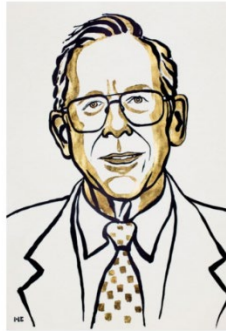
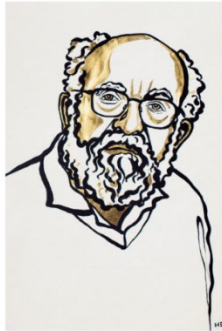




The Accelerating Expanding Universe: Dark Matter, Dark Energy, and Einstein's Cosmological Constant, or Why Jim Peebles was Awarded Half of the 2019 Physics Nobel Prize



Ill. Niklas Elmehed. © Nobel Media.
James Peebles
Prize share: 1/2



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Michel Mayor
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Dr. Bharat Ratra

**Tuesday, November 5
4:30 p.m.
Cardwell 102**

Coffee & Cookies at 4:15 p.m. in CW 119

Dark energy is the leading candidate for the mechanism that is responsible for causing the cosmological expansion to accelerate. In this non-technical talk, Bharat Ratra will describe the astronomical data which persuade cosmologists that (as yet undetected) dark energy and dark matter are by far the main components of the energy budget of the universe at the present time. He will review how these observations have led to the development of a quantitative "standard" model of cosmology that describes the evolution of the universe from an early epoch of inflation to the complex hierarchy of structure seen today. He will also discuss the basic physics, and the history of ideas (many developed by Jim Peebles), on which this model is based.