



QuickBooks comes with payroll. [Turn on Payroll >](#)

- Integrate payroll with accounting
- Do it yourself or let us handle it

Science | Mon Nov 9, 2015 5:08pm EST

Related: SCIENCE

Factbox: Science's 'Breakthrough' prize winners

SAN FRANCISCO

The following is a list of winners of the Breakthrough Prizes, worth \$3 million each, announced on Sunday in Mountain View, California.

Life Sciences:

Karl Deisseroth, Investigator of the Howard Hughes Medical Institute and the D.H. Chen Professor of Bioengineering and of Psychiatry at Stanford University, and Ed Boyden, Professor of Biological Engineering and Brain and Cognitive Sciences at the MIT Media Lab and the MIT McGovern Institute

The two will each win a separate \$3 million prize for developing and implementing optogenetics – the programming of neurons to express light-activated ion channels and pumps, so that their electrical activity can be controlled by light, potentially opening a new path to treatments for Parkinson's, depression, Alzheimer's and blindness.

Helen Hobbs, Investigator of the Howard Hughes Medical Institute and a Professor of Internal Medicine and Molecular Genetics at the University of Texas Southwestern Medical Center

Hobbs discovered human genetic variants that alter the levels and distribution of cholesterol and other lipids, inspiring new approaches to the prevention of cardiovascular and liver disease.

John Hardy, Professor of Neuroscience at University College London

Hardy discovered mutations in the Amyloid Precursor Protein gene (APP) that cause early onset Alzheimer's.

Svante Pääbo, Director at the Max Planck Institute for Evolutionary Anthropology

Pääbo pioneered the sequencing of ancient DNA and ancient genomes, illuminating the origins of modern humans and our relationships to extinct relatives such as Neanderthals.

Mathematics

PHOTOS OF THE YEAR



The year's most powerful images from Reuters photographers around the world. [Gallery >](#)

[Pictures of the year: Migrant crisis](#)

[Pictures of the year: Sports](#)

[Pictures of the year: Entertainment](#)

[Pictures of the year: Politics](#)

[Pictures of the year: Space](#)



Ian Agol, Associate Professor Department of Mathematics at University of California, Berkeley

Agol contributed low dimensional topology and geometric group theory, including work on the solutions of the tameness, virtual Haken and virtual fibering conjectures.

Physics

The prize will be shared among 1370 physicists representing five international teams, who will share \$1 million, and their seven team leaders, who will share \$2 million.

The teams built technically challenging experiments in underground caves to trap the neutrino, and thereby confirmed the theory of neutrino oscillation.

The teams are:

Super-Kamiokande, led by Takaaki Kajita of the Institute for the Physics and Mathematics of the Universe in Tokyo and Director at Institute of Cosmic Ray Research, and Yoichiro Suzuki,

Director at Institute of Cosmic Ray Research

Daya Bay, led by Yifang Wang of the Institute for High Energy Physics and Kam-Biu Luk, Professor, Department of Physics University of California, at Berkeley

K2K and T2K, led by Koichiro Nishikawa of K2K – from KEK to Kamioka – Long-Baseline Neutrino Oscillation Experiment

SNO, led by Arthur B. McDonald, Director of the Sudbury Neutrino Observatory Institute

KAMLand, led by Atsuto Suzuki (KAMLand), Director General of KEK

Breakthrough Junior

Ryan Chester, a high-school senior from North Royalton High School in the U.S. state of Ohio, won \$250,000 in scholarships for his video explaining the theory of relativity. An additional \$100,000 went to his school for a science lab, plus \$50,000 to his teacher Richard Nestoff.

(Reporting by [Sarah McBride](#); Editing by Andrew Hay, Greg Mahlich)

More From Reuters

intuit QuickBooks

Your payroll is ready to go.

Turn on Payroll >

The advertisement features the Intuit QuickBooks logo at the top. Below it, the text reads "Your payroll is ready to go." followed by a prominent orange button with the text "Turn on Payroll >". Underneath the button is a laptop displaying the QuickBooks software interface. The background is a light gray gradient.

Watch your top stories

U.S. markets wrap up a lackluster year

ALSO | VERBATIM: Obama resolves t...

This is a dark-themed news snippet. It starts with the text "Watch your top stories" in orange. The main headline is "U.S. markets wrap up a lackluster year" in white. Below it, there is a smaller line of text: "ALSO | VERBATIM: Obama resolves t...".

Your five minute news show of today's top stories

For more visit Reuters.tv

Sponsored Financial Content

Recent college grad collects millions from the market – in 3 years *Wall Street Daily*

10 good reasons to make sure you have enough international exposure no *Fidelity Investments*

American Homeowners Are In For A Big Surprise In 2016 *Bills.com*

Our Experts Pick The Best Credit Cards In Every Category *NerdWallet*

Cisco calls this a \$19 trillion opportunity, and you can join in! *The Motley Fool*

The box has a white border and a blue checkmark icon with a question mark. It contains five financial news snippets, each with a headline and a source attribution.

