

The Bell Labs Prize 2018

Human experience transforming ideas grown here

The Bell Labs Prize isn't just about the money. It's also about the journey. Present your world-shifting ideas to the leading scientists in their field. Refine your pitch so it catches the attention of CEOs and Nobel Prize winners.

\$100K
1st prize

We believe we are on the verge of the 4th industrial revolution – a revolution that will be driven by the need to automate everything to “save and create time”. At its heart, this is a technological revolution, driven by machines and sensors connecting to Augmented Intelligence over a massively scalable, ultrahigh capacity, ultralow latency, hyper-scalable, dynamic new network infrastructure.

Who will create the new technologies to meet the communications, contextual control, and collaboration needs of the future?

\$50K
2nd prize

Nokia Bell Labs is the world-renowned industrial research arm of Nokia. Over its 90-year history, Bell Labs has invented many of the foundational technologies that underpin information and communications networks and all digital devices and systems. This research has resulted in 8 Nobel Prizes, two Turing Awards, three Japan Prizes, a plethora of National Medals of Science and Engineering, as well as an Oscar, two Grammys and an Emmy award for technical innovation. Nokia Bell Labs continues to conduct disruptive research focused on solving the challenges of the new digital era, defined by the contextual connection and interaction of everything and everyone.

\$25K
3rd prize

Imagine if you had access to the resources of Bell Labs – software, hardware, brilliant collaborators, and an environment with an unparalleled history and spirit of innovation – to earn the recognition your ideas deserve.

Are you ready to invent the future?

We are looking for world-shifting and impactful ideas that have the potential to change the way we live, work and communicate with each other.

If you are interested in developing your idea with leading Bell Labs researchers, you have come to the right place.

Earn the recognition your ideas deserve.

NOKIA Bell Labs



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Will you be next?

The **2017** Bell Labs Prize was awarded to **Kaushik Sengupta, Assistant Professor in Electrical Engineering at Princeton University**, for his invention of a radical new transceiver chip technology that could power a truly universal software-defined reconfigurable radio, improving today's wireless communications and opening the door for new applications currently unapproachable because of their size or cost requirements.

The **2016** Bell Labs Prize was awarded to **Sungwon Chung, Hossein Hashemi, and Hooman Abediasl from the University of Southern California** for their work on "Large-Scale Plasmonic Optical Phased Array – an architectural innovation for nanodevices".

In **2015** we awarded the \$100,000 prize to **Brandon Lucia, assistant professor at Carnegie Mellon University** for his work on "OIC: The Operating System

for Intermittent Computing" which introduces a new class of intelligent computer systems that use novel hardware and software techniques to operate reliably using intermittent or unreliable power.

We awarded the **2014** prize to **Emmanuel Abbe, assistant professor at Princeton University**, for his work on the Shannon Theory of Social Networks and beyond.

Many of the Prize candidates have engaged with collaborations with Bell Labs researchers to further their research in new directions.



Register and enter your idea in 250 words or less. If your idea is among the top 50 submissions, we will invite you to work with one of our researchers to turn your idea into a detailed, professional proposal.

Selected finalists will receive an all expenses paid trip to present their final proposals.

Three prize winners will receive an award of \$100,000 (grand prize), \$50,000 (second place) or \$25,000 (third place). Additionally, through the process, Bell Labs may engage with other contest participants as part of our investment in and engagement with the best and brightest minds.

We are seeking world-shifting proposals in any field of science, technology, engineering, and mathematics – proposals that have the potential to disrupt or profoundly change the state of human knowledge or endeavor. Our particular interest is

in innovations in any domain described in 'The Future X Network: A Bell Labs Perspective'.

The competition is open to anyone in one of the participating countries, who owns their idea and meets the eligibility requirements. The deadline to enter the contest is April 25, 2018. For more information, visit the Bell Labs Prize web site.

Please share this with your most innovative and uniquely talented students and academic colleagues so that they may become enablers of the next technological revolution with us.

How can you create a winning proposal?

You need to submit a proposal that stands out from others in 3 dimensions:

- **10x Innovation Potential**
How is your proposal novel?

What has not been done before? What is the disruptive thinking that could result in a 10x change in performance (e.g. speed, capacity, throughput, distance, latency, cost, energy efficiency or simplicity)?

- **Technical Merit**
How technically sound is your proposal? On what current principles and capabilities does it depend? Would it require future advancements and innovations to succeed?
- **Feasibility**
Can a proof of concept, simulation or demon-

stration be built in the course of the competition? What is required to do so? In order to build a commercially viable (revenue and profit-generating) solution, what more would be required?

How will human and machine communications, collaboration, control, contextual search and knowledge creation change in ten years? If you think you have the answer, let us know, and maybe you will get the chance to join the scores of researchers that have been recognized with Nobel prizes, Japan prizes, US National Medals of Science, Turing awards, and more.

The competition submission deadline is **April 25, 2018!**

To apply, visit the Bell Labs website at www.bell-labs.com/prize