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Michel Talagrand: A brief biography

The Abel Prize Laureate of 2024, Michel Talagrand, has stated that he always worked on the problems he enjoyed the most, following his own preference. Given this attitude, where hard work and pleasure seem to merge, it is hardly surprising that Talagrand is also a marathon runner and has travelled to more than a hundred countries with his family. The Abel Prize 2024 is a confirmation of the fact that his joyous efforts have made a lasting mark on the field of mathematics.

Michel Talagrand was born on February 15th 1952 in France. He grew up in Lyon together with a younger sister, a father who was a professor of mathematics and a mother who was a teaching French.

At age five he lost an eye due to a genetic illness. Ten years later his other eye was at risk, and he missed school for six months. Because of his fear of going blind, he studied hard during this period, and thus discovered his talent for mathematics and physics. He later studied mathematics at the local University of Lyon.

In 1974 he was offered a research position at the National Centre of Scientific Research (CNRS) in Paris, and completed his PhD in 1977. His affiliation lasted until his retirement in 2017. He was a member of the Functional Analysis Team of the Institute for Mathematical Sciences, and, from 1985 onward, research director at CNRS. Early in his career he worked with and was influenced by Gustave Choquet, Gilles Pisier and Vitali Milman.

He is married to Wansoo Rhee, a now retired professor of management science at Ohio State University, whom he met on his first ever trip to the USA. They have two sons.

Talagrand's mathematical style is atypical. He does not mind studying small problems as stepping stones to further significant discoveries. He has himself written of his method that: "it helps to be humble and to start by understanding fully the simple situations. When working on a conjecture I also found it helpful to alternatively try to prove it and try to disprove it. The progress comes by jumps, much like matching



two pieces of a puzzle. This is nearly instantaneous. Now you see it, and the moment before you did not. After such progress, you may have a much clearer vision of the problem.”

Besides a rich bibliography, Talagrand also invested in the exposition of his results and achievements. His books on The Generic Chaining and Spin Glasses are authoritative references in these fields. The introduction volume to Quantum Field Theory represents another aspect of his interests and contributions which will be relevant to numerous researchers. Talagrand’s impressive achievements, illustrated by breakthrough solutions to fundamental conjectures, and invention of new, basic and deep inequalities, have been foundational and extremely influential, with a wide and deep impact.

Talagrand was elected as fellow of the French Scientific Academy in 2004 and is Chevalier de

la Légion d’Honneur since 2011. He has received several awards including the Loève prize (1995), the Fermat Prize (1997) and the Shaw Prize (2019).

After receiving the Shaw prize money, he invited the mathematical community to win rewards by solving puzzles published on his web site under the heading “Become rich with my prizes”. His playful approach to both life and science is also clear to be seen in the first statement on his web page: “Mathematics gives you wings” – linking to the the painting “Allegory of Divine Wisdom” (1680s) by Luca Giordano. Talagrand’s mathematical wisdom has certainly taken him far.

Sources

CNRS, Michel Talagrand’s web site and www.shawprice.org

