

**Berkeley**  
UNIVERSITY OF CALIFORNIA

## Where New Thinking Thrives

Integrated into the innovative San Francisco Bay Area, Haas excels in producing fresh ideas. Meet our people who lead through innovation. [>Read More](#)



# MORE INNOVATIVE THAN ENTREPRENEURIAL

- Since its founding in 1868 and subsequent emergence as the flagship campus of the University of California system, UC Berkeley has been at the forefront of revolutionary discoveries and inventions with profound social and human impact.
- Until relatively recently, however, the university did not seek to systematically advance entrepreneurship or encourage and assist its faculty, students, fellows, and postdocs to commercialize their discoveries and inventions.
- Indeed, for most of the university's history, its most pre-eminent scholars tended to view the pursuit of commercial enterprise as crass and unbecoming.



# WORLD CHANGING INNOVATIONS FROM BERKELEY

A partial list of innovations that have emerged from UC Berkeley include:

- Vitamin E

Herbert M. Evans and  
Dr. Katharine S. Bishop



- Statistical Theory  
Jerzy Neyman

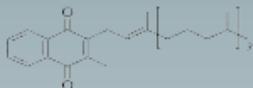


- Nutrition Science  
M.E. Jaffe



# WORLD CHANGING INNOVATIONS

- Vitamin K  
Herman J. Almquist



- Carbon 14 and Photosynthesis  
Melvin Calvin



- Bovine Growth Hormone  
Herbert Evans and Choh Hao Li



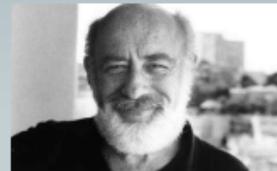
- Nuclear Medicine  
John Lawrence



- Plutonium  
Glenn T. Seaborg



- Lipoproteins and Heart Disease  
John Gofman



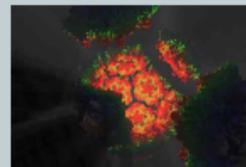
- Influenza Virus Vaccine  
Wendell M. Stanley



- Atomic Bomb  
J. Robert Oppenheimer

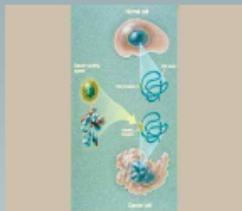


- Polio Virus  
UC Berkeley Virus Laboratory



# WORLD CHANGING INNOVATIONS

- Oncogene activation  
Peter Duesberg



- Computer-aided Circuit Design  
Donald O. Pederson



- Microscopic Motors  
Richard Muller



- Birth of Biotech  
The first biotechnology company, Cetus, is founded by Donald Glaser, winner of the 1960 Nobel Prize in Physics



- Identifying Carcinogens  
Berkeley UNIX and the birth of open-source software  
Kenneth Thompson, Bill Joy, et al



- Genes and breast Cancer  
Mary-Claire King

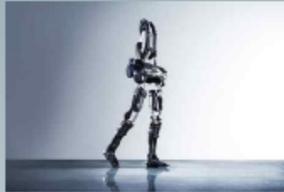


# WORLD CHANGING INNOVATIONS

- Immunotherapy  
James Allison



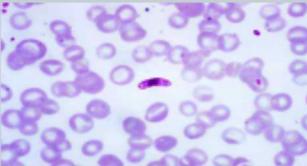
- Robotic Legs  
Homayoon Katuzian



- Biofuels  
\$500 million effort to develop biofuels



- Treatment for Malaria  
Jay Keasling



- Visual Brain WaveS  
Jack Gallant



- CRISPR Gene Editing / mRNA Vaccines  
Jennifer Doudna



For more innovations and details see: <https://www.berkeley.edu/about/history-discoveries>

## ACCUMULATION OF ACCOLADES

- In part as a result, Berkeley became and remains the best public university in the world.
- Throughout the Cold War, Berkeley had more Noble Laureates than the Soviet Union.
- At I I O, Berkeley is currently second only to Harvard in terms of Nobel Prize Winners.
- Berkeley also boasts:
  - 14 Fields Medalists
  - 25 Turing Award winners
  - 103 MacArthur "Genius Grant" recipients
  - 28 Wolf Prize winners
  - 30 Pulitzer Prize winner



