Management of Data (for *View Maintenance in a Warehousing Environment*, with Y. Zhuge, H. Garcia-Molina, and J. Hammer)
 - Best Paper Award, 12th International World Wide Web Conference, 2003 (for *Scaling Personalized Web Search*, with G. Jeh)
 - 10-Year Paper Award, 26th International Conference on Very Large Data Bases, 2000 (for *Deriving Production Rules for Constraint Maintenance*, with S. Ceri)
 - "Test of Time" Paper Award, 2000 ACM SIGMOD International Conference on Management of Data (for *Set-Oriented Production Rules in Relational Database Systems*, with S. Finkelstein)
 - Best Paper Award, 17th International Conference on Very Large Data Bases, 1991 (for *Deriving Production Rules for Incremental View Maintenance*, with S. Ceri)
-

Professional Service

Board of Trustees and Other Oversight Committees

- Singapore Ministry of Education Academic Research Council, 2022-24
- VLDB Endowment Board of Trustees, 1998-2003 (executive board 2000-03)

Selection Committee

- ACM SIGMOD Awards Committee, 2015-17
- IEEE John Von Neumann Medal selection committee, 2014-16
- Heidelberg Laureate Forum selection committee, 2013-15
- Microsoft Research Faculty Fellows selection panel, 2013
- National Academy of Engineering Computer Science peer committee; 2006, 2008-10

Advisory Board Member

- InsightsOne Inc., 2011-14
- Abreivity Inc., 2006-09
- Ingrian Networks Inc., 2004-08
- Celequest Inc., 2003-07
- Kaltix Inc., 2003
- Business Signatures Inc., 2002-06
- CrossGain Inc., 2000-01
- WhizBang! Labs Inc., 1999-2002
- Angara Inc., 1997-2001
- Brookhaven National Laboratory Protein Data Bank, 1997-99

Visiting Committee Member

- Massachusetts Institute of Technology, Electrical Engineering & Computer Science Department, 2022-24
- Harvard University, School of Engineering and Applied Sciences, 2019
- Cornell Tech, 2019
- Princeton University, Computer Science Department, 2015-19
- University of California Santa Barbara, Computer Science Department, 2013-15
- Duke University, Computer Science Department, 2010

Other Professional Boards and Committees

- National Academy of Engineering Nominating Committee, 2021-22
- National Science Foundation IIS Division Director search committee, 2014
- Computing Research Association (CRA) Committee on Best Practices for Hiring, Promotion, and Scholarship; 2013-15

Editor

- Proceedings of the VLDB Endowment; review board, 2008-09

Primary Research Grants

- Taming the Information Explosion. *Boeing Corporation*, 2011-2014, total funding approx. \$1,050,000. Co-Principal Investigator (with H. Garcia-Molina, J. Heer, and J. Leskovec).
- Peta-Scale Information Management on a Cloud. *KAUST Academic Excellence Alliance Collaborative Research Grant*, 2010-2012, total funding approx. \$700,000. Co-Principal Investigator (with H. Garcia-Molina).
- Data Engine for an Analyst's Workbench. *Intelligence Advanced Research Projects Activity (IARPA)*, 2010-2011, total funding approx. \$270,000. Co-Principal Investigator (with H. Garcia-Molina).
- Provenance-Supported Debugging in Data Pipelines. *Yahoo! Faculty Research and Engagement Award*, 2010-2011, total funding \$10,000. Principal Investigator.
- Better Information Integration through Uncertainty. *National Science Foundation*, 2009-2013, total funding approx. \$1,200,000. Principal Investigator.
- Data Integration through Deduplication, Uncertainty, and Lineage. *Microsoft Corporation Jim Gray seed grant*, 2008, total funding \$35,000. Principal Investigator.
- Uncertain Information Integration. *U.S. Office of Research and Development*, 2007, total funding approx. \$150,000. Principal Investigator.
- Next-Generation Issues in Data Stream Management Systems. *National Science Foundation*, 2006-2010, total funding approx. \$950,000. Principal Investigator.
- Information Management Research. *Hewlett-Packard Corporation*, 2006-2009, total funding approx. \$600,000. Principal Investigator.
- Intelligent Information Integration and Aggregation. *Boeing Corporation*, 2005-2010, total funding approx. \$1,040,000. Co-Principal Investigator (with H. Garcia-Molina).
- DataMotion - Dealing with Fast-Moving Data. *National Science Foundation Information Technology Research (ITR)*, 2003-2009, total funding approx. \$3,500,000. Co-Principal Investigator (with H. Garcia-Molina and R. Motwani).
- Management and Processing of Data Streams. *National Science Foundation*, 2001-2004, total funding approx. \$445,000. Principal Investigator.
- From the Web to the Global InfoBase. *National Science Foundation Information Technology Research (ITR)*, 2000-2003, total funding approx. \$3,250,000. Co-Principal Investigator (with H. Garcia-Molina, C. Manning, and J.D. Ullman).
- Managing Semistructured Data. *National Science Foundation*, 1998-2001, total funding approx. \$235,000. Principal Investigator.
- A Warehousing System for Information Integration and Change Management. *Department of the Air Force*, 1997-1999, total funding approx. \$500,000. Principal Investigator.
- Data Management for Wireless Networks. *National Science Foundation*, 1996-1998, total funding approx. \$360,000. Principal Investigator.
- Changes, Consistency and Configurations in Heterogeneous, Distributed Systems. *Defense Advanced Research Projects Agency (DARPA)*, 1995-1998, total funding approx. \$825,000. Principal Investigator.
- A Warehousing Approach to Data and Knowledge Integration. *CIA Office of Research and Development*, 1995-1998, total funding approx. \$1,000,000. Co-Principal Investigator (with H. Garcia-Molina and J.D. Ullman).
- Efficient Management of Active Databases. *Army Research Office*, 1995-1998, total funding approx. \$225,000. Co-Principal Investigator (with J.D. Ullman).

