

Nobel Prizes 2026

Where the Nobel Prize comes from

Alfred Nobel, a Swedish chemist, engineer and industrialist, made his fortune from dynamite, which he invented in 1867. On 27 November 1895, at the Swedish-Norwegian Club in Paris, he signed the will that turned most of that fortune, more than 31 million Swedish kronor, into a fund. The income would be paid out every year to those who, during the preceding year, had conferred the greatest benefit to mankind. He died on 10 December 1896, and the will was read in Stockholm three weeks later.

It took five years of legal and organisational work before the first prizes were handed out on 10 December 1901, the fifth anniversary of his death. That date has stayed the day of the ceremonies ever since.

Year	What happened
1895	Nobel signs his last will in Paris and leaves most of his fortune to fund five prizes.
1900-01	The Nobel Foundation is set up; first prizes awarded on 10 December 1901 (Physics to Röntgen, for X-rays).
1968-69	Sweden's central bank, Sveriges Riksbank, creates a sixth prize in Economic Sciences in Nobel's memory. First awarded in 1969 to Ragnar Frisch and Jan Tinbergen.

Six prizes, four institutions

Prize	Who decides	Presented in
Physics	Royal Swedish Academy of Sciences	Stockholm
Chemistry	Royal Swedish Academy of Sciences	Stockholm
Physiology or Medicine	Nobel Assembly at the Karolinska Institutet	Stockholm
Literature	The Swedish Academy	Stockholm
Peace	Norwegian Nobel Committee, chosen by the Norwegian Parliament	Oslo
Economic Sciences	Royal Swedish Academy of Sciences (not in Nobel's will; added 1968)	Stockholm

The rules that matter

- ◆ **No more than three people** can share a prize. Only the Peace Prize can go to an organisation; the Red Cross has won it three times.
- ◆ Prizes are **not awarded posthumously**, and nominations and deliberations stay **secret for 50 years**.
- ◆ Each laureate receives a **medal, a diploma and prize money**: 12 million Swedish kronor per full prize this year, up from 11 million in 2025.
- ◆ Ceremonies take place on **10 December**, in Stockholm for five prizes and in Oslo for Peace. A few prizes were skipped in some years, mostly during the world wars.
- ◆ Between 1901 and 2025 the prizes were awarded **633 times to 1,026 people and organisations**; 68 of those awards went to women.

The 2026 laureates at a glance

Prize	Laureate(s)	Country	Awarded for
Physiology or Medicine	Karl Deisseroth, Peter Hegemann, Georg Nagel	USA, Germany, Germany	Light-gated ion channels and optogenetics: switching nerve cells on and off with light
Physics	Francis Halzen	USA	The IceCube Neutrino Observatory and the discovery of high-energy neutrinos of astrophysical origin
Chemistry	Henri B. Kagan, Kenso Soai	France, Japan	Non-linear effects and autocatalysis in asymmetric organic synthesis: making a reaction produce one mirror-image molecule
Literature	Anne Carson	Canada	A bold and inventive body of work that, in playful dialogue with the classical tradition, created new forms for contemporary literature
Peace	Navi Pillay	South Africa	Her efforts to promote peace and international law
Economic Sciences	Robert E. Hall, Michael Woodford	USA, USA	Microeconomic foundations of macroeconomic stabilisation: models built on household and firm behaviour to steady the economy

Country is the laureate's institution or home country as listed by the Nobel Committees.

Quick count

- ◆ Ten laureates across all six prizes.
- ◆ Two of the ten are women: Anne Carson and Navi Pillay. Carson is the 19th woman to win the Literature prize.
- ◆ Francis Halzen is the first sole Physics laureate since Georges Charpak in 1992.
- ◆ By country: USA 4, Germany 2, France, Japan, Canada and South Africa 1 each.
- ◆ The prize money is 12 million Swedish kronor for each full prize. Economics and Chemistry are each split in halves between two laureates, Medicine in thirds.

01

NOBEL PRIZE 2026

PHYSIOLOGY OR MEDICINE

Karl Deisseroth

Howard Hughes Medical Institute
and Stanford University
USA · 54 years · one-third

Peter Hegemann

Humboldt University of Berlin
Germany · 71 years · one-third

Georg Nagel

University of Würzburg
Germany · 73 years · one-third

AWARDED FOR

“for their discoveries concerning light-gated ion channels and optogenetics”

In plain words: Hegemann and Nagel found a light-sensitive channel protein in a green alga. Deisseroth put it into nerve cells and used it to switch them on with light.

