MILLENNIUM
TECHNOLOGY
PRIZE

Call for 2020 Nominations

1 April – 31 July 2019

Millennium Technology Prize – Finland's tribute to innovations for a better life

The Millennium Technology Prize highlights the extensive impact of science and innovations on the well-being of society. The Prize is one million euros, and it is awarded every two years by Technology Academy Finland (TAF).

The Prize is awarded for groundbreaking technological innovations that benefit millions of people around the world by:

- enhancing quality of life
- promoting sustainable development and mitigation of climate change
- generating applications with global commercial viability
- creating new socio-economic value
- stimulating further cutting-edge research and development in science and technology

The Millennium Technology Prize, first awarded in 2004, was established jointly by the State of Finland and various academic institutions and high-tech industries. The Patron of the Prize is the President of the Republic of Finland.

How to nominate a candidate for the 2020 Millennium Technology Prize

When can one submit a nomination and which fields are eligible for the Prize?
Nominations from around the world are invited 1 April – 31 July 2019, from all fields of technology, excluding military technology. Special emphasis is placed on proposals related to:

- energy and the environment
- life sciences, including health and food
- information and communications technology and smart systems
- new materials, processes and manufacturing

Who can nominate candidates for the Prize?
Nominations are invited from organizations such as universities, research institutes, academies of science and technology, companies and industries.

Who is eligible for the Prize?
The Millennium Technology Prize can be awarded to an individual or to a team of any nationality. All individuals who deserve the Millennium Technology Prize for the proposed innovation must be named in the nomination. The Prize is intended for innovators in the active stage of their careers.

How does one prepare and submit a nomination?
The nominator must contact the nominee(s) in advance to request permission for the nomination. All nomination materials are to be provided in English and submitted by 31 July 2019 via the nomination portal at ***www.millenniumprize.fi/cfn***.

Process and schedule

1 April – 31 July 2019

Call for the 2020
Millennium Technology Prize nominations

Fall 2019 – Winter 2020

Evaluation of the nominations

Spring 2020

Decision of the 2020
Millennium Technology Prize winner(s)

26 May 2020

Announcement of the 2020 Millennium Technology Prize winner(s) and the Award Ceremony

www.millenniumprize.fi/cfn

For specific enquiries concerning the Prize and the nomination process, please contact Dr. Ari Ahonen, CEO, Technology Academy Finland (ari.ahonen@taf.fi).

The International Selection Committee

The evaluation of the Millennium Technology Prize nominations is carried out by the International Selection Committee. Based on the evaluation, the Committee makes a consensus decision of whom to propose to the Board of Technology Academy Finland as the Millennium Technology Prize winner(s). The Committee is composed of eminent professionals from academia and industry with broad knowledge and collective expertise covering the fields of the Prize.

The Award Ceremony

The President of the Republic of Finland will present the Millennium Technology Prize to the winner(s) at the Award Ceremony on 26 May 2020.

Winners

2018

TUOMO SUNTOLA

Enabling smart technology
Atomic layer deposition (ALD) enables manufacture of nanoscale thin material layers for microprocessors and digital memory devices. The technology has allowed IT equipment to become smaller and less expensive yet more powerful. Components with thin films made with the ALD technique are used in practically all modern computers and smartphones but also in solar panels, LED lights and lithium batteries, in medical instruments and implants and in environmentally friendly packaging materials.

2016

FRANCES ARNOLD

Directed evolution
Directed evolution mimics natural evolution to create new and better proteins in the laboratory. It has revolutionized the slow and costly process of protein modification and is used today in hundreds of laboratories and companies around the world. Modified proteins are used to replace processes that are expensive or utilize fossil raw materials in the production of fuels, paper products, pharmaceuticals, textiles and agricultural chemicals.

2014

STUART PARKIN

Increased data storage density
Spintronic devices, which rely on the magnetic spin angular momentum of electrons, have enabled a thousand-fold increase in the storage capacity of magnetic disk drives. This has led to an explosion of storage capacity, underpinning the evolution of large data centers and cloud services, social networks, music and film distribution online.

2012

SHINYA YAMANAKA

Ethical stem cell research
Stem cells can hold the key to effective new treatments for illnesses and building spare parts for our bodies. Mature human cells can be reprogrammed to revert into a more basic form and stem cells. Thus, stem cells can be produced without using human embryos. Scientists all over the world are pushing forward stem cell research with the promise of huge advances in the treatment of illnesses like cancer and motor neuron disease as well as personalized regenerative medicine.

Winners

2012

LINUS TORVALDS

Linux kernel open source operating system
Open source operating systems are the basis of many smartphones, tablets, digital television recorders and supercomputers all over the world. Today millions of people are using devices with Linux at their core that make their work and social lives much easier and more pleasurable. The open source movement sparked by the Linux operating system evolved as a collaborative effort making it available for the general public free of charge.

2010

MICHAEL GRÄTZEL

Dye-sensitized solar cells
The dye-sensitized solar cell is often described as 'artificial photosynthesis' and is a promising long-term alternative to standard silicon photovoltaics. It is made of low-cost materials and does not need an elaborate apparatus to manufacture.

2008

ROBERT LANGER

Controlled drug release
The development of increasingly sophisticated drug release systems promises improvements in the way we treat illnesses. These systems can control the delivery of carefully measured doses of medicine precisely where and when needed.

2006

SHUJI NAKAMURA

Blue and white LEDs
LEDs are highly energy-efficient, emit little heat, and last for a very long time. Today LEDs are mainstream technology in several fields: high-brightness blue and white LEDs are used in lighting, computer displays and new generation DVDs.

Winners

2004

TIM BERNERS-LEE

World Wide Web
The World Wide Web is now an irreplaceable tool for all Internet users. It has revolutionized the way in which we interact with each other, acquire information and communicate. Thanks to HTTP protocol, HTML language and URLs, web users can access information in a variety of formats using just a web browser.

Technology Academy Finland

The Millennium Technology Prize is awarded by Technology Academy Finland (TAF). TAF is an independent foundation that promotes the impact of science and innovations on the well-being of society and acts as a collaborative platform for business, academia and governmental organizations.

www.millenniumprize.fi/cfn

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MILLENNIUM TECHNOLOGY PRIZE

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TAF TECHNOLOGY ACADEMY FINLAND

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