

Professor Michael J. Biercuk

FOUNDER & CEO OF Q-CTRL | TEDX SPEAKER
PROFESSOR OF QUANTUM PHYSICS & QUANTUM TECHNOLOGY
AT THE UNIVERSITY OF SYDNEY

www.q-ctrl.com

Biography

“Quantum technology, which harnesses quantum physics as a resource, is likely to be as transformational in the 21st century as harnessing electricity was in the 19th.” – *Prof. Michael J. Biercuk*

Michael J Biercuk is the CEO and Founder of Q-CTRL, a venture-capital-backed company that provides control engineering solutions to harness the power of quantum physics for next-generation technologies.

Q-CTRL has been funded by venture capital from both Australia and abroad, with investment from Data Collective, Horizons Ventures, Main Sequence Ventures and Sequoia Capital.

Michael is one of the world’s leading experts in the new emerging field of quantum technology. Q-CTRL is built on Michael’s research leading the Quantum Control Lab at the University of Sydney, where he is a Professor of Quantum Physics and Quantum Technology. Michael holds both CEO and Professorial positions concurrently and, in his academic role, is a chief investigator at the Australian Research Council Centre of Excellence for Engineered Quantum Systems.

An award-winning experimental quantum physicist, Michael speaks with clarity and authority about science and technology and is adept at making physics accessible for a lay audience, such as with his TEDxSydney performance in 2016 and articles in publications such as ABC Science, The Conversation and the Australian Financial Review. Most recently, he was invited to participate as a speaker at the global SXSW conference in Austin, Texas.

Major accolades include the 2015 Australian Museum Eureka Prize for Outstanding Early Career Researcher, selection as one of the Sydney Morning Herald’s 100 Most Influential People (2012) and recognition as the winner of the 2011 NMI Prize for Excellence in Measurement Science.

Educated in the USA, with an undergraduate degree in physics from the University of Pennsylvania and Master’s and Doctorate degrees from Harvard University, Michael served as a technical consultant to DARPA, the premier research funding agency in the USA from 2005-08, providing advice on strategic technological investments in advanced computing.

He also has an active creative collaboration with luxury watchmaker A. Lange & Sohne, focused on the links between high horology and quantum physics.



Speaking Topics

“Quantum technology will make our most advanced capabilities seem as if they came from the stone age.” – *Prof. Michael J. Biercuk*

A prolific writer and engaging speaker, Professor Michael J. Biercuk builds on his research experience to drive public policy debates around innovation and technology. He has experience with large technical and lay corporate audiences with past engagements including Universal McCann, Oracle, Gartner, Dimension Data, Qantas, Facebook and IBM.

Michael is available to either speak on one of the following topics or can curate a topic to suit your event.