What the prize recognises

Optogenetics lets researchers turn chosen nerve cells on or off with light. It rests on channelrhodopsin, a protein from a single-celled green alga. Hegemann and Nagel identified it. Deisseroth showed that it could control neurons, first in a dish and then, two years later, in the brains of living mice.

Through the 20th century researchers mapped brain areas to functions, but those methods could not show cause and effect. The Nobel Committee described the resulting picture as a sketch map full of question marks. Electrodes excite every cell near their tip and drugs act on the whole brain, so neither could single out one type of neuron among billions. Francis Crick had suggested that light might be the way to control specific cells, but nobody had a working method. The committee's chair, Per Svenningsson, said optogenetics offers a way of mapping the brain “that we could once only dream of”.

How optogenetics works

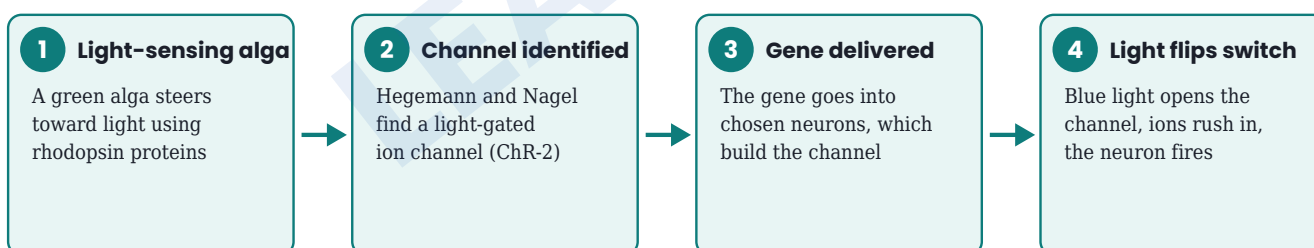


Fig. 1 The four steps behind optogenetics.

The alga. *Chlamydomonas* swims towards light. It reacts within about half a millisecond of light reaching its eyespot; the human eye takes roughly ten. Hegemann suspected that one protein both detects the light and acts on it. Isolating it was difficult because the proteins turned unstable once removed from the eyespot. He got a lead when Japanese researchers published the alga's DNA, which included two genes resembling light-capturing proteins.

The channel. Nagel expressed the two proteins in frog egg cells. The cells reacted to light. The protein responsible was named **channelrhodopsin-2 (ChR-2)**. When illuminated by blue light, a channel opens through it and charged ions flow into the cell, creating an electrical impulse. It made every kind of cell it was placed in light-sensitive.

The neuron. In 2005 Deisseroth's group, with Ed Boyden, Feng Zhang, Ernst Bamberg and Nagel, showed that neurons carrying ChR-2 fire when lit with blue light. Two years later Deisseroth made the switch work in living mice. His team made light move the whiskers of mice and woke sleeping mice by switching on a type of nerve cell thought to control wakefulness. In another experiment, reactivating the brain cells that were active during fear made mice show fear when they were in no danger.

In practice. Researchers use harmless viruses to deliver the gene for a light-sensitive protein, called an opsin, into target cells. Light from a fibre-optic cable or a small LED then switches the cells. Depending on the opsin, light either opens ion channels and activates the cell, or pumps ions to silence it. The name comes from optics and genetics, and first appeared in print in 2006.

Applications and impact

Field	What it is used for
Brain research	Finding the circuits behind pain, social behaviour, thirst, food intake, reward and attention, and studying how memories form.
Disease models	Testing the role of specific cells in Parkinson's disease, depression, schizophrenia, addiction and Alzheimer's disease.
Vision	Clinical trials for retinitis pigmentosa, a disease that destroys the rods and cones of the eye. In one reported case a blind patient wearing special light-emitting glasses could find and grasp objects on a table.
Hearing	Being explored for cochlear implants, which today stimulate the auditory nerve with electricity.
Other organs	Light has been used to pace the heart, to study how heart rate affects brain states. Any cell type that can carry the gene can be controlled this way.

So far optogenetics is mainly a research tool, and the treatments are at trial stage. The committee's press release said it has "fundamentally altered our understanding of the brain", which is the case for the prize. It won against bookmakers' favourites such as GLP-1 drugs and CAR-T therapy.

