

# Vivek Wadhwa

**Author, Academic, Speaker, Entrepreneur**

Please contact a GDA agent for information.

## Topics

- Diversity and Inclusion
- Energy Policy
- Healthcare
- IT
- Professor
- Technology / Alternate Technology

## About Vivek Wadhwa

Vivek Wadhwa is a Distinguished Fellow at Harvard Law School's Labor and Worklife Program. He is the author of five best-selling books: From Incremental to Exponential; Your Happiness Was Hacked; The Driver in the Driverless Car; Innovating Women; and The Immigrant Exodus.

He has been a globally syndicated columnist for The Washington Post and held appointments at Carnegie Mellon University, Duke University, Stanford Law School, UC Berkeley, Emory University, and Singularity University.

Vivek is based in Silicon Valley and researches, speaks, and writes about advancing technologies that are transforming our world. These advances – in fields such as robotics, artificial intelligence, computing, synthetic biology, 3D printing, medicine, and nanomaterials – are making it possible for small teams to do what was once possible only for governments and large corporations to do: solve the grand challenges in education, water, food, shelter, health, and security.

In 2012, the U.S. Government awarded Wadhwa distinguished recognition as an "Outstanding American by Choice" for his "commitment to this country and to the common civic values that unite us as Americans."

He was also named one of the world's "Top 100 Global Thinkers" by Foreign Policy magazine in that year; in June 2013, he was on TIME magazine's list of "Tech 40", one of forty of the most influential minds in tech; and in September 2015, he was second on a list of "ten men worth emulating" in The Financial Times. In 2018, he was awarded Silicon Valley Forum's Visionary Award, a list of luminaries "who have made Silicon Valley synonymous with creativity and life-changing advancements in technology."

## Select Keynotes

### • AI AND THE INCREMENTAL TO EXPONENTIAL OPPORTUNITIES

The pandemic has taught us the incredible power of exponentials. We've seen how a small development in a far-off place can set off a series of events which quickly disrupts everything about our lives. But it's not only viruses that advance exponentially. In the coming years, a range of technologies will create the same sort explosive and transformative changes across industry, society, and government.

What is enabling this new revolution is computer technology's exponentially increasing pace of advancement. Our smartphones now have greater computing power than yesterday's supercomputers. Every technology that is information-based is advancing on an exponential curve, including, AI, robotics, sensors, synthetic biology, 3D printing, and quantum computing – all becoming smaller, faster, and cheaper.

Advancing technologies can be deceptive because at first because as they advance on a linear scale things move very slowly. Then when the exponential curve trends upwards we are caught off guard and disappointment leads to amazement and fear. This is precisely what is happening with Artificial Intelligence, which as recently as a decade ago was considered a failed technology – after two "AI winters".

Today, new "large language models" (LLMs) that power tools such as Chatgpt have surprised even their creators with their unexpected talents. They are about to make obsolete all of the data analytics tools that corporations use, from the tried and tested decisions support systems to the knowledge based and expert systems. This is because they can analyze billions of times more information far more effectively than anything before. Their impact will be akin to the introduction of electricity and everything that has already been electrified will also be



“cognified.”

Vivek Wadhwa will explain in simple terms what these emerging technologies are, including:

- What led artificial intelligence (A.I.), the stuff of science fiction, to failure in the '90s, and the new methods of data analysis and the advent of the GPU that revived it
- Separating fact from fiction: the difference between today's “narrow” or “weak” A.I. and tomorrow's artificial general intelligence and superintelligence
- How A.I. can provide the cheap, reliable, industrial-grade digital smartness to transform decision-making in everything from stock trading, document review, and financial analysis to security, intelligence, fraud detection, and law enforcement
- Classes of machine-learning strategies — supervised, unsupervised, and reinforcement — and their application in business
- Cutting through the hype: the limits and practicalities of business A.I.
- Regulatory and reputational concerns arising from A.I.'s opacity

Attendees will learn of the incredible opportunities we now have to build new billion dollar businesses in trillion dollar industries.

## • **DISRUPTION AND OPPORTUNITY**

Unprecedented advances in technology have now made science fiction a reality. In only a handful of years, we've moved to the near worldwide use of handheld computing, the full mapping the human genome, and the advent of drones and driverless cars, to name just a few life-changing developments. This trajectory of technological advancement is only getting faster.