- Data Management for Wireless Networks. *Stanford Center for Telecommunications and Center for Integrated Systems*, 1995-1996, total funding approx. \$150,000. Principal Investigator.
 - An Integrated Information Management System. *Defense Advanced Research Projects Agency (DARPA)*, 1994-1997, total funding approx. \$2,000,000. Co-Principal Investigator (with H. Garcia-Molina and J.D. Ullman).
 - A Warehousing Approach to Data and Knowledge Integration. *Department of the Air Force*, 1994-1996, total funding approx. \$200,000. Principal Investigator.
-

Publications

Books

1. A First Course in Database Systems. Prentice Hall, Upper Saddle River, New Jersey, first edition 1997, second edition 2002, third edition 2008 (with J.D. Ullman). *Translations: Chinese, Hungarian, Italian, Korean, Polish, Spanish*
2. Database Systems - The Complete Book. Prentice Hall, Upper Saddle River, New Jersey, first edition 2002, second edition 2008 (with H. Garcia-Molina and J.D. Ullman). *Translations: Chinese, Polish, Russian*
3. Database System Implementation. Prentice Hall, Upper Saddle River, New Jersey, 2000 (with H. Garcia-Molina and J.D. Ullman). *Translations: Chinese*
4. Active Database Systems: Triggers and Rules for Advanced Database Processing. Morgan Kaufmann, San Francisco, California, 1996 (with S. Ceri).

Book Chapters

1. Trio: A System for Data, Uncertainty, and Lineage. In C. Aggarwal, editor, *Managing and Mining Uncertain Data*, Springer, 2009.
2. STREAM: The Stanford Data Stream Management System. In M. Garofalakis, J. Gehrke, and R. Rastogi, editors, *Data Stream Management: Processing High-Speed Data Streams*, Springer, 2008 (with A. Arasu, B. Babcock, S. Babu, J. Cieslewicz, M. Datar, K. Ito, R. Motwani, and U. Srivastava).
3. Rule Processing in Active Database Systems. In L. Delcambre and F. Petry, editors, *Advances in Databases and Artificial Intelligence*, JAI Press, 1995 (with E.N. Hanson).
4. Active Database Systems. In W. Kim, editor, *Modern Database Systems: The Object Model, Interoperability, and Beyond*, Addison-Wesley, Reading, Massachusetts, 1994 (with U. Dayal and E.N. Hanson).

