

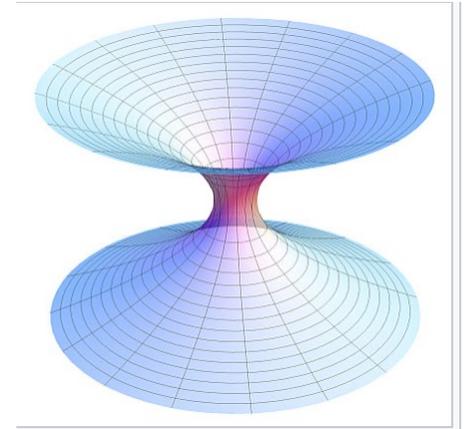
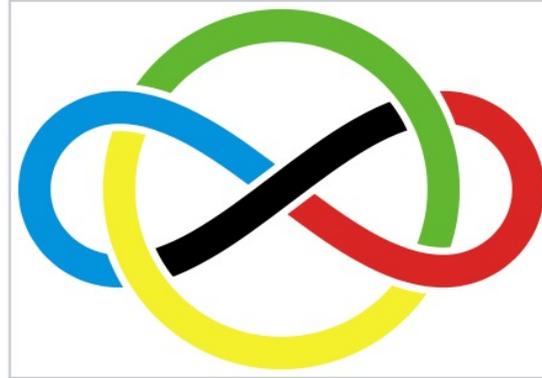
Fields Institute for Research in
Mathematical Sciences



FIELDS

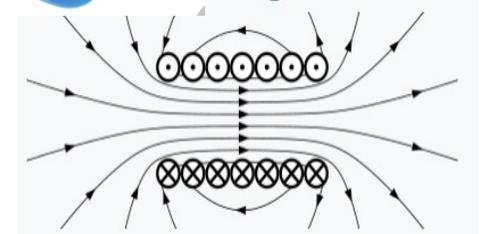
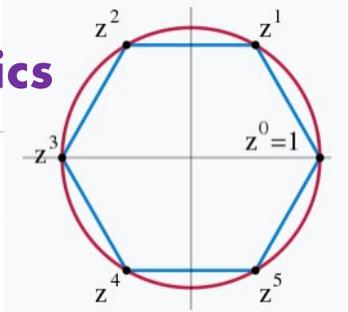
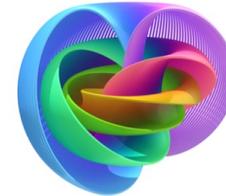
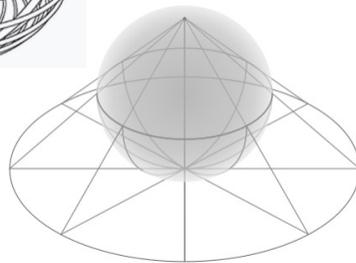
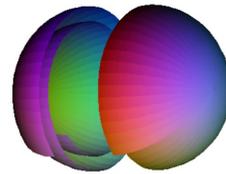


The exterior of the Fields Institute



The Fields Medal

For outstanding contributions to mathematics



Who was Fields?