JFK at UC Berkeley, March 23, 1962

# CONSISTENTLY AT THE TOP

#1	<b>Harvard University</b>  United States Cambridge, MA	100 Global Score 
#2	<b>Massachusetts Institute of Technology</b>  United States Cambridge, MA	97.9 Global Score 
#3	<b>Stanford University</b>  United States Stanford, CA	92.9 Global Score 
#4	<b>University of California--Berkeley</b>  United States Berkeley, CA	92.8 Global Score 
#5	<b>California Institute of Technology</b>  United States Pasadena, CA	89.3 Global Score 
#6	<b>University of Oxford</b>  United Kingdom Oxford	88.1 Global Score 

## Best Global Universities Rankings



These institutions from the U.S. and around 60 other countries have been ranked based on 12 indicators that measure their academic research performance and their global and regional reputations. Students can use these rankings to explore the higher education options that exist beyond their own countries' borders and to compare key aspects of schools' research missions. These are the world's top 1,000 universities.

[See the methodology »](#)



Clarivate Analytics | Formerly Inspec & Webometrics Institute of Higher Education

- UC Berkeley's world-class faculty and researchers are changing the way we understand and interact with the world.
- Consistently ranked among the five top research universities in the world, UC Berkeley is highly rated for the quality and breadth of its research programs and the distinction of its faculty.

# SUPPLYING TALENT AND PIONEERING LEADERSHIP

- Even when the university was not emphasizing the promotion of entrepreneurship and commercialization, its affiliates and graduates managed to establish a long legacy of innovations and leaders that have created groundbreaking products, revolutionary companies, and entirely new industries.
- Since the emergence of Silicon Valley as the epicenter of technology entrepreneurship and innovation, Berkeley has supplied the largest number of talents and CEO's to the Valley.
  - *Business Insider*: "Berkeley beat out Stanford University (No. 2), Carnegie Mellon (No. 3), and the University of Texas at Austin (No. 5) in becoming the university that sends the most graduates on to careers at Silicon Valley's top 25 tech companies by revenue." May 2, 2017.



# COMPANIES FOUNDED BY BERKELEY ALUMNI

	Company	Fortune 1000(2017) <sup>[14]</sup>	Revenue in US\$ millions(2016) <sup>[14]</sup>	Type	Category	Year founded	Comments
1	<a href="#">Apple</a>	3	215,639	Public	Technology	1976	
2	<a href="#">Intel</a>	47	59,387	Public	Semiconductor	1968	
3	<a href="#">American International Group (AIG)</a>	55	52,367	Public	Finance	1919	
4	<a href="#">Morgan Stanley*</a>	76	37,949	Public	Finance	1924 ( <a href="#">Dean Witter &amp; Co.</a> )	
5	<a href="#">Gap Inc.</a>	178	15,516	Public	Clothing	1969	
6	<a href="#">eBay</a>	310	8,979	Public	Technology	1995	
7	<a href="#">Tesla</a>	383	7,000	Public	<a href="#">Automotive</a>	2003	
8	<a href="#">Activision Blizzard*</a>	406	6,608	Public	<a href="#">Video game</a>	1979 ( <a href="#">Activision</a> )	
9	<a href="#">NetApp</a>	468	5,546	Public	Technology	1992	
10	<a href="#">Bio-Rad Laboratories</a>	917	2,068	Public	Medical	1952	
11	<a href="#">Autodesk</a>	928	2,031	Public	<a href="#">Software</a>	1982	
12	<a href="#">Cadence Design Systems*</a>	992	1,816	Public	Software	1983 ( <a href="#">Solomon Design Automation</a> )	

	Company	Fortune Global 500			Fortune 1000			Type	Category	Year founded
1	<a href="#">Sun Microsystems</a>	-	-	-	204 (2010)	187 (2009)	184 (2008) <sup>[15]</sup>	Acquired	Technology	1982
2	<a href="#">SanDisk</a>	-	-	-	464 (2016)	408 (2015)	422 (2014) <sup>[16]</sup>	Acquired	Technology	1988
3	<a href="#">Bay Networks*</a>	-	-	-	573 (1999)	603 (1998)	600 (1997) <sup>[17]</sup>	Defunct	Network hardware	1985 ( <a href="#">SynOptics</a> )
4	<a href="#">UTStarcom*</a>	-	-	-	782 (2008)	613 (2006)	629 (2005) <sup>[18]</sup>	Public	Semiconductor	1991 ( <a href="#">Unitech</a> )
5	<a href="#">LSI Corporation</a>	-	-	-	870 (2014)	808 (2013)	852 (2012) <sup>[19]</sup>	Acquired	Semiconductor	1981
6	<a href="#">Fairchild Semiconductor</a>	-	-	-	984 (2008)	963 (2007)	886 (2005) <sup>[20]</sup>	Acquired	Semiconductor	1957

