PRESS RELEASE

Hong Wang, Permanent Professor at IHES, awarded the 2026 Fields Medal

Hong Wang, a 35-year-old Chinese mathematician specializing in harmonic analysis, has been awarded the Fields Medal at the International Congress of Mathematicians, held in Philadelphia (United States) from July 23 to 30, 2026. This distinction, widely regarded as the most prestigious in mathematics, recognizes her outstanding work, most notably her joint work with Joshua Zahl on the Kakeya set conjecture in three dimensions.

A Permanent Professor at the Institut des Hautes Études Scientifiques (IHES) since September 2025, where she is affiliated with the Alexander Grothendieck Laboratory (CNRS/IHES), Hong Wang is also a Silver Professor of mathematics at the Courant Institute of New York University (NYU) in the United States. Hong Wang's Fields Medal is the ninth Fields Medal (1) awarded to a mathematician from IHES (out of fourteen mathematics professors recruited since the Institute's founding), the twelfth Fields Medal (2) awarded to a scientist from Université Paris-Saclay, of which IHES is a founding member, and the seventeenth Fields Medal to come from a laboratory operating under the auspices of CNRS (3).

Hong Wang says: *"I receive this distinction with great emotion and gratitude. I am grateful to have crossed paths with the right people at the right time, to have been guided toward the right research problems, and to have worked in environments where I could devote myself entirely to my research. Mathematics is a demanding discipline, and what has carried me, above all, is the generosity of everyone who agreed to work with me and to share their intuitions as well as their doubts. This medal reflects their work as much as mine."*

Emmanuel Ullmo, director of IHES, comments: *"When Hong Wang joined IHES as a Permanent Professor, we knew we were welcoming a mathematician of rare stature. What the international mathematical community has confirmed since then has exceeded all our expectations. Solving the Kakeya conjecture in three dimensions is the kind of result that reshapes the landscape of an entire field of research. The succession of prizes she has received—from the Salem Prize to the Fields Medal, by way of the Clay Research Award—simply reflects what her peers unanimously feel: Hong Wang is one of the most important mathematicians of her generation. We are proud and delighted that Hong Wang has chosen to pursue her work in France and at IHES."*

Camille Galap, president of Université Paris-Saclay, states: *"First of all, I would like to extend my warmest congratulations to Hong Wang on this prestigious distinction. Excellence in mathematics at Université Paris-Saclay, of which IHES is a founding member, is one of its historic hallmarks. Close ties have existed among all the members of this community of mathematicians in the area since the pioneers arrived in the 1960s. The creation of the University merely gave institutional visibility to these pre-existing ties. I want to salute the fact that excellence has always been the watchword of this community, part of which comes together within the University's Graduate School of Mathematics, both for its scientific advances and for the quality of its programs, from the bachelor's to the doctoral level."*

"*France can once again take pride in the excellence of its mathematical research, celebrated today thanks to the work of Hong Wang, to whom CNRS extends its warmest congratulations on receiving this prestigious prize,"* stresses **Thierry Dauxois**, Chairman and CEO of CNRS. *"Hong Wang is a model of the creativity and rigor that bring honor to mathematics in France; it is a source of pride that she has joined a joint CNRS–IHES laboratory."*

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“NYU is so proud of Professor Wang’s achievement. The world is recognizing what her NYU colleagues and students have known for years: she is one of the most remarkable minds in mathematics today. Resolving this century-old conjecture has opened new avenues of thought and inquiry that will be felt for decades to come,” said New York University President **Linda G. Mills**.

Hong Wang: A Remarkable Scientific Career

Hong Wang earned her bachelor's degree in mathematics from Peking University in 2011. She continued her studies in France, first at École polytechnique (class of X-2010), then at Université Paris-Saclay, where she obtained a master's degree in mathematics and applications in 2014. She defended her doctoral thesis, supervised by Larry Guth, at the Massachusetts Institute of Technology (MIT) in 2019. After completing her PhD, she was a postdoctoral researcher at the Institute for Advanced Study in Princeton. In 2021, she joined the University of California, Los Angeles (UCLA) as an Assistant Professor, before being appointed Associate Professor at the Courant Institute of New York University (NYU) in 2023. Since September 2025, she has jointly held positions as a Permanent Professor at IHES and Professor at NYU.