John Charles Fields

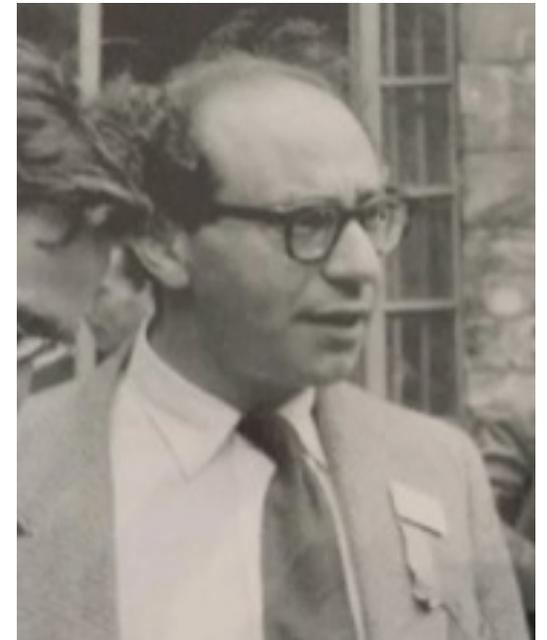


John Charles Fields

- John Charles Fields, born in 1863 in Hamilton Ontario, had humble beginnings as the son of leather shop owner. He studied in Canada and USA gaining his PhD in mathematics.
- Fields is best known for his development of the Fields Medal, which is considered by some to be the Nobel Prize of mathematics, although there are differences between the awards.
- Fields began planning the award in the late 1920s but, due to deteriorating health, never saw the implementation of the medal in his lifetime.
- He died on August 9, 1932 after a three-month illness; in his will, he left Ca\$47,000 (Ca\$700,000 in today's value) for the Fields Medal fund.

John Lighton Synge

- Fields plan for the medal was completed by J. L. Synge.
- A very accomplished Irish mathematician who happened to be in Toronto and worked with Fields on a number of projects.
- The medal was first awarded in 1936, then reintroduced in 1950 and has been awarded every four years since.
- In 1960 the International Mathematics Union voted to *award the medal to two, three or four mathematicians **under the age of 40** who have made important contributions to the field.*



The Fields Medal itself



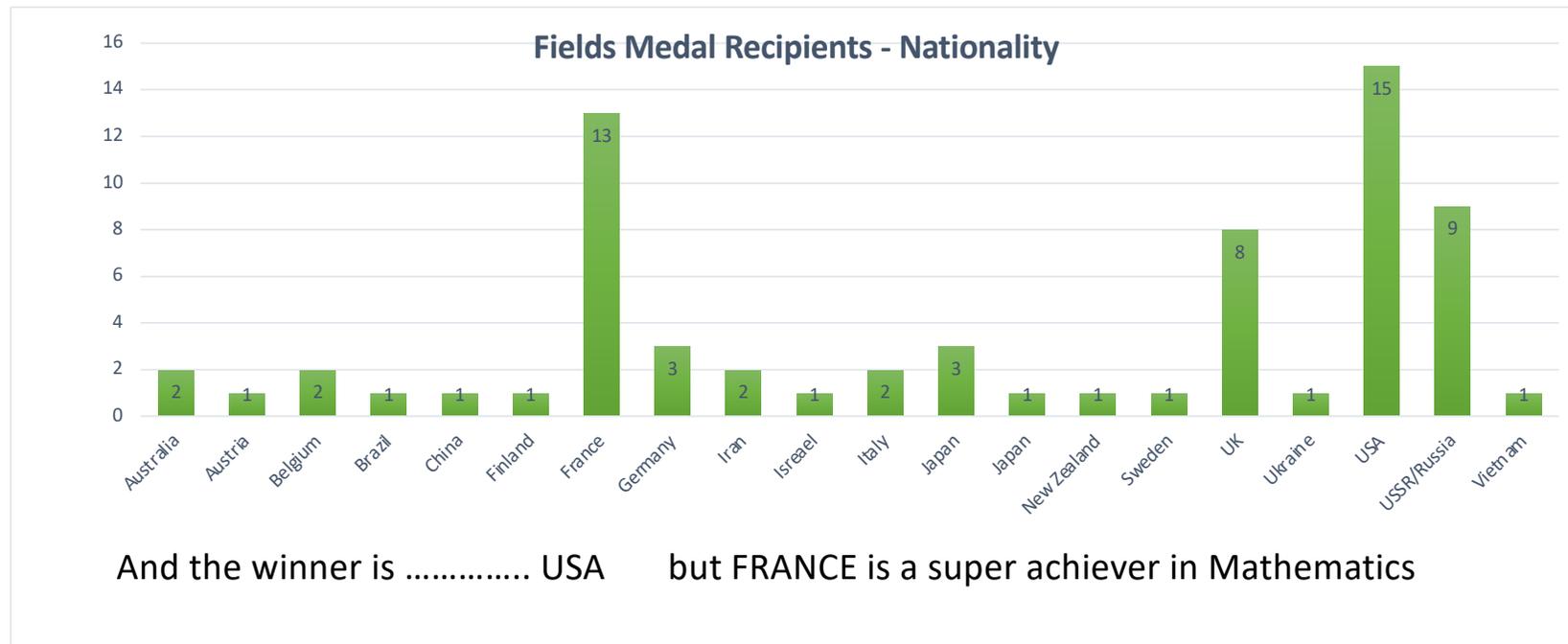
- 14 carat gold Fields Medal
- Archimedes on the obverse (left)
- Quote: TRANSIRE SVVM PECTVS MVNDOQVE POTIRI
To transcend one's human limitations and master the universe
- A sphere inside a cylinder on the reverse (right) on a laurel branch
- Quote: CONGREGATI EX TOTO ORBE MATHEMATICI OB SCRIPTA INSIGNIA TRIBVERE
- Mathematicians gathered from the whole world to honour noteworthy contributions to knowledge".