 **Big Data Analytics in Distributed Network Monitoring** | **Real-Time Visibility into High-Speed Network Performance** | **Packet Capture in High-Speed Data Center Networks** | **7 Key R Distrib**

## 10 top colleges for tech CEOs

Surprise: The No. 1 pick isn't Harvard, Stanford or MIT

By Carolyn Duffy Marsan, June 27, 2012

# 10 top colleges for tech CEOs

Surprise: The No. 1 pick isn't Harvard, Stanford or MIT

Slideshow

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**First**

Berkeley

### No. 1: Berkeley bests Stanford

Despite its laid-back, hippie image, the University of California at Berkeley is the No. 1 university for producing U.S. tech industry CEOs. Among the 81 degrees obtained by top tech CEOs, Berkeley represents five of them -- more than any other school on our list. Graduates include [Paul Jacobs](#), CEO and chairman of Qualcomm, who holds three degrees from Berkeley: bachelor's, master's and doctorate degrees in electrical engineering. Another graduate of Berkeley is [Paul Otellini](#), CEO and president of Intel, who holds an MBA from the Haas School of Business, as does [Shantanu Narayan](#), CEO and president of Adobe.

## NOTABLE BERKELEY FOUNDERS AND CEO'S



Steve Wozniak, Cofounder,  
Apple



Gordon Moore, Co-founder,  
Intel and Fairchild  
Semiconductor



Bill Joy, Cofounder, Sun  
Microsystems



Eric Schmidt, former  
CEO and Executive  
Chairman, Google



Pierre Omidyar,  
Founder, Ebay



Mark Tarpinning, Co-  
founder, Tesla, Inc

# CATCH-UP AND THE MERGER OF ENTREPRENEURSHIP AND INNOVATION

## Innovation & Entrepreneurship at UC Berkeley

Resources for inventors, entrepreneurs, and startups



For more information visit [begin.berkeley.edu](http://begin.berkeley.edu)

**Berkeley**  
UNIVERSITY OF CALIFORNIA

### Academic Programs

AMENA Center for Entrepreneurship & Development  
Berkeley Biology+Business  
Berkeley-Haas Entrepreneurship

### Startup Support

Berkeley Post-Doc Entrepreneurship Program (BPEP)  
Blockchain Xcelerator  
Free Ventures

### Product/Market Fit Support

Big Ideas@Berkeley  
Cal Hacks  
Cleantech to Market

## Academic Programs

AMENA Center for Entrepreneurship & Development  
Berkeley Biology+Business  
Berkeley-Haas Entrepreneurship Program  
Berkeley Master of Design  
BIDS Berkeley Institute of Data Science  
Synthetic Biology Institute  
Blum Center Social Innovator OnRamp  
Fung Institute for Engineering Leadership  
Fung Fellowship for Wellness and Technology Innovations  
Garwood Center for Corporate Innovation  
Management, Entrepreneurship & Technology Program  
Sutardja Center for Entrepreneurship & Technology  
Learn2Launch

## New Product R&D Support

Bakar Fellows  
Bay Area I-Corps  
Berkeley Center for Green Chemistry  
Berkeley Sensor and Actuator Center (BSAC)  
Biomolecular Nanotechnology Center  
CITRIS Invention Lab  
Cleantech to Market  
Department of Chemical and Biomolecular Engineering Product Development Program (PDP)  
Innovate Berkeley  
Jacobs Institute for Design Innovation  
ME Student Machine Shop  
Marvell Nanolab  
Synthetic Biology Institute

