One of the most intriguing problems in present-day physics, astrophysics and cosmology revolves around the nature of dark matter — the dominant form of matter in the universe. Discovered first by pioneers such as Lundmark and Zwicky in the early decades of the last century, the prominence of the dark matter problem has become more acute in recent years. Theoretical and observational evidence agree that dark matter outweighs visible matter by at least five to one, but the identity of dark matter remains a mystery even now.

This workshop will feature the most up-to-date research in this field and introduce various candidates for dark matter. The axion is one such candidate proposed by Nobel Laureate Frank Wilczek, who will be at the workshop in person for discussion. The workshop will also cover the ongoing hunt for dark matter signatures at accelerators and in underground and space experiments, the verification of the existence of dark matter from studies of the cosmic microwave background, and new theoretical ideas about dark matter and dark energy paradigms.