Where are the ceremonies held?

 2022 should have been in Russia but Putin's war was unacceptable. So, it was held mainly online with only the recipients at the ceremony in Finland in person.

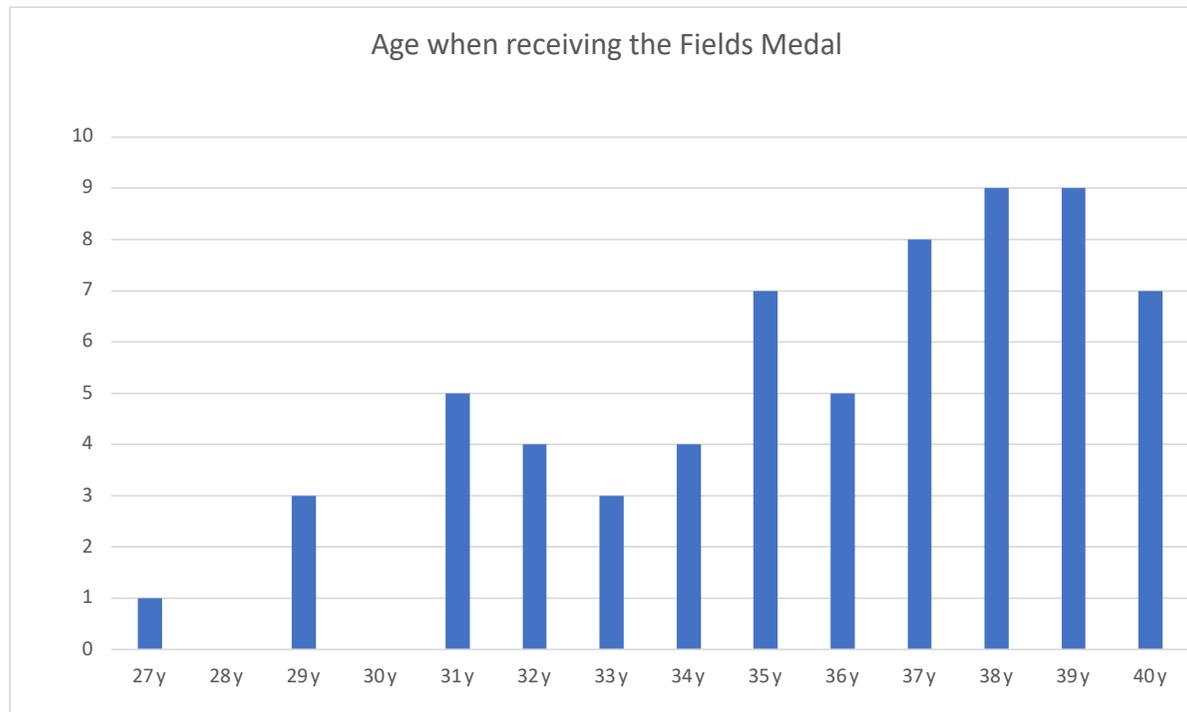


Where do they all come from?

