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WILBUR ROSS' PHANTOM BILLIONS



DECEMBER 12, 2017

Forbes



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WOLFE HERD**

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QUEEN BEE OF
DATING APPS

30 **UNDER** **30**

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How the 30 Under 30 Works

BY RANDALL LANE

THE MOST FREQUENT QUESTION I get: How do I make it onto Forbes' 30 Under 30 list? Understandable, since membership in this club makes it easier to get meetings, funding, deal flow and jobs.

Producing the 30 Under 30 isn't a Star Chamber but rather a multistage process. More than 100 *Forbes* reporters spend much of the year trawling their respective fields for young entrepreneurs and game changers. The first, most fruitful harvest: those we find ourselves. Hundreds of sources identify who in their field is making money and making waves. Dig enough and the strongest names repeat.

The rest of the nominations come over the transom, which we encourage. Some arrive from distinguished recommenders, whether Y Combinator, U.S. senators or 30 Under 30 alums. The larger number reach us via our website—submitted by friends, colleagues or the nominees themselves—and we check them all out. In the end, we reviewed more than 15,000 excellent names this year for the 600 slots—odds far more daunting than getting into Stanford Business School.



Caroline Howard

For each of the 20 categories, reporters select 60 to 80 finalists, our house bias leaning to entrepreneurs over corporate ladder-climbers, innovators over caretakers. Then the formal judging begins, led by three or four legends (and some 30 Under 30 alumni) in each field. Think Olympian Simone Biles in sports or billionaire Leon Cooperman in finance. As we discuss each person, the judges lend their wisdom and name, adding more luster. "When I speak to those on the list, they use words like 'humbled,' 'proud,' 'greatest challenge to live up to,'" says our Caroline Howard, who so ably manages it all. For a peek at the next 50 years of leadership in every field, see page 90.

This credibility, built over seven years, forges a powerful community of ambition and achievement. And it's global: We repeat this process in Asia and Europe and for country-specific lists from China to the Czech Republic.

And as we ring in the new class, it's appropriate to salute one person who's graduating. As with pretty much any media company (and most companies in general), 2010 was a dire time for Forbes Media. Into the breach stepped Lewis D'Vorkin. As chief product officer he quickly implemented a contributor network that allowed Forbes.com to achieve enormous scale while also investing in the great staff journalism we produce every day. And his BrandVoice native-advertising initiative offered a transparent way to help pay for it all. Lewis is off to a new challenge: As editor-in-chief of the *Los Angeles Times*, he has a chance to create a new model for newspaper journalism, which our country desperately needs. He leaves Forbes Media in excellent shape, financially and journalistically. That's a legacy any 30 Under 30 could aspire to. **F**

LeaderBoard

CELEBRITIES

officer of his famous dad's estate. "My father said that if you go to the well over and over again, the bottom will drop out. You have to start digging wells, man." To that end, House of Marley sells its products in more than 48 countries. Two of its biggest hits: Get Together portable speakers (which logged \$6 million in sales last year) and Smile Jamaica earphones (\$8.1 million).

Rohan is one of a dozen or so heirs stirring up the Marley empire. (Bob's three oldest children—Cedella, Stephen and Ziggy—also manage parts of the Marley empire; the rest sit on a board and share evenly in proceeds.) They run a posthumous powerhouse that tallied \$23 million in earnings over the past year, fifth on our list of top-earning dead celebrities.

It's a vast improvement over the past. After the singer's death in 1981, the estate became mired in a years-long battle for control, with his widow, his producer and the Jamaican government, that was resolved in 1991. The financial situation had improved somewhat by 2007, but even then the Marleys were relying on a hodgepodge of middling licensing deals that brought in a meager annual income of \$4 million.

They started to get serious around 2010, when they hired an experienced consumer-products executive, Alon Kaufman, cofounder of consumer-tech company HoMedics, to help run House of Marley. The company's first offering, \$39.99 Uplift earphones, hit stores the next year. The clan began to fiercely oppose unauthorized uses of Bob's name and likeness—from unlicensed T-shirts to bobblehead dolls—and hired talent agency CAA to serve as the brand's guardian.