## Startup Support

Berkeley Post-Doc Entrepreneurship Program (BPEP)  
Blockchain Xcelerator  
Free Ventures  
Berkeley Ventures  
Berkeley Startup Cluster  
Cal Hacks Fellowship  
CITRIS Foundry  
Cyclotron Road  
California Institute for Quantitative Biosciences (QB3)  
EBI2  
LAUNCH  
SkyDeck  
StEP  
The House Residency

## Funding Support

Signatures Innovation Fellows  
Berkeley Angel Network  
Berkeley-Haas Entrepreneurship Startup Seed Fund  
Berkeley SkyDeck Fund  
Dorm Room Fund  
Haas Impact Fund  
House Fund  
Ironfire Ventures  
Osage University Partners  
SBIR/STTR grants  
Industry Alliances Office, IPIRA  
Berkeley Catalyst Fund  
Blue Bear Ventures  
Bee Partners  
Contrary Capital

## Product/Market Fit Support

Big Ideas@Berkeley  
Cal Hacks  
Cleantech to Market  
NSF Innovation Corps  
Venture Capital Investment Competition  
Collider Cup  
Nuclear Innovation Bootcamp

## Legal Support

Business Community Law Clinic  
Office of Technology Licensing, IPIRA  
Startup @ Berkeley Law

## Recruiting Support

BearX  
Career Center  
Handshake  
UCB Startup Fair

## Entrepreneurship and Intellectual Property Support

Berkeley Entrepreneurs Association  
BEGIN  
Berkeley Energy & Resources Collaborative (BERC)  
Intellectual Property and Industry Research Alliances (IPIRA)  
Sigma Eta Pi  
Venture Strategy Solutions  
Entrepreneurs@Berkeley

## APPOINTMENT OF A CHIEF INNOVATION AND ENTREPRENEURSHIP OFFICER



- To coordinate and activate the full potential of Berkeley's innovation and entrepreneurship landscape, Berkeley appointed the former Dean of the Haas School of Business Rich Lyons as the university's first -ever Chief Innovation and Entrepreneurship Officer (CIEO) effective January 1, 2020.
- As the CIEO, Professor Lyons will work with campus partners to further develop and communicate Berkeley's rich portfolio of innovation and entrepreneurship activities to the benefit of students, faculty, staff, and startups.
- He will also be responsible for developing strategies to raise the visibility of these activities internally and externally and to create high-value partnerships with stakeholders.
- Lyons: 'If together we can improve the transformation of Berkeley's prodigious intellectual product, across the whole campus, into greater societal benefit, then we will have achieved a great deal'.

# SELECTED BERKELEY ENTREPRENEURSHIP PROMOTION PROGRAMS



Office of Intellectual  
Property



Berkeley-Haas  
SkyDeck



Entrepreneurship  
Program



Fung Institute



QB3 for Startups



CITRIS Foundry



Cleantech to Market



Biomanufacturing to  
Market



BPEP



Berkeley Innovators



Big Ideas



StartupatBerkeleyLaw

# SELECTED BERKELEY AI AND DATA SCIENCE RESOURCES



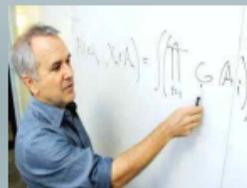
EECS Department



Berkeley Institute for  
Data Science



Simons Institute  
for Computing



Statistics Department



SADAV Institute



D-Lab



Berkeley Artificial Intelligence  
Research Lab (BAIR)



Center for Long-term  
Cybersecurity



School of Information



Rise Lab

# ENERGY, CLIMATE AND THE ENVIRONMENT SELECTED PROGRAMS



**ENERGY BIOSCIENCES INSTITUTE**



**CLIMATE READINESS  
INSTITUTE AND ENVIRONMENT**



**CALIFORNIA INSTITUTE  
FOR ENERGY**



**ENVIRONMENTAL CHANGE  
RESEARCH NETWORK @ BERKELEY**



**ENERGEY INSTITUTE**



**RENEWABLE & APPROPRIATE  
ENERGY LAB**



**CAL ENERGY CORPS**

# RESULTS

**#1**

Public University

**1652**

Startup Founders

**1649**

Active Inventions

**#2**

University for Entrepreneurs

**1481**

Startups

**774**

Active Patents

**#4**

in Most Successful Founders

**\$780M**

in Research Funding

**814**

Active Foreign Patents

# TOP UNIVERSITIES FOR STARTUPS

## Top Universities

(2010 to 3Q 2013)

Ranked by number of alumni who founded companies that received a first round of VC funding.