Refereed Journal Articles

1. Understanding Workers, Developing Effective Tasks, and Enhancing Marketplace Dynamics: A Study of a Large Crowdsourcing Marketplace. *Proceedings of the VLDB Endowment*, 10(7):829-840, March 2017 (with A. Jain, A. Das Sarma, and A. Parameswaran).
2. Optimal Crowd-Powered Rating and Filtering Algorithms. *Proceedings of the VLDB Endowment*, 7(9):685-696, May 2014 (with A. Parameswaran, S. Boyd, H. Garcia-Molina, A. Gupta, and N. Polyzotis).
3. Optimizing Graph Algorithms on Pregel-like Systems. *Proceedings of the VLDB Endowment*, 7(7):577-588, March 2014 (with S. Salihoglu).
4. Query Optimization over Crowdsourced Data. *Proceedings of the VLDB Endowment*, 6(10):781-792, August 2013 (with H. Park).
5. Making Aggregation Work in Uncertain and Probabilistic Databases. *IEEE Transactions on Knowledge and Data Engineering*, 23(8):1261-1273, August 2011 (with R. Murthy and R. Ikeda).
6. Human-Assisted Graph Search: It's Okay to Ask Questions. *Proceedings of the VLDB Endowment*, 5(12):1990-1993, February 2011 (with A. Parameswaran, A. Das Sarma, H. Garcia-Molina, and N. Polyzotis).

Moses Charikar

Office: Gates Computer Science Bldg **Email:** moses@cs.stanford.edu
353 Jane Stanford Way **URL:** <https://profiles.stanford.edu/moses-charikar>
Stanford, CA 94305

RESEARCH INTERESTS

Efficient algorithmic techniques for processing, searching and indexing massive high-dimensional data sets; efficient algorithms for computational problems in high-dimensional statistics and optimization problems in machine learning; approximation algorithms for discrete optimization problems with provable guarantees; convex optimization approaches for non-convex combinatorial optimization problems; low-distortion embeddings of finite metric spaces.

EDUCATION

1995 - 2000 Stanford University, Stanford, CA.
Ph.D. Computer Science.
Advisor: Rajeev Motwani

1991 - 1995 Indian Institute of Technology (IIT), Bombay, India.
Bachelor of Technology, Computer Science and Engineering.

PROFESSIONAL EXPERIENCE

Dec '17 onwards

Donald E. Knuth Professor of Computer Science and Professor, by courtesy, of Mathematics, Stanford University.

August '15 onwards

Professor, Computer Science, Stanford University.

July '11 - July '15

Professor, Computer Science, Princeton University.

July '07 - June '11

Associate Professor, Computer Science, Princeton University.

Sept '01 - June '07

Assistant Professor, Computer Science, Princeton University.

Sept '00 - Aug '01

Research Scientist, Google Inc.

PROFESSIONAL SERVICE

- ACM-SIAM SODA steering committee (2010-2012), SIGACT Committee for the Advancement of Theoretical Computer Science (2011-2017), Workshops chair for STOC 2013, FOCS 2013, Scientific Advisory Board member, Simons Institute for the Theory of Computing (2015-2018), TheoryFest co-chair (2018), TheoryFest chair (2019).

- Program Committee member for APPROX (2001), FOCS (2001), SODA (2003), ESA (2003), FSTTCS (2003), STOC (2004), APPROX (2005), FOCS (2006), SODA (2009), ICS (2011), FOCS (2012), FOCS (2014), FOCS (2016), APPROX (2017), HALG (2018), COLT (2019), SOSA (2020). Program Committee Chair for APPROX (2007), SODA (2010).
- Director, Center for Computational Intractability, 2012-14.
- Co-organizer of Aladdin workshops on “Integrated Logistics” at Princeton (Oct-Nov ’02) and CMU (March ’03), workshop on “Discrete Metric Spaces and their Applications” at Princeton (Aug ’03), Aladdin workshop on “Flexible Network Design” at Princeton (Nov ’05), Concentration week on “Metric Geometry and Geometric Embeddings of Discrete Metric Spaces” at Texas A&M (July ’06), Mini-course on “Additive Combinatorics” at Princeton (Aug ’07), “Women in Theory” workshop at Princeton (June ’08, June ’10, June ’12), workshop on “Geometry and Algorithms” at Princeton (Oct ’08), DIMACS Tutorial on Limits of Approximation Algorithms: PCPs and Unique Games (July ’09), Co-Chair of Organizing Committee for DIMACS Special Focus on Intractability (2008-2010), Co-organizer of Barriers in Computational Complexity II workshop at Princeton (Aug ’10), workshop on Approximation Algorithms: The Last Decade and the Next at Princeton (June ’11), Summer School in Theoretical Computer Science at Princeton for high school students (June-Aug ’11), STOC 2012 workshop on Recent results regarding the Unique Games Conjecture (May ’12), workshop on Provable Bounds in Machine Learning (Aug ’12), minicourse on Spectral Methods (June ’13), Rising Stars in EECS workshop (2017).