Beyond House of Marley, Rohan pushes Marley Coffee (sold in Whole Foods and Walmart), while Cedella heads Marley Natural, a purveyor of herb-related products such as a sold-out \$178 smoked-glass water pipe. Like the audio goods, all have an eco-friendly aspect.

"You can't win by price anymore," says Jeri Yoshizu, who came over from Toyota to be House of Marley's head of marketing. "[It's] all about how is the brand going to stand out and what does it stand for."

Adds Rohan: "They say, 'Oh, the Marleys—they sing about love and peace and everything! They'll survive!' No, come on, man, that's rubbish. You need capitalism."

THE TOP-EARNING DEAD CELEBRITIES

Death doesn't always mean an end to a star's career. The prosperous departed who make up our annual ranking still draw in Las Vegas crowds and front fashion brands, while others shill everything from Salesforce to perfume.



1. MICHAEL JACKSON

\$75 MILLION

MUSICIAN

DIED: JUNE 25, 2009

AGE: 50

CAUSE: OVERDOSE/HOMICIDE

The King of Pop retains his throne in the afterlife thanks to a Cirque du Soleil show in Las Vegas, a stake in the EMI publishing catalogue and continued interest in his music.



9. JOHN LENNON

\$12 MILLION

MUSICIAN

DIED: DECEMBER 8, 1980

AGE: 40

CAUSE: MURDER

Imagine all the profits... Lennon continues to cash in on an extensive list of hits—both from his days with the Fab Four and on his own—while also collecting checks from the Beatles-themed Cirque du Soleil show *Love* in Las Vegas.

Our list measures pretax income from October 15, 2016, through October 15, 2017, before deducting cuts for agents, managers and lawyers. Sources: Nielsen SoundScan; IMDb; Pollstar Pro; interviews with celebrity-estate experts.



2. ARNOLD PALMER

\$40 MILLION

ATHLETE

DIED: SEPTEMBER 25, 2016

AGE: 87

CAUSE: HEART DISEASE

More than a year after the legendary golfer's death, 400-plus stores still sell Palmer-branded merchandise in Asia, with plans afoot to move into new markets such as Thailand and Vietnam. Arizona Beverages makes 500 million cans a year of its Arnold Palmer drinks, while MasterCard and Rolex continue to feature him in their marketing.