Based on his critically acclaimed new book *The Driver in the Driverless Car: How Our Technology Choices Will Create the Future*, Vivek Wadhwa not only explores the amazing technologies that are just now being integrated into our lives and work, but he also shares both the dilemmas and the solutions of technology advancement. Using his wonderfully vivid storytelling skills, he examines how Artificial Intelligence, Autonomous Machines, Robotics, Synthetic Biology, etc. are impacting fields of healthcare, education, transportation, energy development, investment management and more, analyzing the huge benefits as well as the economic and social consequences. He shares a three-pronged assessment that gauges whether a new technology will benefit everyone equally; whether the rewards outweigh the risks; and whether it promotes autonomy or leads to dependency.

Alongside a balanced evaluation of the impacts of both recently arrived technology or developments just around the corner, Vivek examines:

- How driverless cars are a perfect metaphor for our anxiety over where technology is headed
- What conditions make services or sectors ripe for a giant leap into the future
- Which industries stand to benefit most, and which will be upended
- Why Artificial Intelligence is both the most important breakthrough and the most dangerous technology ever created by man
- When, and if, society will accept robotic caregivers, housekeepers, and even warriors
- Whether cybersecurity can begin to keep up with our ubiquitous connectivity

This might be the most fascinating speech you will ever experience regarding our future.

## • **HOW TECHNOLOGY WILL EAT MEDICINE**

When Apple announced that it was developing a watch that had the functions of a medical device, it became clear that the company was eyeing the \$3 trillion healthcare industry; that the tech industry sees medicine as the next frontier for exponential growth. Apple isn't alone. Companies such as Google, Microsoft, and Samsung and hundreds of startups also see the market potential and have big plans. They are about to disrupt health care in the same way in which Netflix decimated the video rental industry and Uber is changing transportation.

This is happening because several technologies such as computers, sensors, robotics, and artificial intelligence are advancing at exponential rates. Their power and performance are increasing dramatically as their prices fall and their footprints shrink.

We will soon have sensors that monitor almost every aspect of our body's functioning, inside and out. By combining these data with our electronic medical records and the activity and lifestyle information that our smartphones observe, artificial intelligence-based systems will monitor us on a 24x7 basis. They will warn us when we are about to get sick and advise us on what medications we should take and how we should improve our lifestyle and habits. And with the added sensors and the apps that tech companies will build, our smartphone will become a medical device akin to the Star Trek tricorder.

Technologies such as Apple ResearchKit are also going to change the way in which clinical trials are done. Data that our devices gather will be used to accurately analyze what medications patients have taken, in order to determine which of them truly had a positive effect; which simply created adverse reactions and new ailments; and which did both.

Combined with genomics data that are becoming available as plunging DNA-sequencing costs approach the costs of regular medical tests, a healthcare revolution is in the works. By understanding the correlations between genome, habits, and disease - as the new devices will facilitate - we will get closer and closer to an era of Precision Medicine, in which disease prevention and treatment are performed on the basis of people's genes, environments, and lifestyles.

Vivek Wadhwa will give you a crash course in exponential technologies - such as computing, Artificial Intelligence, sensors, synthetic biology, and robotics - and describe how they will converge and help turn our sick-care system into one that can truly focus on health care.

### Select Book Titles

- **2018:** Acclaimed Technology Authority (June 2018)
- **2017:** The Driver in the Driverless Car: How Our Technology Choices Will Create the Future - co-written Alex Salkever and Vivek Wadhwa
- **2017:** Your Happiness Was Hacked: Why Tech Is Winning the Battle to Control Your Brain--and How to Fight Back
- **2014:** Innovating Women
- **2012:** The Immigrant Exodus

### Select Articles

- [Why we will all benefit from the next space race](#)

Regardless of the risks, the era of space exploration has begun and we can expect many exciting breakthroughs. We can also start dreaming about the places we want to visit in the heavens.

- [Latest from Vivek Wadhwa](#)

Why liberal arts and the humanities are as important as engineering,

- [Washington Post: How today's technology is rapidly catching up to Star Trek](#)
- [MIT Technology Review: Laws and Ethics Can't Keep Pace with Technology](#)
- [Washington Post: Move over, humans, the robocars are coming](#)
- [Wall Street Journal: How technology will eat medicine](#)