RESEARCH GRANTS

- Amazon Research Award for *Efficient Algorithms for High-Dimensional Statistics* \$80,000 (2019).
- Google Research Award for *New Estimators via Locality Sensitive Hashing* \$70,000 (2018).
- NSF CCF award 1617577 for *New Perspectives on Mathematical Programming Relaxations*, \$450,000 (July ’16 - June ’19).
- Simons Investigator award, \$1,320,000 (August ’14 - July ’24)
- NSF CCF award 1302518 for *Towards Provable Bounds for Machine Learning* (co-PI Sanjeev Arora), \$900,000 (Sep ’13 - Aug ’17).
- NSF CCF award 1218687 for *Approximation Techniques for Combinatorial Optimization*, \$400,000 (Aug ’12 - July ’16).
- Google Research Award for *Online Bipartite Matching* \$70,110 (2011).
- NSF CCF award 0916218 for *Mathematical Programming Methods in Approximation*, \$499,996 (Aug ’09 - July ’12).
- NSF Expeditions award 0832797 for *Understanding, Coping with, and Benefiting from Intractability* (co-PI’s Sanjeev Arora, Bernard Chazelle, Bob Tarjan, Boaz Barak, Avi Wigderson, Russell Impagliazzo, Eric Allender, Mike Saks, Mario Szegedy, Subhash Khot, Assaf Naor), approx \$10,000,000 (Aug ’08 - July ’13).

- Google Research Award for *Efficient Content Based Similarity Search* (co-PI Kai Li) \$110,000 (2006), \$120,000 (2007).
- Yahoo! Research Alliance Award for *Content-Based Based Similarity Search for Non-Text, Feature-Rich Datasets* (co-PI Kai Li) \$100,000 (2006-07).
- NSF MSPA-MCS award 0528414 for *Embeddings of Finite Metric Spaces - A Geometric Approach to Efficient Algorithms* (co-PI's Sanjeev Arora, Bill Johnson, Misha Gromov), \$289,998 (Sept '05 - Aug '08).
- NSF CSR-PDOS award 0509447 for *Content-Searchable Storage for Feature-Rich Data* (co-PI's Kai Li, Perry Cook, Olga Troyanskaya), \$290,464 (July '05 - June '06).
- NSF IIS award 0414072 for *Constructing an Enhanced version of Wordnet* (co-PI's Christiane Fellbaum, Daniel Osherson, Rob Schapire), \$106,000 (Sept '04 - Aug '05)
- NSF CAREER award 0237113 for *Approximation Algorithms: New directions and Techniques*, \$400,091 (July '03 - June '09).
- DOE Early Career Principal Investigator Award for *Algorithmic Techniques for Massive Data Sets*, \$256,817 (Sept '02 - Aug '05).
- NSF ITR award 0205594 for *New directions in Clustering and Learning* (co-PI's Sanjeev Arora, Amit Sahai and Yoram Singer), \$1,530,000 (July '02 - June '07).

AWARDS AND HONORS

- 10 year best paper award, VLDB 2017.
- Best paper award, 30th Annual Conference on Learning Theory (COLT), 2017.
- Distinguished Alumnus Award, IIT Bombay, 2016.
- Simons Investigator in Theoretical Computer Science, 2014.
- ACM Paris Kanellakis Theory and Practice Award, 2012.
- Howard B. Wentz Jr. junior faculty award, 2004.
- Best paper award, 44th IEEE Symposium on Foundations of Computing (FOCS), 2003.
- Alfred P. Sloan Fellowship, 2003.
- Best student paper award, 31st ACM Symposium on Theory of Computing (STOC), 1999.
- Invited speaker: 17th Annual Conference on Learning Theory (July 2004), 14th Annual Fall Workshop on Computational Geometry (Nov 2004), Statistics and Optimization of Clustering Workshop (July 2005), 11th International Conference on Artificial Intelligence and Statistics (March 2007), Rajeev Motwani Distinguished Lecture at Stanford (March 2011), 54th Annual IEEE Symposium on Foundations of Computer Science (October 2013), 35th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (December 2015).