	1. Stanford University	190
	2. UC Berkeley	160
	3. University of Pennsylvania	131
	4. Harvard University	124
	5. MIT	115
	6. Cornell University	110
	7. University of Michigan	93
	8. University of Texas	80
	9. Carnegie Mellon University	79
	10. Indian Institutes of Technology	77

Source: PitchBook

# RECENT UC BERKELEY STARTUP SUCCESSES



Mobility Company  
\$1B Valuation



Ultrasonic powered bioelectronic devices  
Acquired for \$429M by Astellas Pharma



Ultra-low power Electronic sensor  
Acquired by TDK



Robotics system for manufacturing

**HARVESTING BERKELEY'S CAPABILITIES TO ESTABLISH THE PLANNED UC BERKELEY-KOREA AI INNOVATION INSTITUTE. NAMES OF UC BERKELEY'S PROPOSED/POTENTIAL KOREAN PARTNERS ARE INCLUDED IN THE ADJOINING VISION HOUSE. AN AGREEMENT TO NEGOTIATE, HOWEVER, IS NOT A NEGOTIATED AGREEMENT.**

**UC Berkeley - Korea  
AI Innovation Institute**

**Entrepreneurship and Human Capital Development**

**Program :** 1. Innovation Academy & Innovation Workshop  
2. Innovation Hub Accelerator & Incubator

'22/'23

'22/'23

'22/'25

**EWU Lead\***

**WSU Lead\***

**SVBF Lead\*\***

Ewha  
Womans  
University  
+  
TAF

WooSong  
University  
+  
JNU/GIST

LG/Sejong  
Smart City  
+  
100 Sponsor  
Companies

**Female/Asian  
Leaders**

**International  
Schools**

**Rising  
Cities**

**Course :** 1. Undergraduates+\* 2. Graduates+\* 3. Executives+\*\*

**Grants\* + Scholarship, Internship & Sponsorship by Corporates\*\***

**JV  
Ewha+UCB  
AI Innovation Institute**

**Female Leader Development + Entrepreneurship**

**Catalyst to Transform Korea and Asia**

**'22/'23**

**Pilot-1\***

**Innovation  
Academy  
&  
Innovation  
Workshop**

**Undergraduates+**

**'22/'23**

**Pilot-2\***

**Innovation  
Hub  
Accelerator  
&  
Incubator**

**Graduates+**

**'22/'25**

**Pilot-3\*\***

**AI  
Advanced  
Management**

**Executives+**

**\* Governmental Grants + Partnership with The Asia Foundation**

**\*\*Scholarship, Internship & Sponsorship by Corporates**

# PROGRAMS

To strengthen and expand top-tier skills and the talent base for thriving in the innovation economy, the Korea Innovation Institute will offer the following programs:

- **Innovation Academy**

To train talented college and graduate students and business executives in 21st century skills.

- **Innovation Hub**

To accelerate and incubate innovative ideas in technological applications to develop innovative startup companies.

- **Hybrid Startup Camp**

Post incubation for Korean startups at UC Berkeley to be exposed to the global market.