8. THEODOR "DR. SEUSS" GEISEL

\$16 MILLION

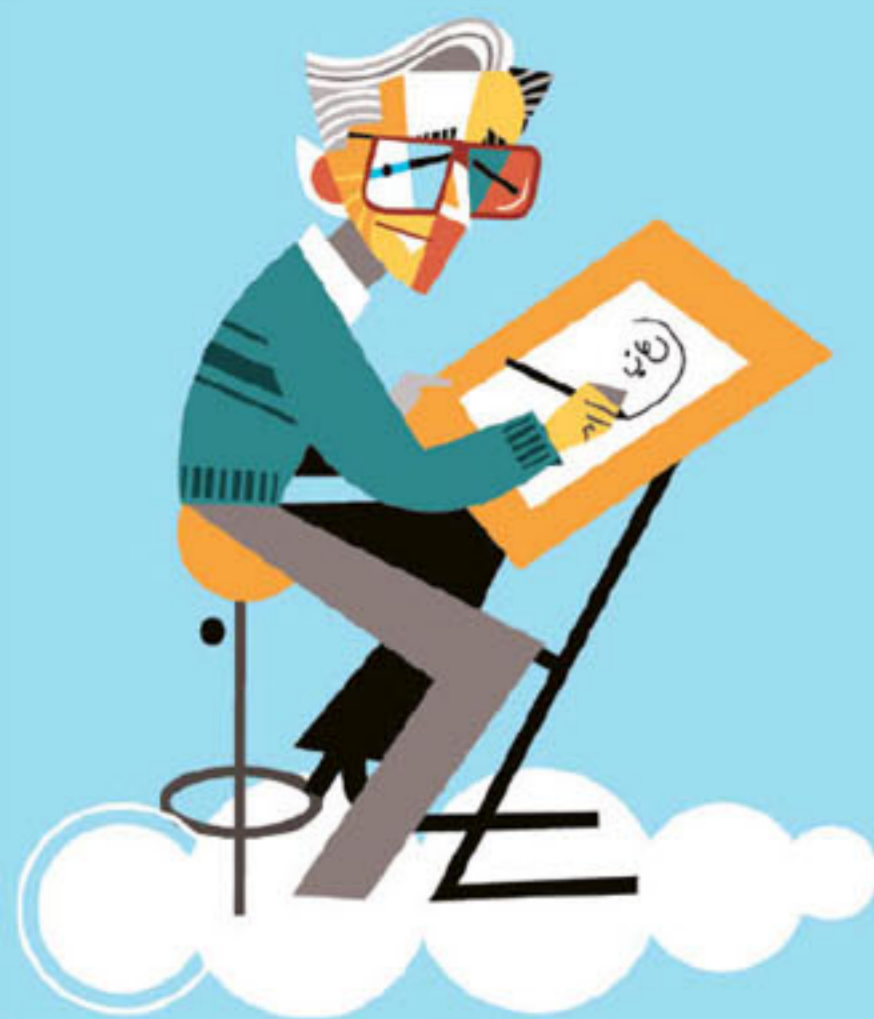
AUTHOR

DIED: SEPTEMBER 24, 1991

AGE: 87

CAUSE: NATURAL CAUSES

Oh, the places he goes: In the past year more than 5 million copies of Seuss books were sold in the U.S. alone.



3. CHARLES SCHULZ

\$38 MILLION
CARTOONIST

DIED: FEBRUARY 12, 2000

AGE: 77

CAUSE: COLON CANCER

MetLife retired the Peanuts gang from its ad campaigns this year after three decades of Snoopy and Charlie Brown. Nevertheless, Schulz's estate still pulls in millions from its contract with the insurance company, which doesn't expire until 2019.

4. ELVIS PRESLEY

\$35 MILLION

MUSICIAN, ACTOR

DIED: AUGUST 16, 1977

AGE: 42

CAUSE: HEART ATTACK

In March, Graceland unveiled its largest expansion since it opened in 1982: a 40-acre entertainment complex called Elvis Presley's Memphis, across the street from the singer's Tennessee home. There's also a recently opened hotel, the Guest House at Graceland.



5. BOB MARLEY

\$23 MILLION
MUSICIAN

DIED: MAY 11, 1981

AGE: 36

CAUSE: CANCER

SEE STORY, P. 17.

7. PRINCE

\$18 MILLION
MUSICIAN, ACTOR

DIED: APRIL 21, 2016

AGE: 57

CAUSE: DRUG OVERDOSE

A new publishing deal padded Prince's posthumous payday, though it would have been even greater had a \$31 million Universal record deal not been canceled earlier this year.



6. TOM PETTY

\$20 MILLION
MUSICIAN

DIED: OCTOBER 2, 2017

AGE: 66

CAUSE: CARDIAC ARREST

The Heartbreakers' front man passed away at the peak of his touring power and is credited with earnings from the past year on the road—where his band grossed north of \$1 million per night. The spike in song spins immediately following his death also boosted his bottom line.



10. ALBERT EINSTEIN

\$10 MILLION
SCIENTIST

DIED: APRIL 18, 1955

AGE: 76

CAUSE: NATURAL CAUSES

Salesforce's artificial-intelligence service is named after the famed physicist—who, for a fee, also lends his name and likeness to products that include dorm-room posters and tablets designed by Israeli tech company Fourier Systems.



11. DAVID BOWIE

\$9.5 MILLION
MUSICIAN, ACTOR

DIED: JANUARY 10, 2016

AGE: 69

CAUSE: CANCER

The Thin White Duke remains as popular as ever. His last album, *Blackstar*, has sold 1.9 million copies since its release shortly before his death.



12. ELIZABETH TAYLOR

\$8 MILLION
ACTOR

DIED: MARCH 23, 2011

AGE: 79

CAUSE: HEART FAILURE

Top-selling fragrances, including White Diamonds, and a QVC jewelry collection keep Liz's earnings alive.



13. BETTIE PAGE

\$7.5 MILLION
MODEL

DIED: DECEMBER 11, 2008

AGE: 85

CAUSE: NATURAL CAUSES

The pinup legend's classic style has been memorialized in clothing, lingerie, handbags and even bridal wear.

