

Marilena LoVerde receives Department of Energy Early Career Award

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On August 9, 2017 the Office of Science of the Department of Energy (DOE) announced that YITP faculty member Marilena LoVerde will receive an Early Career Award, on the basis of her innovative and influential research and her ambitious proposal “

[Discovering Dark Energy, Dark Matter and Neutrino Properties with Cosmic Structure](#)

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Dr. LoVerde

joined the YITP faculty in 2015 at the same time as Professor Anja van der Linden of the Department of Physics and Astronomy, as part of an initiative in Cosmology made possible with SUNY 20/20 funding. Professor van der Linden is also a

[Career Award recipient this year](#)

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Recent decades have seen an extraordinary confluence of particle physics and cosmology. The discovery that neutrinos have mass challenges cosmologists to determine the role of these elusive but ubiquitous particles in the history of the universe, even as compelling astrophysical evidence for dark matter has inspired laboratory experiments to detect new particles. Professor LoVerde works at the interface of particle physics and cosmology, with a special interest in consequences and astrophysical signals of neutrino masses, and their influence on the growth of cosmological structure. She is developing a theory of structure formation that transcends the limitations of current methods, to make possible the full use of the extraordinary capabilities of galaxy and microwave background radiation survey instruments. Such a theory will enable cosmologists to discern the imprint of neutrinos, dark matter and dark energy on the structured universe we see around us.

With degrees from Berkeley and Columbia, Dr. LoVerde joined the C.N. Yang Institute for Theoretical Physics and the Department of Physics and Astronomy in September 2015, following postdoctoral appointments at Princeton University and the University of Chicago.

The prestigious Early Career Award will provide \$750,000 over five years in support of her research. Professor LoVerde was one of fifty nine recipients nationwide this year, selected by peer review from approximately 700 applications in all fields supported by the Office of Science.