

Honorary Doctor of Science

Professor Cédric VILLANI

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Chancellor:

From star mathematician to member of the French National Assembly, Professor Cédric Villani has squeezed into life so many achievements at such a young age that many have been left breathless by his career.

His passion for mathematics is unrivalled. If you are fortunate enough to have attended one of his scintillating lectures, such as the one he gave here at City University of Hong Kong on particles, stars and eternity two years ago, you will have experienced first-hand his contagious enthusiasm for science.

Professor Villani was born in 1973 in France. He studied mathematics at the École Normale Supérieure and defended his PhD on the mathematical theory of the Boltzmann equation. He subsequently conducted research into kinetic theory (Boltzmann and Vlasov equations and their variants), and optimal transport and its applications, a field for which he wrote the reference books *Topics in Optimal Transportation* in 2003 and *Optimal Transport, Old and New* in 2008.

Professor Villani has received many national and international prizes for his research, including the Fields Medal in 2010 for his proofs of nonlinear Landau damping and convergence to equilibrium for the Boltzmann equation.

He is a Member of the French Academy of Sciences and the Pontifical Academy of Sciences and was bestowed the Knight of the National Order of Merit and Knight of the Legion of Honour in 2009 and 2011, respectively. The latter is the highest French national honour for military and civil merits. Professor Villani was the director of the Institut Henri Poincaré from 2009 to 2017.

In addition to his achievements in mathematics, Professor Villani was elected to the National Assembly, the lower house of the French Parliament, during the 2017

legislative election. His motivation for immersing himself in the world of national politics stems in part from his desire to renew civil society.

“We need people who have already made careers in specific fields and who bring their vision to the solutions for different problems,” he has said. On his part, this commitment has meant that he has had to familiarise himself with a host of political, social and economic problems, some of which have taken months to master.

Perhaps this dual career is not as mysterious as it first appears. Despite the obvious differences between life as a star mathematician and a career as a member of the French National Assembly, there are clear parallels, too. Just as solving a complex mathematical problem requires imagination to gain fresh insight and perspective, tackling issues of national governance requires comparable levels of intellectual creativity.

But on reflection, perhaps there is more to his decision to get involved in politics. A clue might lie in the Latin inscription on the Fields Medal bestowed on Professor Villani in 2010. The inscription reads: To transcend one’s spirit and to take hold of the world. Professor Villani is certainly someone who has overcome the human limitations and set out to grasp the world!

Madam Chancellor, to recognise his extraordinary contributions to mathematics education and inspiring a passion for academic enquiry, I request City University of Hong Kong to confer upon Professor Cédric Villani a Doctor of Science, *honoris causa*.