

Ukrainian mathematician awarded prestigious Fields Medal

July 5 2022, By FRANK JORDANS



Maryna Viazovska, right, receives the Fields prize from IMU President Carlos E. Kenig, during the International Congress of Mathematicians 2022 in Helsinki, Finland, Tuesday, July 5, 2022. Maryna Viazovska, James Maynard, June Huh and Hugo Duminil-Copin, were awarded the Fields Medal for Mathematics, a prize for mathematicians under 40 years of age, at the International Congress of the International Mathematical Union (IMU), a meeting that takes place every four years. Credit: Vesa Moilanen/Lehtikuva via AP

Ukrainian mathematician Maryna Viazovska was named Tuesday as one of four recipients of the prestigious Fields Medal, which is often described as the Nobel Prize in mathematics.

The International Mathematical Union said Viazovska, who holds the chair in number theory at the Swiss Federal Institute of Technology Lausanne, was being honored for her research into geometric problems.

Viazovska, 37, said she was very humbled to receive the prize for her work, which she said addresses a "very old and natural question," namely the densest way to pack identical spheres.

While many people are familiar with the problem having seen cantaloupes stacked like a pyramid in a supermarket, Viazovska took it to another dimension—the eighth and 24th, to be precise—solving it in a way that drew widespread praise from top mathematicians.

"This is actually a very useful tool used in many areas of technology," she told The Associated Press.

Viazovska said Russia's invasion of Ukraine on Feb. 24 had profoundly changed her life and those of all Ukrainians.

"Ukraine is my native country and seeing how it's being destroyed, how many lives are lost ... of course, it's all very difficult," she said.

The other winners were French mathematician Hugo Duminil-Copin of the University of Geneva; Korean-American mathematician June Huh of Princeton; and British mathematician James Maynard of the University of Oxford.



Maryna Viazovska attends the Fields prize ceremony during the International Congress of Mathematicians 2022 in Helsinki, Finland, Tuesday, July 5, 2022. Maryna Viazovska, James Maynard, June Huh and Hugo Duminil-Copin, were awarded the Fields Medal for Mathematics, a prize for mathematicians under 40 years of age, at the International Congress of the International Mathematical Union (IMU), a meeting that takes place every four years. Credit: Vesa Moilanen/Lehtikuva via AP



June Huh attends the Fields prize ceremony during the International Congress of Mathematicians 2022 in Helsinki, Finland, Tuesday, July 5, 2022. Maryna Vjazovska, James Maynard, June Huh and Hugo Duminil-Copin, were awarded the Fields Medal for Mathematics, a prize for mathematicians under 40 years of age, at the International Congress of the International Mathematical Union (IMU), a meeting that takes place every four years. Credit: Vesa Moilanen/Lehtikuva via AP



Hugo Duminil-Copin poses with the Fields prize during the International Congress of Mathematicians 2022 in Helsinki, Finland, Tuesday, July 5, 2022. Maryna Vjazovska, James Maynard, June Huh and Hugo Duminil-Copin, were awarded the Fields Medal for Mathematics, a prize for mathematicians under 40 years of age, at the International Congress of the International Mathematical Union (IMU), a meeting that takes place every four years. Credit: Vesa Moilanen/Lehtikuva via AP



In this photo released by EPFL shows Ukrainian mathematician Maryna Sergiivna Viazovska in Lausanne, Switzerland, June 13, 2022. Viazovska was named Tuesday as one of four recipients of the prestigious Fields Medal, which is often described a the Nobel Prize in mathematics. Credit: EPFL/Fred Merz



From left, Maryna Vjazovska, James Maynard, June Huh and Hugo Duminil-Copin, attend the prize ceremony during the International Congress of Mathematicians 2022 (ICM 2022) in Helsinki, Finland, Tuesday, July 5, 2022. They won the Fields Medal for Mathematics, a prize awarded to mathematicians under 40 years of age at the International Congress of the International Mathematical Union (IMU), a meeting that takes place every four years. Credit: Vesa Moilanen/Lehtikuva via AP



June Huh, right, receives the Fields prize during the International Congress of Mathematicians 2022 in Helsinki, Finland, Tuesday, July 5, 2022. Maryna Vjazovska, James Maynard, June Huh and Hugo Duminil-Copin, were awarded the Fields Medal for Mathematics, a prize for mathematicians under 40 years of age, at the International Congress of the International Mathematical Union (IMU), a meeting that takes place every four years. Credit: Vesa Moilanen/Lehtikuva via AP



James Maynard, right, receives the Fields prize from IMU President Carlos E. Kenig during the International Congress of Mathematicians 2022 in Helsinki, Finland, Tuesday, July 5, 2022. Maryna Vjazovska, James Maynard, June Huh and Hugo Duminil-Copin, were awarded the Fields Medal for Mathematics, a prize for mathematicians under 40 years of age, at the International Congress of the International Mathematical Union (IMU), a meeting that takes place every four years. Credit: Vesa Moilanen/Lehtikuva via AP



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This photo provided by the Institut des Hautes Etudes Scientifiques (IHES) show French mathematician Hugo Duminil-Copin in January 2016 in Bures-sur-Yvette, southern of Paris. Hugo Duminil-Copin was named Tuesday July 5, 2022 as one of four recipients of the prestigious Fields Medal, which is often described as the Nobel Prize in mathematics. Credit: Marie-Claude Vergne/ IHES via AP



James Maynard attends the Fields prize ceremony during the International Congress of Mathematicians 2022 in Helsinki, Finland, Tuesday, July 5, 2022. Maryna Vjazovska, James Maynard, June Huh and Hugo Duminil-Copin, were awarded the Fields Medal for Mathematics, a prize for mathematicians under 40 years of age, at the International Congress of the International Mathematical Union (IMU), a meeting that takes place every four years. Credit: Vesa Moilanen/Lehtikuva via AP



This photo provided by the Institut des Hautes Etudes Scientifiques (IHES) shows French mathematician Hugo Duminil-Copin in April 2017 in Bures-sur-Yvette, southern of Paris. Hugo Duminil-Copin was named Tuesday July 5, 2022 as one of four recipients of the prestigious Fields Medal, which is often described as the Nobel Prize in mathematics. Credit: Marie-Claude Vergne/ IHES via AP



This photo provided by the Institut des Hautes Etudes Scientifiques (IHES) shows French mathematician Hugo Duminil-Copin in April 2017 in Bures-sur-Yvette, southern of Paris. Hugo Duminil-Copin was named Tuesday July 5, 2022 as one of four recipients of the prestigious Fields Medal, which is often described as the Nobel Prize in mathematics. Credit: Marie-Claude Vergne/ IHES via AP

The Fields Medal is awarded every four years to mathematicians under age 40. The recipients are normally announced at the International Congress of Mathematicians, which was originally due to be held in Russia this year but moved to Helsinki instead.

"The ongoing barbaric war that Russia still continues to wage against Ukraine clearly shows that no other alternative was feasible," said Carlos

E. Kenig, the president of the International Mathematical Union.

Viazovska recently dedicated one of her lectures to Yulia Zdanovksa, a young Ukrainian mathematician and computer scientist from Kharkiv. who was killed in a Russian missile attack.

"When someone like her dies, it's like the future dies," Viazovska said. "Right now, Ukrainians are giving the highest price for our beliefs and for our freedom."

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