Boyden co-authored the 2005 paper and shared the 2018 Gairdner Award with Hegemann and Deisseroth. He is not among the laureates, since a Nobel Prize can be shared by three people at most. The prize comes 21 years after the 2005 paper.

India link

Optogenetics is practised in Indian labs too. Vidita Vaidya of the Tata Institute of Fundamental Research says it has changed the scale at which discoveries are made in neuroscience, and Sanjeev Kumar Mehto of IIT (BHU) says it has helped scientists understand the functions of the brain and certain conditions. The method is still mostly confined to laboratories. As it moves towards treatments such as vision restoration, the question for India, as for other countries, is how quickly lab research reaches patients.

Terms

Term	Meaning
Optogenetics	Using light to control genetically modified cells.
Opsins	Light-sensitive proteins. Placed in specific cells, they work as on/off switches for the cell's activity.
Channelrhodopsin	A light-gated ion channel first found in the green alga <i>Chlamydomonas</i> .

02

NOBEL PRIZE 2026

PHYSICS

Francis Halzen

University of Wisconsin–Madison. Born 23 March 1944 in Tienen, Belgium; PhD 1969, KU Leuven. Principal investigator of IceCube since 2001.

USA · 82 years · whole prize

AWARDED FOR

“for decisive contributions to the IceCube Neutrino Observatory and the discovery of high-energy neutrinos of astrophysical origin”

In plain words: Halzen proposed using Antarctic ice as a neutrino detector and led the project that built it. IceCube has since caught neutrinos that come from outside our Galaxy.

What the prize recognises

Cosmic rays, mostly protons and the nuclei of elements such as helium and iron, have been known to bombard the Earth since the early 20th century. Some carry more energy than the world’s largest accelerator, the Large Hadron Collider, can produce. Exploding stars or jets from distant galaxies were suspected of giving them that push, but nobody could be sure. Cosmic rays are charged, so magnetic fields in space bend their paths and their arrival direction says little about where they came from.

Neutrinos have no electric charge, very little mass, and interact rarely with matter. Trillions pass through your body every second without leaving a trace, and they travel in a straight line, so a detected neutrino points back to its source. When a cosmic-ray proton strikes other atoms it can produce particles that decay into neutrinos, so a high-energy neutrino shows that some high-energy event produced it.

Because neutrinos interact so rarely, catching more of them needs more matter. Halzen and John G. Learned proposed using the ice at the South Pole in 1987–88. Halzen went on to organise the effort, funded mainly by the US National Science Foundation. The committee credited him with proposing the idea and with keeping hundreds of scientists and engineers working on it for decades.

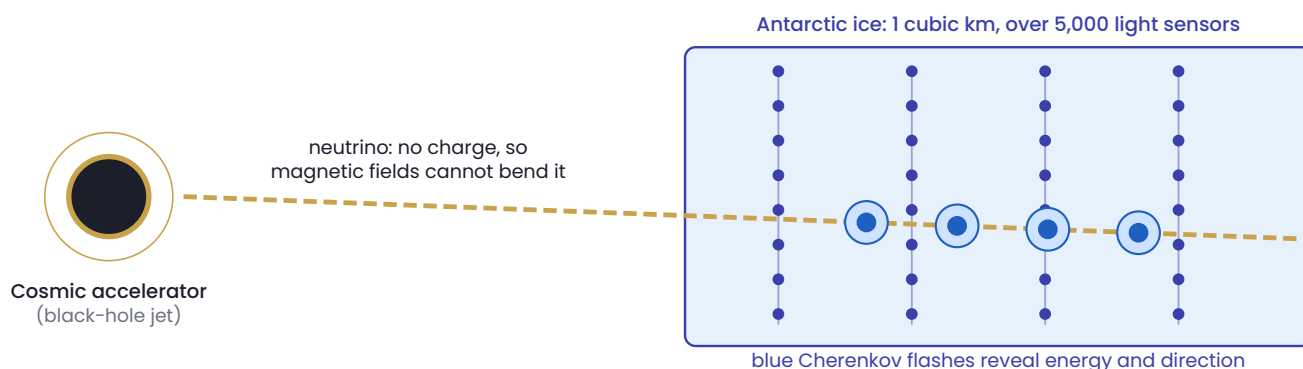
How IceCube works

Fig. 2 A neutrino collides with an atom in the ice; the faint flashes along its path give its direction.

