“Searching for Dark Matter - Past, Present, Future”

The existence for dark matter, the invisible energy that holds galaxies together, has become an inescapable part of our understanding of modern cosmology. Discovering its particle nature has thus become a central question for particle physics. I will review how people think about a models of dark matter, and how searches for dark matter have unfolded. I will discuss how recent results have forced people to confront their priors on what dark matter is, and how as we have wreaked those, a broad set of new possibilities have appeared. This has resulted in an explosion of new ideas of how to find it.

Neal Weiner
New York University & Center for Cosmology and Particle Physics