Chelsea Finn

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Stanford, CA 94305
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Current Positions

Stanford University, Computer Science Department and Electrical Engineering Department, Assistant Professor 2019 – present

Google, Inc., Brain Team, Research Scientist 2019 – present

Education

University of California, Berkeley, PhD 2014 – 2018
Thesis: *"Learning to Learn with Gradients"*.
Department of Electrical Engineering and Computer Science

Massachusetts Institute of Technology, Bachelor of Science 2010 – 2014
Electrical Engineering and Computer Science

Honors and Awards

IEEE RAS Early Academic Career Award in Robotics and Automation 2022
Awarded to two early-career academics for major impact on robotics & automation
For pioneering contributions in deep robotic learning, and their application to vision-based robotic manipulation

ONR Young Investigator Award 2021
Awarded to 38 early-career faculty

Samsung AI Researcher of the Year 2020
Awarded to five early-career researchers in AI worldwide

CoRL Best Paper Award 2020
For the paper *"Learning Latent Representations to Influence Multi-Agent Interaction"*

Intel Rising Star Faculty Award 2020
Awarded to ten early-career professors worldwide

Microsoft Faculty Fellowship Award 2020
Awarded to five early-career professors in North America

ACM Doctoral Dissertation Award 2019
Awarded to the best doctoral dissertation in computer science and engineering, worldwide

MIT TR35 Innovator Award 2018
Awarded to 35 innovators under 35 worldwide

Rising Stars in EECS 2017
Awarded to 70 EECS graduate and postdoctoral women

C.V. Ramamoorthy Distinguished Research Award 2017
For outstanding contributions to a new research area in computer science and engineering

ICRA Best Cognitive Robotics Paper Finalist 2017
For the paper *"Deep Visual Foresight for Planning Robot Motion"*

Tong Leong Lim Pre-Doctoral Prize 2016
For achieving the highest distinction in the pre-doctoral examination

Fei-Fei Li

(Publish as L. Fei-Fei)

Sequoia Professor of Computer Science
Stanford University

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(Last update: 2020.10)

EDUCATION

CALIFORNIA INSTITUTE OF TECHNOLOGY **Pasadena, CA, U.S.A.**
Doctor of Philosophy in Electrical Engineering (Ph.D) **2001 - 2005**

- Advisors: Pietro Perona (primary) and Christof Koch (secondary)
- Dissertation: “*Visual Recognition: Computational Models and Human Psychophysics*”

CALIFORNIA INSTITUTE OF TECHNOLOGY **Pasadena, CA, U.S.A.**
Master of Science in Electrical Engineering **2001 - 2003**

- Advisors: Pietro Perona (primary) and Christof Koch (secondary)

PRINCETON UNIVERSITY **Princeton, NJ, U.S.A.**
Bachelor of Arts in Physics **1995 - 1999**

- Graduated with High Honors
- Certificates (equivalent of Minor) in Applied & Computational Mathematics, and Engineering Physics

WORK EXPERIENCES - ACADEMIA

STANFORD UNIVERSITY **Stanford, CA, U.S.A.**
Sequoia Professor, Computer Science Department **2019.06 - Present**
Denning Co-Director, Stanford Human-Centered AI Institute (HAI) **2018.10 - Present**
Professor, Computer Science Department **2018.01 - 2019.06**
Director, Stanford Artificial Intelligence Lab (SAIL) **2013 - 2018.10**
Courtesy Professor, Psychology Department **2013 - Present**
Associate Professor, Computer Science Department **2012.08 - 2017.12**
Assistant Professor, Computer Science Department **2009.06 - 2012.08**

PRINCETON UNIVERSITY **Princeton, NJ, U.S.A.**
Assistant Professor, Computer Science Department **2007.01 - 2009.06**
Associated Assistant Professor, Psychology Department **2007.01 - 2009.06**

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN **Urbana-Champaign, IL, U.S.A.**
Assistant Professor, Electrical and Computer Engineering Department **2005.08 - 2006.12**
Associated Assistant Professor, Psychology Department **2005.08 - 2006.12**