IceCube took its full shape in 2011 after seven years of construction. Holes were melted in the ice with jets of hot water, and the sensors, hung on cables, were lowered before the water froze again. Today it has 5,160 optical sensors on 86 cables, lying 1.4 to 2.4 km below the surface and covering roughly a cubic kilometre of ice.

When an energetic neutrino strikes an atomic nucleus in the ice, the collision creates charged particles. Those that move faster than light does in ice emit Cherenkov radiation, a dull blue glow. The sensors record which of them lit up and in what order, which gives the neutrino's energy and direction. IceCube registers about a lakh neutrinos a year above an energy cutoff, and around a hundred of them come from astrophysical sources.

Three messengers compared

Messenger	Strength	Weakness
Light	Easy to detect; mature technology	Absorbed or scattered by dust and gas; hidden sources stay hidden
Cosmic rays	Carry energy from the extreme universe	Charged, so magnetic fields scramble their direction
Neutrinos	Travel straight; give an unobstructed view of cosmic accelerators	Almost undetectable; need cubic-kilometre detectors

What IceCube has found

When	Finding
2013	Two neutrinos with about 140 times the energy of a proton accelerated by the LHC. More data showed a whole population of high-energy neutrinos reaching Earth from outside our Galaxy.
2017	A neutrino of about 290 TeV traced to TXS 0506+056 , a distant galaxy whose black hole powers a jet pointed roughly at Earth. Archived data showed the same object had also produced a burst in 2014-15.
2022	More neutrinos than expected from NGC 1068 , a galaxy 46 million light-years away, also with an active central black hole.
2023	First high-energy neutrinos from the plane of our own Milky Way (4.5 sigma).

Halzen's reading of the data is that the neutrinos come from dense regions close to supermassive black holes, where gamma rays are absorbed and never escape. The prize is given to Halzen alone, although IceCube is an international collaboration. After the announcement he said he hoped it reflected on "the really courageous people who joined me in the beginning of this project". The prize arrives 38 years after the 1988 proposal.

Applications and impact

Field	What it opens up
Origin of cosmic rays	Neutrinos are made where cosmic rays are accelerated, so they can point to the sources of the highest-energy cosmic rays, a question open for over a century.
Multimessenger astronomy	Neutrino detections can be matched with light, cosmic rays and gravitational waves from the same event.
Particle physics	IceCube is also used to study neutrinos themselves, search for dark matter and watch for supernova explosions in our Galaxy.
More telescopes	Similar detectors are being built in the Mediterranean Sea and in Lake Baikal.

The gain here is knowledge: a new way to observe the universe. The work has no direct commercial application.

India link

India's own neutrino project is the India-based Neutrino Observatory (INO). It was planned as an underground detector for atmospheric neutrinos, a different approach from IceCube's ice, to answer questions such as the ordering of neutrino masses. The site was first chosen near Singara in the Nilgiris and later shifted to the Bodi West Hills in Theni district, Tamil Nadu. It has been held up for years by environmental clearances and local opposition, and has not been built.

Terms

Term	Meaning
Neutrino	Neutral, extremely light particle that very rarely interacts with matter.
Cherenkov light	Glow emitted when a charged particle moves through a medium faster than light does in that medium.
IceCube	Neutrino observatory at the South Pole that uses a cubic kilometre of ice as its detector.
Multimessenger astronomy	Studying the same cosmic event through light, neutrinos, cosmic rays and gravitational waves.

03

NOBEL PRIZE 2026

CHEMISTRY

Henri B. Kagan

Université Paris-Sud
France · half the prize

Kenso Soai

Tokyo University of Science
Japan · half the prize

AWARDED FOR

“for the discovery of non-linear effects and autocatalysis in asymmetric organic synthesis”

In plain words: Kagan and Soai found ways to make a chemical reaction produce one mirror-image form of a molecule instead of a mixture of both. Soai's reaction produces almost purely one form, and the product helps make more of itself.

What the prize recognises

Many molecules exist in two forms that are mirror images of each other, like a left and a right hand. The property is called **chirality** and the two forms are **enantiomers**. Living things use only one form: the amino acids in proteins are all the “left” (L) form and the sugars in DNA the “right” (D) form. How that one-sidedness began is an open question. In a flask, an ordinary reaction gives both forms in equal amounts, a 50:50 mix called a racemate. Louis Pasteur observed this as far back as 1848, when bacteria consumed one mirror form of tartaric acid and left the other untouched.