Research in Harmonic Analysis and the Kakeya Conjecture

Hong Wang's work lies in the field of harmonic analysis, a branch of mathematics that studies the decomposition of functions into elementary waves. To this end, Hong Wang primarily draws on tools from geometric measure theory.

Hong Wang's contributions address several central conjectures in harmonic analysis: the Fourier restriction conjecture, the local smoothing conjecture, the Furstenberg conjecture, and the Kakeya conjecture. The latter, posed in 1917 by the Japanese mathematician Sōichi Kakeya, asks about the minimal size of a set that contains a line segment in every direction. By proving that the Hausdorff dimension of these sets is equal to the dimension of the ambient space R^3, Hong Wang and her collaborator Joshua Zahl provided an answer to a problem that had remained open for nearly a century.

Awards and honors

Hong Wang has established herself as one of the most brilliant mathematicians of her generation, garnering a series of prestigious international honors. Winner of the Maryam Mirzakhani New Frontiers Prize in 2022, she went on to receive the Frontier of Science Award twice (2023 and 2025), a testament to the consistently high quality of her research. The year 2025 marked a resounding turning point in her career: she was awarded the Antonio Ambrosetti Medal, the Ostrowski Prize, the Salem Prize, and the Gold Medal of the International Congress of Chinese Mathematicians. Hong Wang's string of accolades continued into 2026, with the Sadosky Prize from the Association for Women in Mathematics, the New Horizons in Mathematics Prize, the Clay Research Award, and, crowning an exceptional career, the Fields Medal, the highest distinction in mathematics.

1) Other IHES mathematicians who have won the Fields Medal:

- René Thom, 1958, Permanent Professor at IHES from 1963 to 1990
- Alexander Grothendieck, 1966, Permanent Professor at IHES from 1958 to 1970
- Pierre Deligne, 1978, Permanent Professor at IHES from 1970 to 1984
- Alain Connes, 1982, holder of the Léon Motchane Chair since 1979, Professor Emeritus since 2017
- Jean Bourgain, 1994, Permanent Professor at IHES from 1985 to 1993
- Maxim Kontsevich, 1998, Permanent Professor at IHES since 1995
- Laurent Lafforgue, 2002, Permanent Professor at IHES from 2000 to 2021
- Hugo Duminil-Copin, 2022, Permanent Professor at IHES since 2016

(2) Other Université Paris-Saclay mathematicians who have won the Fields Medal:

- Jean-Christophe Yoccoz, 1994
- Wendelin Werner, 2006
- Ngô Bảo Châu, 2010

(3) Other Fields medalists who worked in CNRS-affiliated laboratories:

- Laurent Schwartz, 1950
- Jean-Pierre Serre, 1954
- Pierre-Louis Lions, 1994
- Cédric Villani, 2010
- Artur Ávila, 2014

The Institut des Hautes Études Scientifiques (IHES)

A founding member of Université Paris-Saclay, IHES is a research center in mathematics, theoretical physics and all related disciplines. A private foundation recognized in the public interest, the Institute has only a restricted number of permanent faculty. Besides, it welcomes about 200 visitors from all over the world for research visits each year. Freedom of research, independence and interdisciplinarity are the fundamental values of IHES.

CNRS

A major player in fundamental research worldwide, the French National Centre for Scientific Research (CNRS) is the only French organization active in all fields of science. Its unique position as a multi-specialist enables it to bring together the various scientific disciplines to shed light on and address the challenges of today's world, in collaboration with public and socio-economic stakeholders. Together, the sciences work in the service of sustainable progress that benefits society as a whole.

Université Paris-Saclay

Born of the shared ambition of universities, grandes écoles, and research organizations, Université Paris-Saclay ranks among the leading European and world universities, covering the fields of Science and Engineering, Life Sciences and Health, and Humanities and Social Sciences. Its scientific policy closely combines research and innovation, spanning both fundamental and applied sciences to address major societal challenges. From undergraduate programs to doctorates, including grande école programs, Université Paris-Saclay offers education across a broad range of disciplines, in the service of student success and professional integration. It prepares students for a rapidly changing society in which critical thinking, agility, and the ability to renew one's skills are key. Université Paris-Saclay also offers a rich program of lifelong learning. Located south of Paris across a vast area, Université Paris-Saclay enjoys a geographic position that fosters both its international visibility and close ties with its socio-economic partners—major industrial groups, SMEs, startups, local authorities, nonprofit organizations...