

Ceremonial Talk PV VII Tue 15:45 HSZ/AUDI
The once unattainable – new breakthroughs in particle physics — ●MONICA DUNFORD — Kirchhoff-Institut für Physik (KIP), Ruprecht-Karls-Universität Heidelberg

The dynamics of the Standard Model of particle physics play a central role in the properties of not only the microscopic world but also the biggest structures of our universe. The Higgs boson, for exam-

ple, plays a critical part in how particles obtain their masses but also perhaps to dark matter and how our universe evolved. In this talk, I will focus on a handful of recent developments in particle physics that were considered out of reach, but through innovative ideas and powerful data science are now attainable. I will highlight how these results have connections beyond the microscopic world to dark matter, matter and anti-matter differences and beyond.