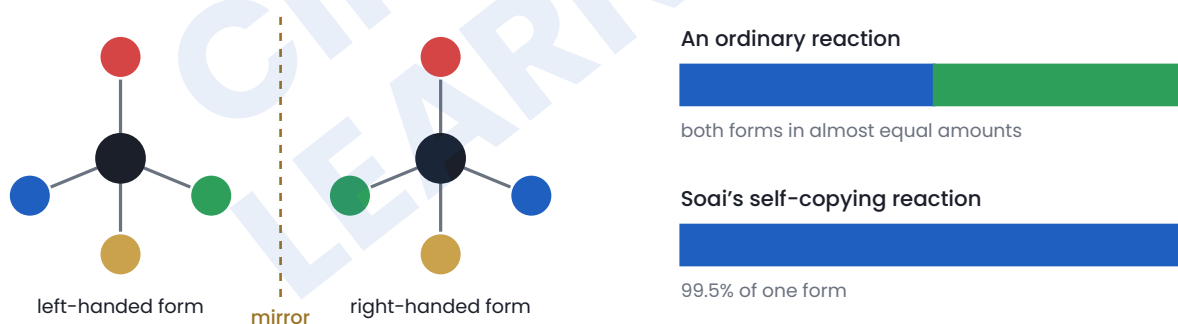


Fig. 3 Mirror-image forms of a molecule, and what the prize-winning work changed.

How they got there

In 1953 Charles Frank, a theoretical physicist at the University of Bristol, worked out mathematically what it would take to start a one-sided bias. His model needed three things: a substance that catalyses its own production (autocatalysis), a catalyst that favours one hand, and an “anti-catalyst” that suppresses the mirror image. With all three, even a tiny initial difference snowballs. Autocatalysis was already known, and asymmetric catalysis had earned Nobel Prizes in 2001 and 2021. Nobody had shown how to combine the two. That is where Kagan (1986) and Soai (1995) come in.

Kagan. Chemists believed that a purer product needed a purer catalyst, so the race was for ever purer ingredients. Kagan reasoned that the metal in a catalyst grips two chiral molecules, the ligands that give it handedness. Build the catalyst from a 75:25 mix of the two hands and the metal picks its partners at random:

right-right (about 56%), left-left (about 6%) and mixed right-left (about 38%). The matched pairs work well. The mixed pair barely works, so it sits idle and takes minority-hand molecules out of play. The reaction is driven almost entirely by right-right catalysts, and the product comes out roughly 90:10, purer than the 75:25 mix it started from. This is the **non-linear effect**. It overturned the old assumption that a product could be no purer than the catalyst's ingredients.

Soai. Soai built the reaction Frank had imagined. The product is also the catalyst, so each batch seeds the next and comes out more lopsided than the last. Starting from a pyrimidyl alcohol with a 5% excess of one hand, five rounds lifted it to 90%. In a later version an excess of just 0.00005%, far too small to measure by ordinary means, became more than 99.5% in three rounds, an amplification of roughly 630,000 times. Then came the decisive step. Starting from ingredients with no handedness at all, the reaction still ended up almost entirely one-handed, with the hand chosen by chance. It was the first time a one-handed product had been made from non-chiral ingredients in this way, and it remains the only known example. Committee member Peter Somfai called it probably the coolest experiment in organic chemistry.

Is it a model for the origin of life? Not quite, and the committee says so. Soai's reaction uses zinc reagents in an organic solvent, nothing like the watery "prebiotic soup" in which life is thought to have emerged. The committee calls it a proof of concept: it shows that the mechanism Frank described can work in a laboratory.

Applications and impact

Field	What it is used for
Medicines	Drug makers can make the wanted mirror form directly. Earlier they often made a mixture and separated it, which was expensive and wasteful.
Flavours and fragrances	The two forms of a molecule can smell or taste different, so the right form matters.
Agricultural chemicals	Many crop-protection chemicals are chiral. Making only the active form means less waste.
Origin of life	Soai's reaction is a laboratory model for how a tiny imbalance can grow into near-pure one-handedness.

A drug works by fitting onto an enzyme or receptor, like a key in a lock. The wrong mirror form can be harmless at best and harmful at worst. Thalidomide, first sold as a sedative, left thousands of children with birth defects in the early 1960s. Both forms were long blamed, but later analysis shows that is only part of the explanation. The broader point is that enantiomers matter.