WORK EXPERIENCES -- NON-PROFIT & PUBLIC SERVICES (Selected)

See Additional Work Experiences for more

AI4ALL - Non-profit organization for AI education and diversity **Oakland, U.S.A.**
Co-Founder & Chairperson of the Board **2017.03 - present**

- Co-Founder & Director of precursor program -- SAILORS (Stanford AI Lab Outreach Summer program) (2015 - 2017)

Committee on Science, Technology, and Law, National Academy of Science 2020.03 - present
Member

Commission of Future of Work by Statement of California Sacramento, CA, U.S.A.
Commissioner 2019.09 - present

Computer Vision Foundation (CVF) - *Non-profit organization for international Computer Vision research*
Member, Board of Directors 2019.06 - present

The AI International Scientific Board by French President's Office - *an international group of AI experts to advise on AI-related issues to the French President's office* France
Member 2019.06 - present

Global AI Council by World Economic Forum - *an international group of AI experts to discuss AI-related technical, ethical and governance issues* U.S.A./Switzerland
Member 2019.04 - present

Scientific Committee, Future Prize - *Non-government, Non-Profit organization to award basic science research breakthroughs in greater China region* China
Member 2017.06 - 2019.09

Scientific Advisory Board (Fachbeirat), Max Planck Institute of Informatics Saarbrücken, Germany
Member 2017 - 2020

External Advisory Committee, Center for Brains, Minds and Machines, MIT Cambridge, MA, USA
Member 2017 - 2019

WORK EXPERIENCES -- INDUSTRY (Selected)

See Additional Work Experiences for more

TWITTER INC. San Francisco, CA, U.S.A.
Member, Board of Directors 2020.05 - Present

ZEBRA-MEDICAL Israel
Advisor 2019.01 - present

GOOGLE INC. Mountain View, CA, U.S.A.
Chief Scientist of AI/ML, Vice President, Google Cloud AI 2017.01 - 2018.09

- As part of an academic sabbatical leave from Stanford
- Co-founder of Cloud AI business unit
- Overall responsibility of product engineering, product management, basic science research and thought leadership
- Grow the Cloud AI team, business, and partnership
- Chief architect of major Google Cloud AI products such as AutoML Vision, NLP, Translation
- Business leader responsible for acquisition of Kaggle.com
- Business leader responsible for establishing Google AI's China Center in Beijing

ANDREESSON & HOROWITZ INC. 2016.05 - 2017.01
Professor in Residence

MICROSOFT RESEARCH CENTER CAMBRIDGE Cambridge, UK

HONORS & DISTINCTIONS

- 2020 Member, National Academy of Medicine (NAM)
- 2020 Member, National Academy of Engineering (NAE)
- 2020 Member, Council on Foreign Relations (CFR)
- 2019 Technical Leadership Abie Award, AnitaB.org (“most prestigious award and celebrates a woman who led or developed a product, process, or innovation that made a notable impact on business or society.”)
- 2019 IEEE PAMI-TC Longuet-Higgins Prize (“recognizes papers published at CVPR ten years ago that have stood the test of time.”)
- 2019 Further Award, National Geographic (“recognizes a leader whose work is uniquely innovative, timely, and impactful—someone who has boldly pushed the boundaries of his or her field, and who serves as an outstanding ambassador for that breakthrough work.”)
- 2019 Best Paper Award, International Conference on Robotics and Automation (ICRA)
- 2018 Fellow, Association for Computing Machinery (ACM)
- 2018 One of “the World’s 50 Top Women in Tech”, Forbes Magazine
- 2017 WITI@UC Athena Award for Academic Leadership, University of California
- 2017 One of Seven Women in Technology honorees, Elle Magazine
- 2016 J.K. Aggarwal Prize, International Association for Pattern Recognition (IAPR)
- 2016 One of the 40 “The great immigrants,” Carnegie Foundation
- 2016 IEEE PAMI Mark Everingham Prize
- 2016 Pioneer in AI Research Award, NVidia
- 2015 One of the Leading Global Thinkers of 2015, Foreign Policy
- 2014 IBM Faculty Fellowship Award
- 2012 W.M. Keck Foundation Faculty Scholar
- 2012 Yahoo! Labs Faculty Research Engagement Program (FREP) Award, Yahoo!
- 2012/11 1st Place in PASCAL VOC Action Classification Challenge (internationally recognized computer vision competition)
- 2011 Alfred P. Sloan Fellowship (highly prestigious fellowship awarded to “best scholars in [the current] generation”)
- 2010 Best Paper Honorable Mention, IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
- 2010 Google Research Award
- 2009 Stanford Terman Fellowship
- 2009 NSF CAREER Award
- 2008 Google Research Award
- 2007 1st Place in Semantic Robot Vision Challenge Software League - NSF / AAIL sponsored visual recognition competition
- 2006 Microsoft Research New Faculty Fellowship - highly selective, awarded to “the best new professors in computing disciplines today”
- 2005 IEEE ICCV Best Short Course Prize (with R. Fergus and A. Torralba)
- 1999 - 2002 National Science Foundation Postgraduate Fellowship
- 1999 - 2002 Paul and Daisy Soros Fellowship for New Americans
- 1999 - 2000 Princeton University Martin Dale ’53 Fellowship
- 1999 Princeton University Kusaka Memorial Prize in Physics