SCIENCE

- Tyler Allen, 25**
Ph.D. candidate, North Carolina State University
- Dinesh Bharadia, 29**
Assistant professor, University of California, San Diego
- Kristi Bradford, 27**
Senior instrument systems engineer, Planetary Resources
- Ritchie Chen, 29**
Postdoctoral fellow, MIT
- Cody Daniel, 28**
Cofounder, 3Scan
- Natalya Gallo, 29**
Ph.D. candidate, University of California, San Diego
- Erik Hoel, 29**
Postdoctoral researcher, Columbia University
- Ashlee Howarth, 29**
Postdoctoral fellow, Northwestern University
- Deep Jariwala, 29**
Assistant professor, University of Pennsylvania
- Patrick Kaifosh, 29**
Cofounder, CTRL-Labs
- Tomas Leijtens, 29**
Postdoctoral fellow, Stanford University
- Karthish Manthiram, 29**
Assistant professor, MIT
- Aaron Melsner, 29**
Cofounder, Backyard Worlds: Planet 9
- Prineha Narang, 28**
Assistant professor, Harvard University
- Alexendar Pérez, 28**
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- Tomas Pfister, 29**
Staff research scientist, Apple
- Ritu Raman, 26**
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- Negar Reiskarimian, 28**
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- Peyton Robertson, 16**
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- Conor Russomanno, 29**
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- Lauren Sherman, 29**
Postdoctoral fellow, Temple University
- Hao Sun, 29**
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- Danielle Szafir, 29**
Assistant professor, University of Colorado, Boulder
- Fred Turner, Sam Parlett, 22, 26**
Cofounders, TL Biolabs
- Spin Wang, 27**
Cofounder, TetraScience
- Liang Wu, 29**
Postdoctoral fellow, University of California, Berkeley
- Amber Yang, 18**
Founder, SEER Tracking
- Zhou Yu, 29**
Assistant professor, University of California, Davis
- William Zeng, 28**
Director, software and applications, Rigetti Computing
- You Zhou, 29**
Postdoctoral fellow, Harvard University

JUDGES

Danielle Bassett, associate professor, University of Pennsylvania; MacArthur Fellow

Sabrina Pasterski, Ph.D. candidate, Harvard University (Under 30 Class of 2015)

Cody Daniel, 28

COFOUNDER, 3SCAN

Analyzing tissue samples is a laborious, manual process that hasn't changed significantly in a century. Scientists still cut tissues into slices, stain them and examine them through a microscope. For Cody Daniel, that's not good enough. "We need to develop better tools, better understanding of the world around us and better methods of continuing the human endeavor here on Earth."

To that end his company, 3Scan, offers a modernized alternative. Instead of fewer than ten slices, its robotic microscope can turn a small tissue sample into up to 60,000 slices. Then rather than producing stained, two-dimensional images, its machine vision creates robust, 3-D images, which can be better explored. "The opportunity to influence the course of humanity through clever tools and insightful design is a real responsibility," says Daniel, who has helped 3Scan raise \$21 million in funding.

—Alex Knapp, Sarah Hedgecock and Matt Perez



Leah Sibener, 26

COFOUNDER, 3T BIOSCIENCES

The latest weapons in the fight against cancer: your own white blood cells, which scientists genetically modify to attack tumors. 3T Biosciences, founded by Leah Sibener with research partner Marvin Gee and VC Luke Lee, is using machine learning to predict what chemicals would be on cancer cells but not normal ones. Then it uses a new genetic-engineering process to modify T cells, a type of white blood cell, to target those chemicals. In theory, those T cells should be able to attack tumors in ways competing therapies can't—taking on breast, lung and prostate cancers. 3T Biosciences has reportedly secured investors like Asset Management Ventures, Facebook billionaire Sean Parker, Peter Thiel's Thiel Capital and Charles River Ventures. "For us, success is helping people," Sibener says. —Matthew Herper, Sarah Hedgecock and Ellie Kincaid