India link

Ethambutol, a first-line tuberculosis drug, shows why this matters in India. Its (S,S) form is about 500 times more potent against the TB bacillus than its (R,R) mirror image, yet the drug can damage the optic nerve, a side effect linked to dose and duration of treatment. A purer supply of the potent form could allow lower doses and so lower exposure to the side effects. India has the world's highest TB burden and is among the largest producers of generic medicines, so efficient routes to the right mirror form matter to its drug industry.

Terms

Term	Meaning
Chirality	Existence of a molecule in two mirror-image forms, like left and right hands.
Enantiomers	The two mirror-image forms of a chiral molecule.
Homochirality	Preference for one mirror-image form, as found in all living things.
Non-linear effect	A partly one-handed catalyst giving a product that is far more one-handed.
Autocatalysis	A reaction in which the product also acts as the catalyst for making more of itself.

CIRCULAR
LEARNINGS

04

NOBEL PRIZE 2026

LITERATURE

Anne Carson

Canadian poet, essayist, classicist and translator. Born June 1950 in Toronto.

Canada · 76 years · whole prize

AWARDED FOR

“for her bold and inventive oeuvre that, in playful dialogue with the classical tradition, has created new forms for contemporary literature”

In plain words: Carson writes poetry, essays and translations that often blur into one another. She works with ancient Greek writing throughout, and the Academy rewarded the new forms she has made from it.

What the prize recognises

Carson has written for more than four decades. She studied Classics at the University of Toronto, and her doctoral dissertation (1981) was on the ancient Greek poet Sappho. Her books move between poetry, essay, translation, memoir and fiction, sometimes within a single work. The Swedish Academy said almost all her work has centred on the intersection between the philologist’s obsession with words and the poet’s desire for new meaning. She writes about desire, abandonment and grief in a detached tone, and brings in feeling through a fragment of Sappho, a photograph, a mythological figure or a sudden change of form. She has translated Sappho, Euripides and others, notably in *If Not*, *Winter* and *An Oresteia*. Writing across forms has a precedent among Literature laureates in India’s Rabindranath Tagore, who wrote poems, plays, novels, essays and songs. His *Gitanjali* won him the 1913 prize, and he was the first non-European Nobel laureate in any category.

Main works

Year	Work	What it is
1986	<i>Eros the Bittersweet</i>	Her first book, an essay on desire in ancient Greek literature.
1992	<i>Short Talks</i>	Her first book of poetry; brief prose poems that began as drawings.
1998	<i>Autobiography of Red</i>	A novel in verse that retells the myth of Geryon and Herakles as a coming-of-age story.
2001	<i>The Beauty of the Husband</i>	“A fictional essay in 29 tangos.” Made her the first woman to win the T. S. Eliot Prize.
2010	<i>Nox</i>	Accordion-fold book of photographs, letters and translation, made after her brother’s death.
2024	<i>Wrong Norma</i>	25 poetic-prose pieces; won the National Book Critics Circle Award for Poetry in 2025.

Carson is the 19th woman among the 122 individuals to have won the Literature prize. She was in Iceland when the news reached her, and the Academy’s permanent secretary, Ingrid Carlberg, said she was taken by surprise. Last year’s winner was the Hungarian writer László Krasznahorkai.

05

NOBEL PRIZE 2026
PEACE

Navanethem “Navi” Pillay

South African jurist and former UN High Commissioner for Human Rights. Born 23 September 1941 in Durban, into a Tamil family of Indian origin.

South Africa · 85 years · whole prize

AWARDED FOR

“for her efforts to promote peace and international law”

In plain words: Pillay has spent her career as a judge and UN official working to make sure war crimes, crimes against humanity and genocide are prosecuted.

What the prize recognises

The Norwegian Nobel Committee said the prize goes to a person who, with exceptional courage and integrity, has led the way towards a more comprehensive global legal order, and who has been instrumental in ensuring that war crimes, crimes against humanity and genocide are prosecuted. It linked the choice to Nobel’s will: by advancing the use of tribunals for peace and justice, Pillay strengthens fraternity between nations and gives the “peace conferences” named in the will their modern form.

The statement was unusually direct about the present. The committee said international law is no longer just a supplement to peace and security but an absolute necessity. It warned of a shift towards power politics at the expense of legal frameworks, of judges who are sanctioned while their institutions are attacked, and of cases under international law that have produced different results depending on who is the perpetrator and who is the victim. The United States has sanctioned ICC officials since 2025. Last year’s Peace Prize went to María Corina Machado of Venezuela for her democracy work.