SPEECHES & SEMINARS (Selected)

“Artificial Intelligence: A Deeply Human Pursuit”

- 2019.10 Keynote, Society for Neuroscience annual conference, Chicago, USA
- 2018.04 Invited Lecture for the Lorna Casselton Memorial Lecture Series, Oxford University, Oxford, U.K.
- 2017.10 Keynote, Grace Hopper Conference, FL, USA

Chelsea

Finn

cbfinn at cs dot stanford dot edu

I am an Assistant Professor in [Computer Science](#) and [Electrical Engineering](#) at [Stanford University](#). My lab, [IRIS](#), studies intelligence through robotic interaction at scale, and is affiliated with [SAIL](#) and the [ML Group](#). I also spend time at Google as a part of the [Google Brain](#) team.

I am interested in the capability of robots and other agents to develop broadly intelligent behavior through learning and interaction.

Previously, I completed my Ph.D.

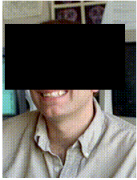


Pat Hanrahan

[CANON USA Professor](#)

[Computer Graphics Laboratory](#)
[Computer Science](#) and [Electrical Engineering](#) Departments
[School of Engineering](#)
[Stanford University](#)

Gates Computer Science Building, Room 370 3B
Stanford, CA 94305-9035

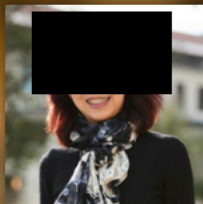


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BROWS



Fei-Fei Li

SEQUOIA CAPITAL PROFESSOR, CO-DIRECTOR OF THE STANFORD INSTITUTE FOR HUMAN-CENTERED ARTIFICIAL INTELLIGENCE (HAI) AND PROFESSOR, BY COURTESY, OF OPERATIONS, INFORMATION AND TECHNOLOGY AT THE GRADUATE SCHOOL OF BUSINESS

Computer Science

PRINT PROFILE EMAIL P

BIO

RESEARCH & SCHOLARSHIP

TEACHING

Bio

Dr. Fei-Fei Li is the inaugural Sequoia Professor in the Computer Science Department at Stanford University, and Co-Director of Stanford's Human-Centered AI Institute. She served as the Director of Stanford's AI Lab from 2013 to 2018. And during her sabbatical from Stanford from January 2017 to September 2018, she was Vice President at Google and served as Chief

CONTACT

Academic
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University - Fac
Department: C

[Hennessy]

- Honorary Societies: Tau Beta Pi, Eta Kappa Nu, Pi Mu Epsilon, 1973.

Corporate and Advisory Boards

- Google, Board of Directors, April 2004-present, Chair 2018-present.
- Cisco Systems, Board of Directors, January 2002-2018.
- Founding Chairman, Board of Directors, Atheros (now part of Qualcomm), 1998-2010.
- Technology Advisory Board, Microsoft Corporation, 1992-96.

Public Service and Nonprofit Activities

- Member, Strategic Council on Research Excellence, Integrity, and Trust, National Academy of Sciences, 2021-present.
- Board of Directors, Chan Zuckerberg Biohub, 2015-present.
- Board of Trustees, Gordon and Betty Moore Foundation, 2012-present.