Building the Quantum Economy

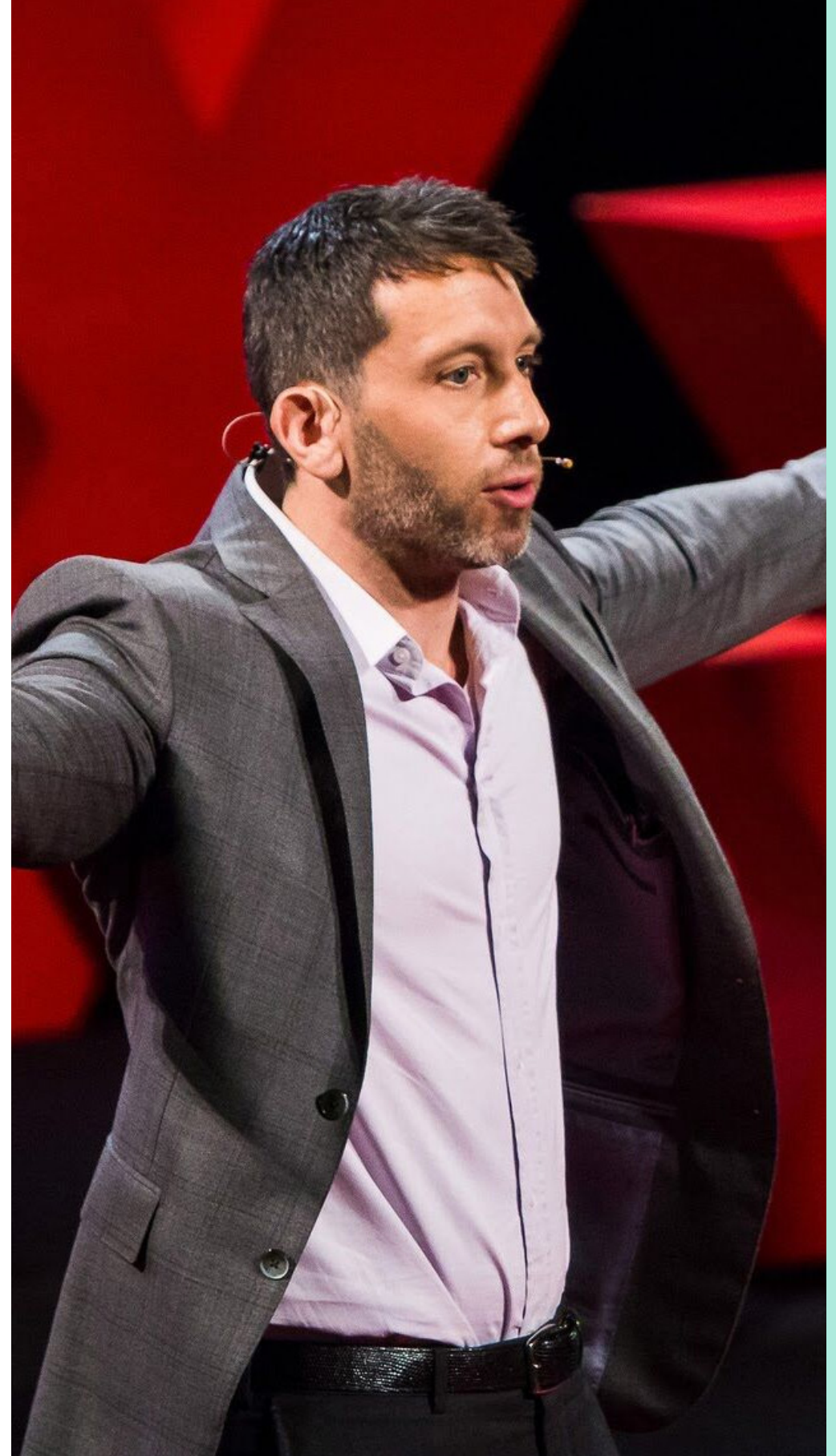
Quantum physics facilitates almost everything we do in our daily life. Smartphones, internet servers and GPS all work because of our understanding of quantum physics; but these technologies only scratch the surface of what could be possible.

Michael’s research and commercial activity is focused on building a new generation of Quantum Technologies that exploits the full range of phenomena offered by nature. Quantum tech, harnessing the most exotic phenomena in quantum physics as resources, will be as transformational in the 21st century as harnessing electricity was in the 19th.

Hear how the earliest application of quantum technology has already changed the world and what the future might hold.

Opportunity vs Truth: The Journey from Academic to Founder

University academics are generally exceptionally talented researchers with sharp analytic minds and a desire to make an impact. Nonetheless, relatively few consider transitioning to a startup once they become established as academics. Based on his experience as a Professor at the University of Sydney turned founder of Q-CTRL, Michael will offer insights into his journey and help policymakers, investors and academics understand how to maximise success in research translation.



Notable Achievements

Speaking

- SXSW in Austin, Texas, 2019
- ABC's "Q&A", 2016
- Main Stage Keynote Speaker at TEDxSydney, 2016
- Public science lectures, including Sydney Science Festival, 2016 and Ultimo Science Festival "Einstein Lecture", 2013
- Sydney Writer's Festival, 2015
- Corporate keynotes with Facebook, Universal McCann, Oracle, Gartner, Dimension Data and others
- Over 100 invited technical lectures at Universities, Conferences and Workshops
- Regular panelist on "The Drum"

Awards & Honours

- Research Selected "#8 World Changing Experiment," BBC FOCUS, 2012
- Sydney Morning Herald "Sydney's Top 100 Most Influential People", 2012
- Australian Museum Eureka Prize for Outstanding Early Career Researcher (Winner) - *most prestigious national award for researchers under 35, across all disciplines*, 2015
- NMI Prize for Excellence in Measurement Science (Winner), 2011
- Temasek Singapore Summit Invitee, 2018
- World Economic Forum "Young Scientists" Invitee (declined), 2016
- Australian Museum Eureka Prize for Innovation in Computer Science (Finalist), 2012
- Australian Innovation Challenge (Finalist), 2014, 2013 & 2011
- Founders Fund F50 Technology Workshop Invitee, Laramie, WY, 2013



In the Media



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EMAIL SEGMENTATION OPINIONS & ADVICE ANTHILL MAGAZINE TECH & INNOVATION

A deep dive into Deep Tech: what you need to know about this growing type of investment