RECOMMENDED VIDEO

- **Oil will blow past \$80 a barrel in 2016**
| 30 Dec
- **Erdogan says Hitler's Germany exemplifies effective presidential system** | 31 Dec
- **The double life of a Russian 'spy' beheaded by Islamic State** | 29 Dec
- **Drifting barge on course to hit Valhall oilfield platforms: BP**
| 31 Dec
- **Russia can only use the United States as an excuse for so long** | 29 Dec
- **Lockheed files injunction to stop work on Oshkosh trucks** | 18 Dec
- **Veteran storm chaser attacked in Texas**
| 28 Dec
- **Before Mosul, Iraqi army may face fight at the gates of Baghdad** | 31 Dec
- **Islamic State suffers double blow as Ramadi falls, leaders killed** | 30 Dec
- **BP orders complete evacuation of Valhall field in North Sea**
| 31 Dec

Sponsored Financial Content (?)

- **Step 1 In Getting The Best Credit Card: Check Out The Research** *NerdWallet*
- **How will markets react when rates rise? 5 charts tell a good story.** *Fidelity Investments*
- **Forget Your 401K if You Own a Home (Do This)** *Bills.com*
- **Cisco calls this a \$19 trillion opportunity, and you can join in!** *The Motley Fool*
- **99 Retirement Tips from Ken Fisher. Download Your Guide Now!** *Fisher Investments*

Giant wave hits oil rig

Cosby accuser appears in Toronto park

SPONSORED TOPICS

1. **5 Best Cars to Own**
2. **2016 Best SUVs**
3. **Best Retirement Communities**
4. **Retirement Planning Calculator**
5. **Cheapest Cell Phone Plans**
6. **High Yield CD Rates**



From The Web

Sponsored Links by Taboola



Free Guide to Endpoint Data Backup
Code42



The Razor That's Changing An Industry
Harry's



10 Statement Coats To Upgrade Your Winter Wardrobe
NastyGal.com



Brilliant Mortgage Payoff Method Has Banks On Edge
Comparisons.org



Why Personalize a Mattress | Helix Sleep
Helix Sleep



"Brightest Flashlight Ever" is Selling Like Crazy
G700 Tactical Flashlight

Sponsored Topics

1. [Top 10 Retirement Plans](#)
 2. [Best Cars to Own](#)
 3. [2015 Medicare Premiums](#)
 4. [HD Security Camera Systems](#)
 5. [Luxury SUV Deals](#)
 6. [Cheapest Cell Phone Plans](#)
 7. [High Yield CD Rates](#)
 8. [Retirement Annuity Rates](#)
 9. [Cloud Computing Services](#)
 10. [2016 Best SUVs](#)
-

[Back to top](#)

Reuters.com

[Business](#) | [Markets](#) | [World](#) | [Politics](#) | [Technology](#) | [Opinion](#) | [Money](#) | [Pictures](#) | [Videos](#) | [Site Index](#)

More from Reuters

[Reuters News Agency](#) | [Brand Attribution Guidelines](#) | [Delivery Options](#)

Support & Contact

[Support](#) | [Corrections](#)

Account Information

[Register](#) | [Sign In](#)

Connect with Reuters

[Twitter](#) | [Facebook](#) | [Linkedin](#) | [RSS](#) | [Podcast](#) | [Newsletters](#) | [Mobile](#)

About

[Privacy Policy](#) | [Terms of Use](#) | [Advertise With Us](#) | [AdChoices](#) | [Copyright](#)

Thomson Reuters is the world's leading source of intelligent information for businesses and professionals.

[Thomsonreuters.com](#)

[About Thomson Reuters](#)

[Investor Relations](#)

[Careers](#)

[Contact Us](#)

Our Flagship financial information platform incorporating Reuters Insider

An ultra-low latency infrastructure for electronic trading and data distribution

A connected approach to governance, risk and compliance

Our next generation legal research platform

Our global tax workstation

Thomson Reuters is the world's largest international multimedia news agency, providing investing news, world news, business news, technology news, headline news, small business news, news alerts, personal finance, stock market, and mutual funds information available on Reuters.com, video, mobile, and interactive television platforms. Thomson Reuters journalists are subject to an Editorial Handbook which requires fair presentation and disclosure of relevant interests.

NYSE and AMEX quotes delayed by at least 20 minutes. Nasdaq delayed by at least 15 minutes. For a complete list of exchanges and delays, please click here.