HEALTH CARE

- Omar Abudayyeh, Jonathan Gootenberg, 27, 26**
M.D.-Ph.D., Ph.D. candidates, Broad Institute, Harvard-MIT
- Adelanwa Adesanya, Shuo Qiao, 27, 27**
Cofounders, Moving Analytics
- Waleed Asif, Alamin Uddin, 25, 24**
Cofounders, NexHealth
- Manik Bhat, Eric Conner, Daniel Levenson, Alex Villa, 27, 28, 25, 27**
Cofounders, Healthify
- Andrew Brimer, Abby Cohen, 27, 26**
Cofounders, Sparo
- Sol Chen, Evan Ehrenberg, 22, 24**
Cofounders, Clara Health
- Giffin Daughtridge, 29**
Cofounder, UrSure
- Ivonna Dumanyan, Gabrielle Levac, 23, 25**
Cofounders, Fathom AI
- Kevin Eisenfrats, 24**
Cofounder, Contraline
- Trit Garg, 28**
Resident physician, Stanford Health Care
- Jeffrey Huber, Garrett Spiegel, 28, 29**
Cofounders, Standard Cyborg
- Doug Jacobs, 28**
Primary care resident physician, Brigham & Women's Hospital and Harvard Medical School
- Alistair Johnson, 28**
Research scientist, Laboratory for Computational Physiology, MIT
- Moufeef Kaddoura, 25**
Cofounder, ExVivo Labs
- Kunwoo Lee, 29**
Cofounder, GenEdit
- Oren Miron, 29**
Research associate, Harvard Medical School
- Eric Pahl, Dalton Shauli, 24, 23**
Cofounders, HealthTech Solutions
- Kyle Powers, 29**
Cofounder, PrestoDoctor
- Andreas Puschnik, 29**
Fellow, Chan Zuckerberg Biohub
- Siddharth Satish, 29**
Founder, Gauss Surgical
- Akshaya Shanmugam, 29**
Cofounder, Lumme
- Leah Sibener, Marvin Gee, Luke Lee, 26, 26, 28**
Cofounders, 3T Biosciences
- Cody Simmons, 29**
Cofounder, DermaSensor
- Sourav Sinha, 28**
Cofounder, Oncolinx
- Cathy Tie, 21**
Cofounder, Ranomics
- R. Danae Vachata, 29**
Cofounder, Dynamic Surgical; Mallium
- Lea von Bidder, 27**
Cofounder, Ava Science
- Andrew Warren, 28**
Founding scientist, product development lead, Glympse Bio
- Travis Whitfill, 28**
Cofounder, Azitra
- Cheryl Zogg, 28**
M.D.-Ph.D. candidate, health law fellow, Yale School of Medicine, Yale Law School

JUDGES

Peter B. Bach, director, Center for Health Policy & Outcomes, Memorial Sloan Kettering Cancer Center

Cigall Kadoch, assistant professor, pediatric oncology, Dana-Farber Cancer Institute (Under 30 Class of 2014)

Steven L. Salzberg, professor, biomedical engineering, computer science, biostatistics, Johns Hopkins University School of Medicine

CODY DANIEL WEARS CASHMERE SUIT (\$9,050), COTTON SHIRT (\$870), SILK TIE (\$290) AND COTTON POCKET SQUARE (\$220) BY KITON. LEATHER BELT BY PENGUIN (\$20) AND LEATHER SHOES BY FRATELLI ROSSETTI (\$660). LEAH SIBENER WEARS A SILK GRACE TOP (\$298) AND STRETCH COTTON VANNER PANTS (\$258) BY TORY BURCH. SANDALS BY SAM EDELMAN (\$100).



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30 UNDER 30 SCIENCE

Inventing the future from the atom up
Edited by Sarah Hedgecock, Alex Knapp and Matt Perez



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Assistant Professor, University of California, San Diego