Her career

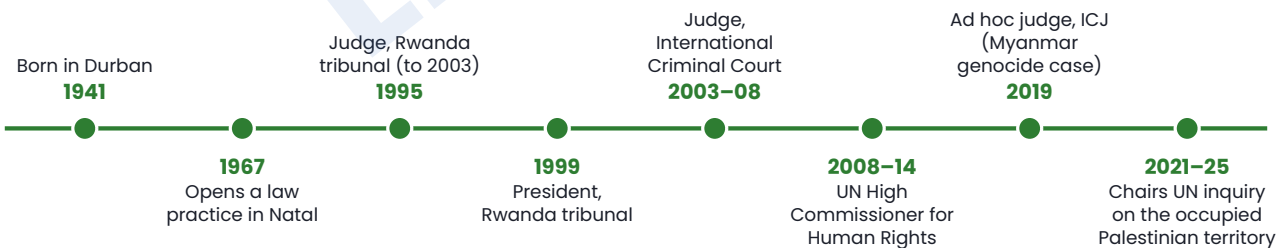


Fig. 4 Navi Pillay’s career.

Pillay was born in a poor neighbourhood of Durban. Her father was a bus driver. After studying law at the University of Natal she became the first woman to open a law practice in the province, in 1967, and defended opponents of apartheid. In 1973 she won the inmates of Robben Island, who included Nelson Mandela, the right to legal representation. She later earned a doctorate in law at Harvard and campaigned for the equality clause in South Africa’s post-apartheid Constitution.

Mandela nominated her in 1995 to the International Criminal Tribunal for Rwanda, where she spent eight years, four of them as president. She was then a judge of the International Criminal Court (2003–08) and UN High Commissioner for Human Rights (2008–14). In 2019 she became an ad hoc judge, designated by The Gambia, at the International Court of Justice in the genocide case against Myanmar, where she still sits.

Impact

The Rwanda tribunal delivered two landmark rulings in her time there. In the Akayesu case (1998), the first conviction for genocide by an international court, it held that rape and sexual violence can constitute genocide. In the Media case it held that those who spread hate propaganda against the Tutsis by radio and print were guilty of incitement to genocide. Later courts rely on both precedents.

Reaction

From 2021 to 2025 Pillay chaired the UN Commission of Inquiry on the Occupied Palestinian Territory. In September 2025 the commission concluded that Israel has committed genocide in Gaza and found reasonable grounds that four of the five acts listed in the 1948 Genocide Convention had been committed since October 2023. Israel rejects the conclusion and called the award a “grotesque weaponisation” of the prize. Asked about the finding, the committee’s chair said the “Nobel Committee is not the court”.

India link

Pillay’s family belongs to the Indian diaspora. Her grandparents were brought from India in the 1890s as indentured labourers for the sugar plantations of Natal, the same province where Gandhi had practised law and begun his campaigns. India took up the cause of Natal’s Indians and then of apartheid itself early: in 1946 it raised the treatment of Indians in South Africa at the UN and cut trade ties with the Pretoria government.

India’s relationship with the courts Pillay later served in is more distant. It is not a party to the Rome Statute, so the ICC has no automatic jurisdiction over its territory or citizens. Her current ICJ case is nearer home. It concerns the Rohingya of Myanmar, India’s neighbour, and India hosts Rohingya refugees.

Terms

Term	Meaning
International Criminal Court (ICC)	Permanent court in The Hague that tries individuals for genocide, war crimes and crimes against humanity. Created by the Rome Statute.
International Court of Justice (ICJ)	Principal judicial organ of the UN; settles legal disputes between states . The genocide case against Myanmar is before it.
Rwanda tribunal (ICTR)	Temporary UN tribunal set up to try those responsible for the 1994 genocide in Rwanda.
UN High Commissioner for Human Rights	Head of the UN human rights office (OHCHR).

06

NOBEL PRIZE 2026

ECONOMIC SCIENCES

Robert E. Hall

Stanford University. Born 1943 in Palo Alto, California; PhD 1967, MIT.

USA · 83 years · half the prize

Michael Woodford

Columbia University. Born 1955 in Chicopee, Massachusetts; PhD 1983, MIT.