- **Inspiration**

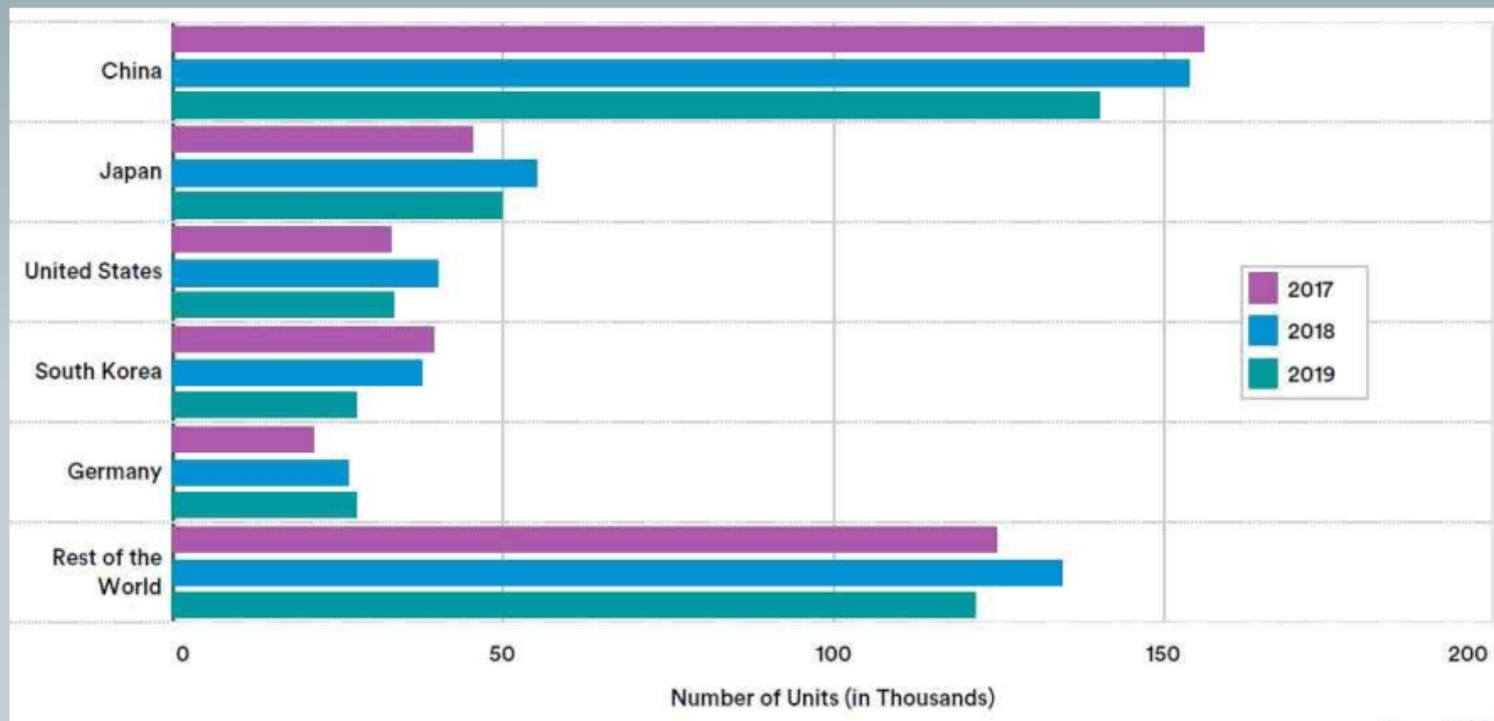
To inspire and motivate youth to be attracted to science, technology, innovation and creativity.

# AI ADOPTION BY INDUSTRY & FUNCTION 2020

Industry	Human Resources	Manufacturing	Marketing And Sales	Product and/or Service Development	Risk	Service Operations	Strategy and Corporate Finance	Supply-Chain Management
All Industries	8%	12%	15%	21%	10%	21%	7%	9%
Automotive and Assembly	13%	29%	10%	21%	2%	16%	8%	18%
Business, Legal, and Professional Services	13%	9%	16%	21%	13%	20%	10%	9%
Consumer Goods/Retail	1%	19%	20%	14%	3%	10%	2%	10%
Financial Services	5%	5%	21%	15%	32%	34%	7%	2%
Healthcare/Pharma	3%	12%	16%	15%	4%	11%	2%	6%
High Tech/Telecom	14%	11%	26%	37%	14%	39%	9%	12%

% of Respondents

# NEW INDUSTRIAL ROBOT INSTALLATIONS IN FIVE MAJOR MARKETS 2017-2019



# GLOBAL DISTRIBUTION OF AI TALENT



## GLOBAL DISTRIBUTION OF TOP AI TALENT

(TOP AI TALENT AS A PERCENTAGE OF ALL AI TALENT IN EACH COUNTRY)

Country	Number of top AI talent	÷	Number of total AI talent	=	top AI talent as a percentage of all AI talent in each country
USA	5158		28536		18.1%
UK	1177		7998		14.7%
Germany	1119		9441		11.9%
France	1056		6395		16.5%
Italy	987		4740		20.8%
China	977		18232		5.4%
Spain	772		4942		15.6%
Japan	651		3117		20.9%
Canada	606		4228		14.3%
Australia	515		3186		16.2%