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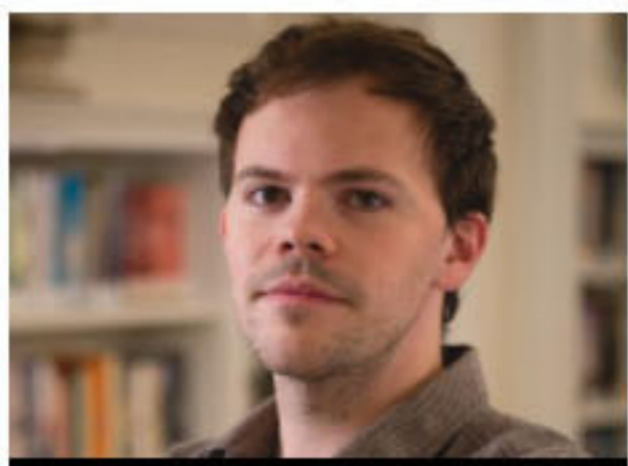
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Director of Research, 3Scan



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PhD Candidate, University of California, San Diego



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Ashlee Howarth, 29
Assistant Professor, Concordia University



Deep Jariwala, 29
Assistant Professor, University of Pennsylvania



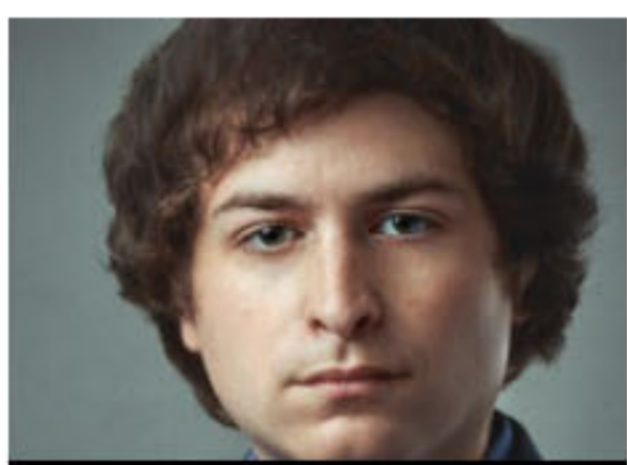
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Assistant Professor, Massachusetts Institute of Technology



Aaron Meisner, 29
Cofounder, Backyard Worlds: Planet 9



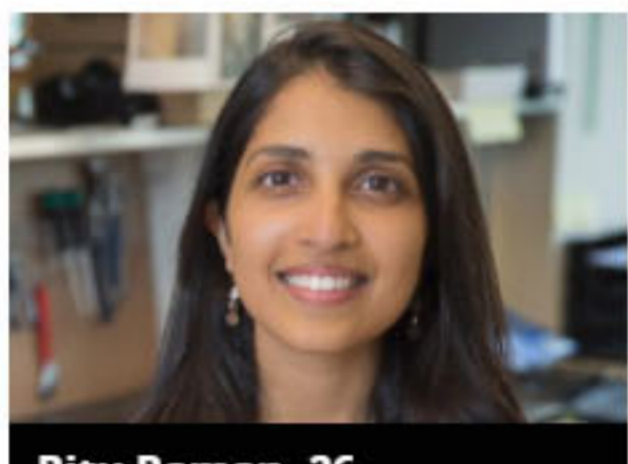
Prineha Narang, 28
Assistant Professor, Harvard University



Alexendar Pérez, 27
MD/PhD Candidate, Weill Cornell Medicine



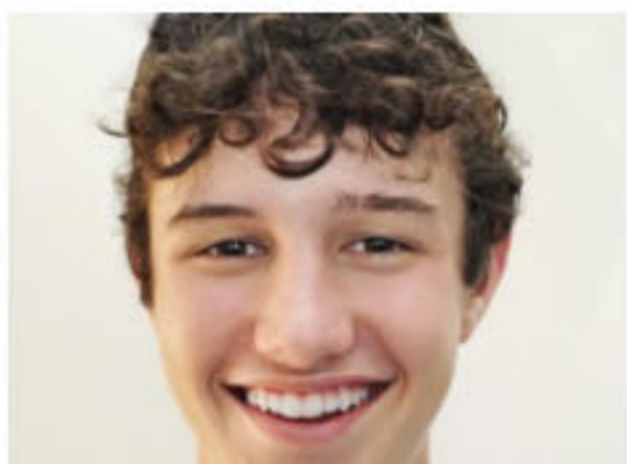
Tomas Pfister, 29
Staff Research Scientist, Apple



