US topology and chaos theorist wins mathematics Abel Prize

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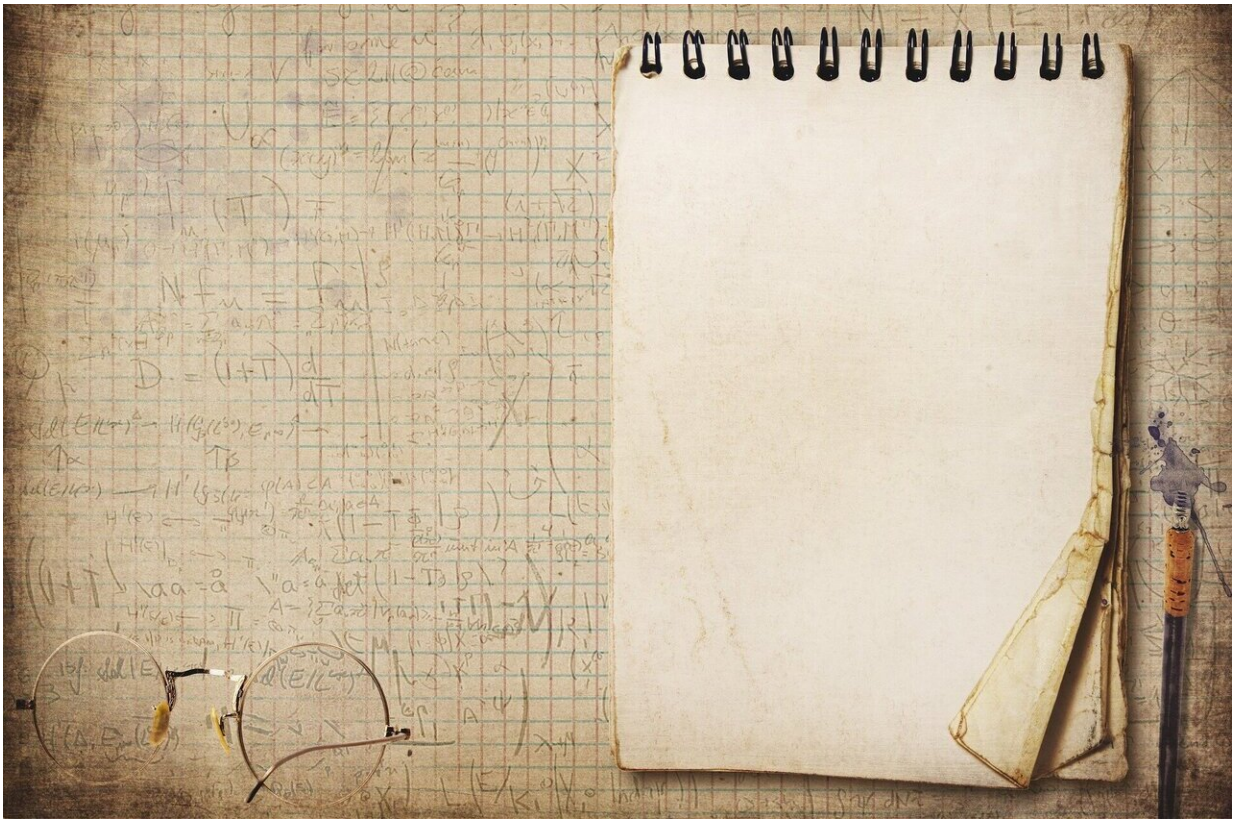

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The Abel Prize honouring achievements in mathematics was awarded Wednesday to American Dennis Parnell Sullivan for his contributions to topology, including work on chaos theory, the Norwegian Academy of

Science said.

Sullivan, a professor at the Stony Brook University in New York, was given the honour "for his groundbreaking contributions to topology in its broadest sense, and in particular its algebraic, geometric and dynamical aspects".

Topology "investigates the properties of objects that do not change when they are deformed," and has "significant applications in fields ranging from physics to economics to data science", the academy said.

Described as a "charismatic and lively member of the mathematics community," Sullivan, 81 was highlighted for finding "deep connections between a dazzling variety of areas of mathematics.

"Sullivan has moved from area to area, seemingly effortlessly, using algebraic, analytic and geometric ideas like a true virtuoso," Hans Munthe-Kaas, chair of the Abel Committee, said in a statement.

Born in Michigan, Sullivan at a young age moved to Houston in Texas, where he later attended Rice University before getting his doctorate at Princeton.

In the late 1970s he began working on chaos theory.

Among his achievements in the field was solving a conjecture that had eluded mathematicians for 60 years.

Sullivan will receive his award, which includes 7.5 million Norwegian kroner ($850,000, 780,000 euros) at a ceremony in Oslo on May 24.

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