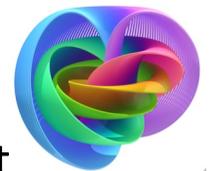
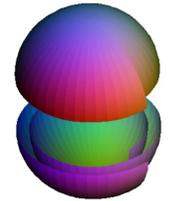


How old are they?

The youngest person to receive the Fields Medal was in 1954 - a French mathematician Jean Pierre Serre age 27. Here he is aged 77, he is now 96.

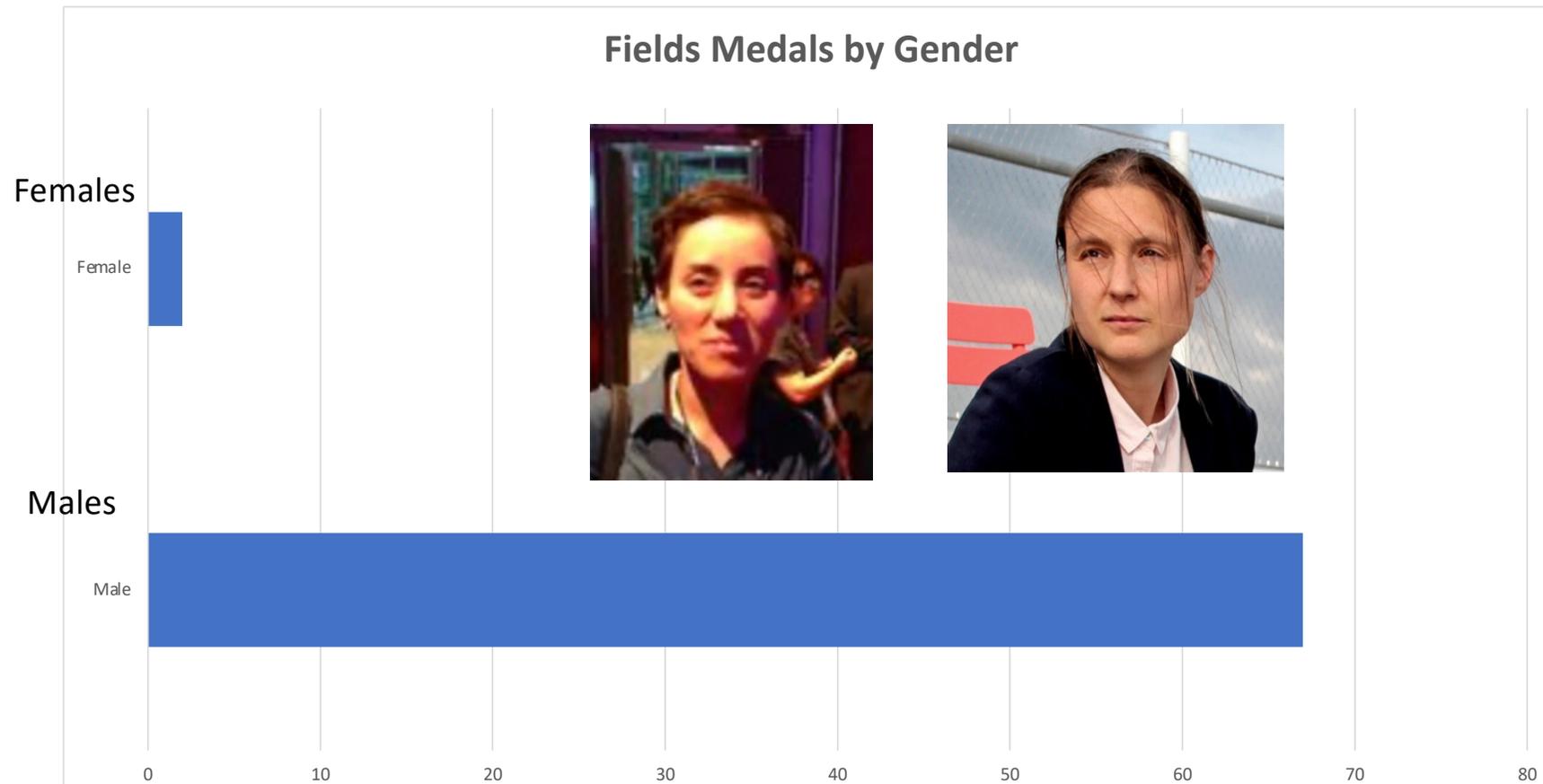


So, he is also the oldest living recipient.