By Anthill Magazine - Mar 15, 2019

COMPUTERWORLD FROM IDG

NEWS TECHNOLOGY TOOLS

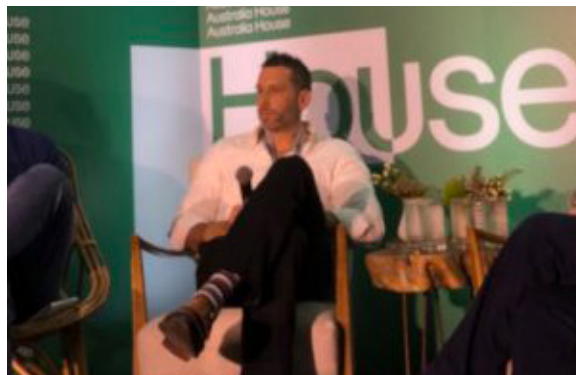
Sydney quantum start-up Q-Ctrl joins IBM's Q Network

Will get to experiment with IBM's quantum computers



George Nott (Computerworld)
05 April, 2018 15:27

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Sydney quantum start-up Q-CTRL launches first product

Black Opal claims world first with quantum control software



Forbes

Quantum Data Storage Breakthrough Brings Quantum Computing One Step Closer



Rich pickings: How executives can build their own wealth
Airbnb one-off: Why it's impossible to get rid of all of them
The office jerk: Why it's impossible to get rid of all of them

FINANCIAL REVIEW

AMP warns planners on risky advice

Quantum leap for Aussie start-up

AMP has set up a quantum computing fund to invest in the sector. The fund will focus on companies that are developing quantum computing technology. AMP is a major investor in the sector, and has been instrumental in the development of Q-CTRL. The fund will invest in companies that are developing quantum computing technology, and will provide support to these companies. AMP is a major investor in the sector, and has been instrumental in the development of Q-CTRL. The fund will invest in companies that are developing quantum computing technology, and will provide support to these companies.



Quantum leap: Sydney startup launches world-first software product



RESEARCH GIVES NEW PERMANENCE TO QUANTUM MEMORY



A Quantum Computing Problem Solved

BY QUENTIN HARDY JUNE 19, 2013 10:59 AM



BREAKING NEWS > Asia start-up partnership to offer Filipino workers more financial choice



Q-CTRL announces new quantum firmware for improving superconducting quantum computers



AFR Magazine Print article

Why quantum physicist Michael Biercuk is obsessed with time

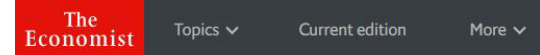


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Q-CTRL software hits the market



Michael Biercuk: Quantum software launch built on years of Australian research effort



Measuring small things

The force is weak with this one

Michael Biercuk, then at America's National Institute of Standards and Technology (NIST) in Boulder, Colorado, and his fellow researchers have reported that they have measured a force of 174 yoctonewtons (yN). This is the smallest force ever detected, by some three orders of magnitude.



Image Gallery



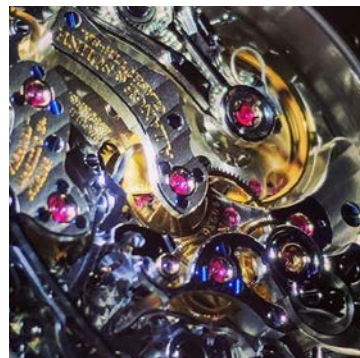
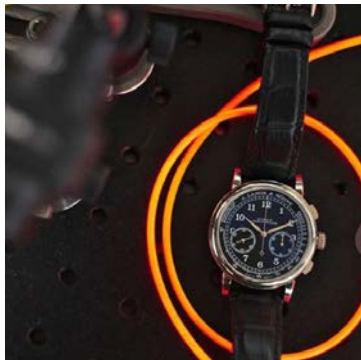
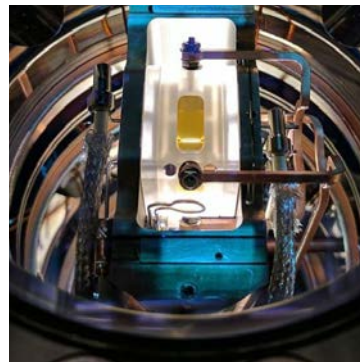
On Instagram

“There is something
that you demand
not only of your watch,
but also of yourself:
never stand still.”

– *Walter Lange*

Michael's Instagram page provides a unique view
of the beauty contained in advanced technical research
and the links to luxury products from the
world's finest craftspeople. See more
for yourself via the link below.

Find Michael at [@mjbiercuk](https://www.instagram.com/mjbiercuk)





Contact

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