USA · half the prize

AWARDED FOR**“for microeconomic foundations of macroeconomic stabilisation”**

In plain words: Hall and Woodford rebuilt the models that guide governments and central banks, starting from how households and firms decide, so that well-timed policy can reduce the economy's peaks and troughs.

What the prize recognises

Economies swing between upturns and downturns. Since Keynes put forward his theories almost a century ago, the standard response has been stabilisation policy: in a recession, cut interest rates and run a larger budget deficit; in a boom, do the opposite. The Academy's point of departure is the 1970s. After the oil crises, the Keynesian models that told policymakers when and how to act seemed to stop working. They did not bring unemployment down but produced runaway inflation. The West went through a decade of low growth, high unemployment and high inflation, and many people concluded that stabilisation policy had done more harm than good and should be retired.

Hall and Woodford are honoured for showing how the models could be rebuilt. The older models rested on statistical links between aggregates such as inflation, production and consumption. Those links can break the moment policy changes. The two laureates built models on a microeconomic foundation instead: how the whole mass of households and businesses affect the economy through their individual decisions.

A central feature of these models is that households and firms look forward when they decide how much to save or what price to charge. That gives policy a second channel. When governments and central banks announce their plans, they change what people expect, and expectations move spending and prices today. The committee says the models have been extremely helpful in dealing with the downturns since they were introduced. Its chair, John Hassler, put it this way: the work gives “a stable theoretical foundation for the models that are now used by central banks and governments around the world”, and leaves us better equipped to deal with shocks such as energy crises or sudden changes in how much households consume.

The two bodies of work

	Robert E. Hall	Michael Woodford
Starting point	Households, workers and firms: how they spend, save and hire.	Monetary policy: how central banks should set interest rates.
Key idea	In 1978 he showed that, if people look ahead rationally, changes in consumption cannot be predicted. Later work looked at why hiring and wages respond slowly in downturns.	With Julio Rotemberg he built one of the first New Keynesian models with sticky prices on microeconomic foundations, then used it to study how interest-rate rules should be designed.
Landmark	Chairs the NBER committee that dates US recessions, since 1978.	<i>Interest and Prices</i> (2003), a leading advanced text on monetary theory.

Hall. Before 1978 the usual view was that consumption tracks current income closely. Hall asked what should happen if people plan ahead and use everything they know. Then today's consumption already reflects what they expect, so the next change can come only from news nobody foresaw. His result became a baseline that later work on consumption was measured against. He has also studied unemployment and downturns for decades, and the committee that dates US recessions, which he chairs, decides when an expansion has ended.

Woodford. His work with Rotemberg gave sticky prices, the fact that firms cannot reprice every day, a microeconomic basis. In such models an interest-rate decision changes real activity because prices do not adjust at once. *Interest and Prices* (2003) set out the framework in full, which he calls neo-Wicksellian after the Swedish economist Knut Wicksell. His work also covers inflation targeting and how people form expectations when they are not fully rational.

Applications and impact

Area	What it is used for
Central banks	Models of this kind are the working tools for studying how interest-rate decisions affect inflation and output.
Governments	Fiscal measures, such as a larger deficit in a recession, are timed and sized with the same models.
Communication	Announcing the likely path of policy shapes borrowing and spending today, because people look forward.
Shocks	The committee names energy crises and sudden changes in household consumption as shocks the models help handle.
Recession dating	Hall's committee gives the official US dates for when recessions begin and end, which researchers use as the reference.

Last year's prize went to Joel Mokyr, Philippe Aghion and Peter Howitt for innovation-driven growth. Both of this year's laureates are American, as are most Economics laureates. Only three women have won the prize, the latest being Claudia Goldin in 2023.

India link

India's monetary policy follows this tradition. Since 2016 the Reserve Bank of India works under a flexible inflation-targeting framework, in which a Monetary Policy Committee sets the repo rate to keep consumer-price inflation around 4 per cent, within a band of 2 to 6 per cent. The committee's rate decisions, and what it says about the future path of rates, are the kind of policy and communication these models are built to analyse.

Terms

Term	Meaning
Stabilisation policy	Fiscal and monetary measures to reduce swings in output, jobs and inflation over the business cycle.
Microeconomic foundations	Building economy-wide models from the decisions of households and firms.
New Keynesian model	Model in which prices or wages adjust slowly, so monetary policy can affect real output.
Stagflation	High inflation together with high unemployment and low growth, as in the 1970s.
Random walk	A series whose next change cannot be predicted from its past.

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