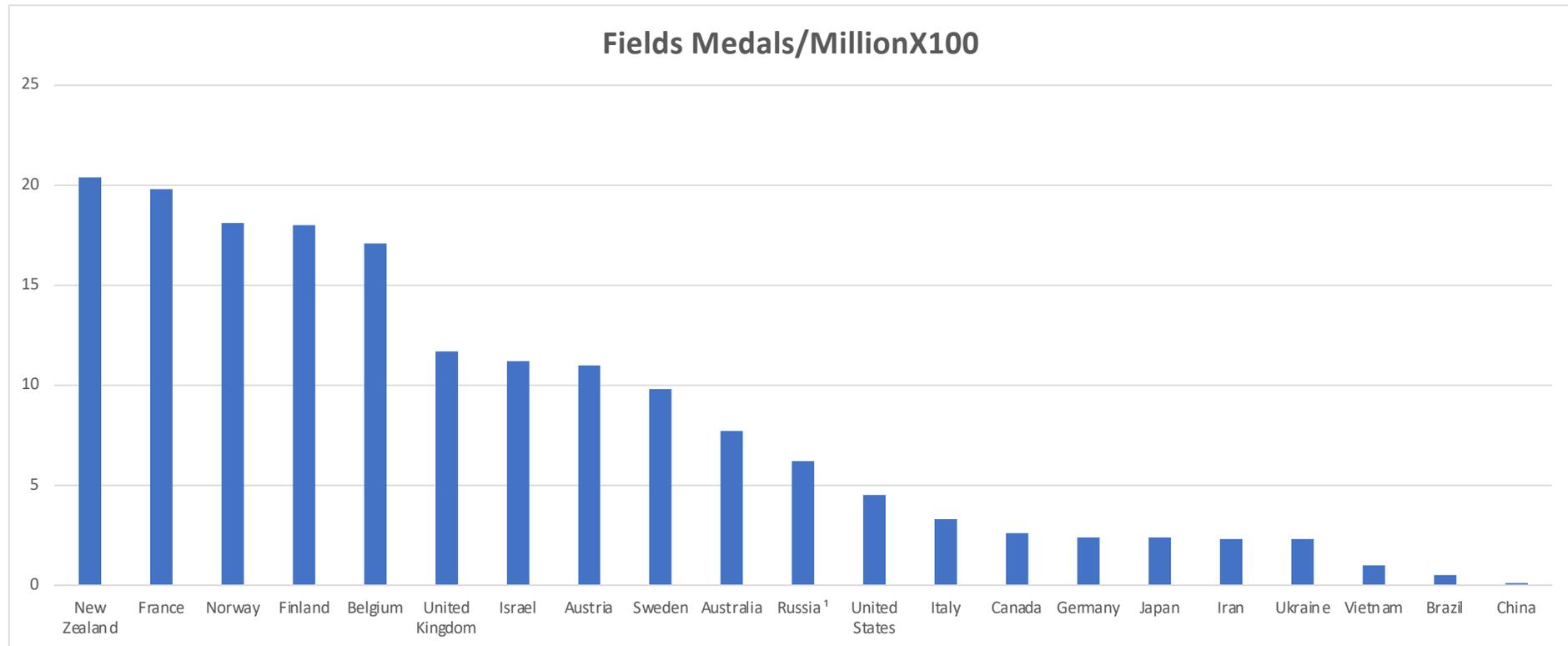


Gender?

Too many men only two women



What about Medals per Capita?



And the winner is: **NEW ZEALAND**

Thank you Sir Vaughn Frederick Randal Jones



Born: Gisborne 31 December 1952

Died: 6 September 2020

1990 Received the Fields Medal for his work on von Neumann algebras and knot polynomials.

Jones was made an honorary vice-president for life of the International Guild of Knot Tyers in 1992.

