ELAVACTOR

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1 Biography of Emmanuel Candes

He is the Barnum-Simons Chair in Mathematics and Statistics, and Professor of Electrical Engineering (by courtesy) at Stanford University. Until 2009, he was the Ronald and Maxine Linde Professor of Applied and Computational Mathematics at the California Institute of Technology. Candes graduated from the Ecole Polytechnique in 1993 with a degree in science and engineering, and received my Ph.D. in Statistics from Stanford University in 1998.
He am very grateful for the awards, he have received over the years. These include the 2006 Alan T. Waterman Award from NSF, which recognizes the achievements of early-career scientists; the George Polya Prize awarded by the Society of Industrial and Applied Mathematics (SIAM) (2010), the Collatz Prize from the International Council for Industrial and Applied Mathematics (2011), the Lagrange Prize in Continuous Optimization from the Mathematical Optimization Society (MOS) and SIAM (2012), the Dannie Heineman Prize presented by the Academy of Sciences at Göttingen (2013), the AMS-SIAM George David Birkhoff Prize in Applied Mathematics (2015), the Prix Pierre Simon de Laplace from the Société Française de Statistique (2016), the Ralph E. Kleinman Prize from SIAM (2017). He was selected as the Wald Memorial Lecturer by the Institute of Mathematical Statistics (2017). He am a member of the National Academy of Sciences (elected in 2014) and the American Academy of Arts and Sciences (elected in 2014). In 2017, He received a MacArthur Fellowship popularly known as the 'genius award'. He received the 2020 Princess of Asturias Award for Technical and Scientific Research. The IEEE Board of Directors selected me along with Terence Tao and Justin Romberg to receive the 2021 IEEE Jack S. Kilby Signal Processing Medal.

2 Research interests

His work lies at the interface of mathematics, statistics, information theory, signal processing and scientific computing, and is about finding new ways of representing information and extracting information from complex data. For example, He helped launch the field known as compressed sensing, which has

led to advances in the efficiency and accuracy of data collection and analysis, and can be used to significantly speed up MRI scanning times. More broadly, he is interested in theoretical and applied problems characterized by incomplete information. My work combines ideas from probability theory, statistics and mathematical optimization to answer questions such as whether it is possible to recover the phase of a light field from intensity measurements only as in X-ray crystallography; or users' preferences for items from just a few samples as in recommender systems; or fine details of an object from low-frequency data as in microscopy.