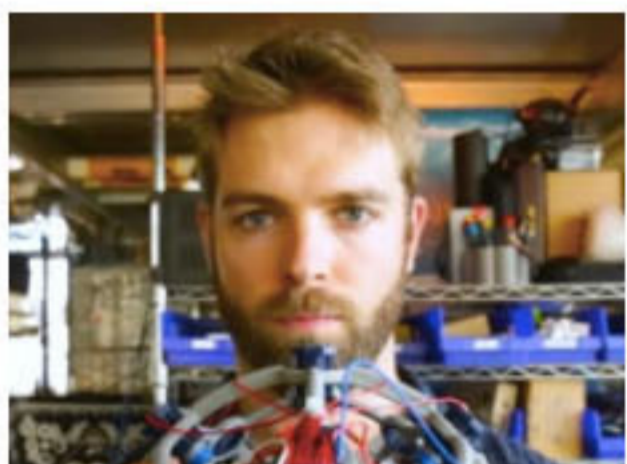
Ritu Raman, 26
Postdoctoral Fellow, Massachusetts Institute of Technology



Negar Reiskarimian, 28
PhD Candidate, Columbia University



Peyton Robertson, 16
Inventor



Conor Russomanno, 29
Cofounder, OpenBCI



Lauren Sherman, 29
Postdoctoral Fellow, Temple University



Hao Sun, 29
Assistant Professor, University of Pittsburgh



Danielle Szafir, 28
Assistant Professor, University of Colorado Boulder



**Sam Parlett, 26;
Fred Turner, 22**



Spin Wang, 27
Cofounder, TetraScience



Liang Wu, 29
Postdoctoral Fellow, University of California, Berkeley



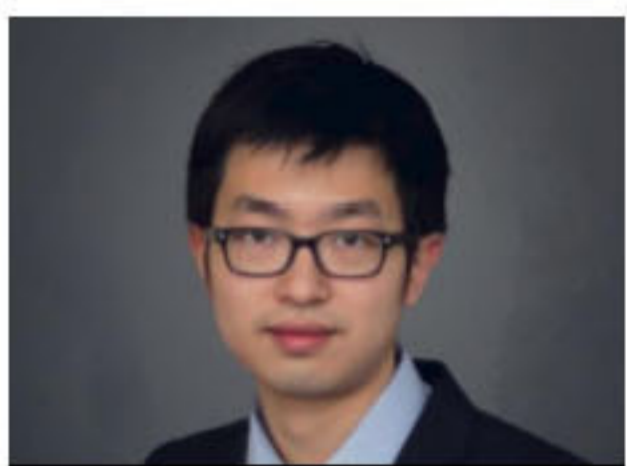
Amber Yang, 18
Undergraduate Student, Stanford University



Zhou Yu, 29
Assistant Professor, University of California, Davis



William Zeng, 28
Director, Software & Applications, Rigetti Computing



You Zhou, 29
Postdoctoral Fellow, Harvard University

JUDGES

The 30 Under 30 list was personally vetted by a blue-ribbon panel of experts in their fields.



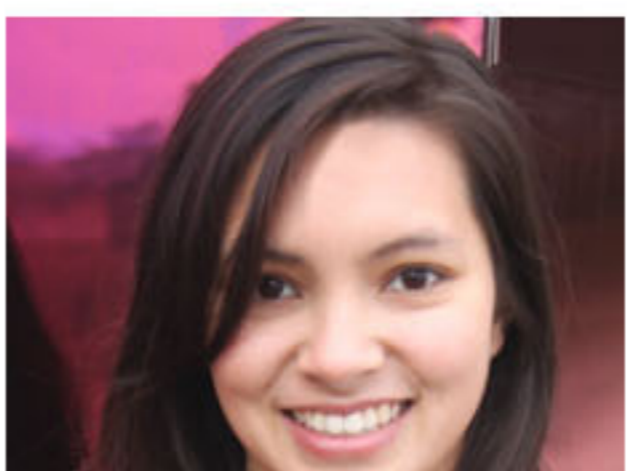
Danielle Bassett



Sabrina Pasterski

ALL-STAR ALUMNI

This year's class joins the brilliant company of these stars from our network of 3,000+



Adina Mangubat, 30



Julia Schwarz, 28



Jeroen Cappaert, 29