The Jones Medal, created by the Royal Society of New Zealand in 2010, is named after him.



The Jones Medal

For a *Lifetime of Achievement in the Mathematical Sciences* with strong association to New Zealand

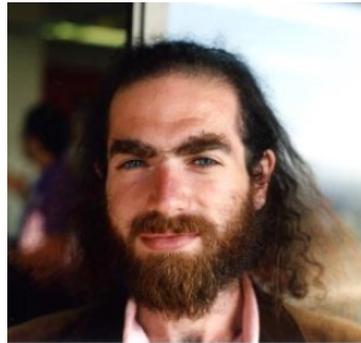
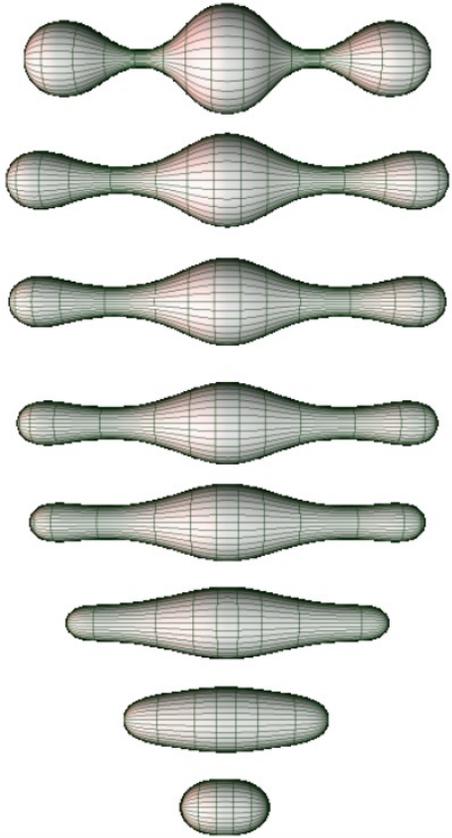


Inter-twining Mathematical Knots & Clasp hands for thought & patience to find a solution. The "*Jones Medal*"



The Nautilus shell – Nature's elegant mathematics – Binary numbers 'e', 'Pi' and 'the golden ratio'-circles representing hyperbolic geometry

No Thank you



- In August 2006, Grigori Yakovlevich Perelman was offered the Fields Medal.
- He declined the award, stating: *"I'm not interested in money or fame; I don't want to be on display like an animal in a zoo."*

On 22 December 2006, the scientific journal *Science* recognized Perelman's proof of the *Poincaré conjecture* as the scientific "Breakthrough of the Year", the first such recognition in the area of mathematics.

And the 2022 winners are

- Maryna Sergiivna Viazovska
Ukranian
- James Maynard
United Kingdom
- June Huh
United States
- Hugo Duminil-Copin
France



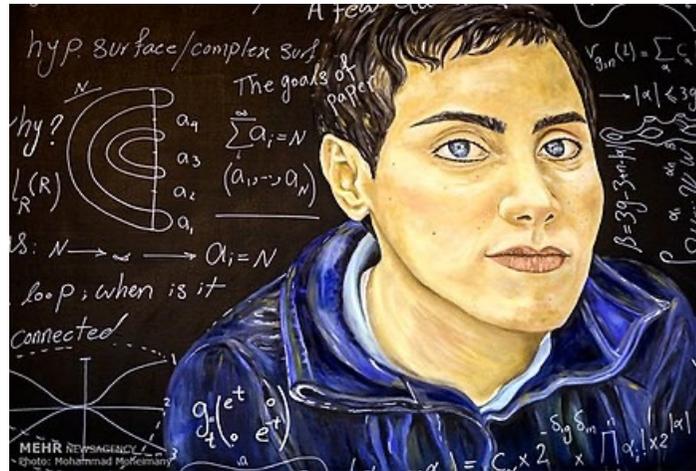
Maryam Mirzakhani

Twice Olympiad gold

First female to win a Fields

R. I. P. Maryam

Sadly, Maryam
died of breast
cancer aged 50



The Four 2014 Winners +
Maryam's daughter

Thank you for listening