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Cosmic strings, Dark Matter, and Gravitational Wave Signatures from Pure Yang-Mills Theory

Thursday, 9 November 2023 14:30 (30 minutes)

I will explain the formation of cosmic superstrings following the confinement phase transition in pure Yang-Mills theory, without invoking string theory or extra dimensions, and their significance in the production of GWs. Moreover, in pure SO(2N) gauge theory, a "baryonic glueball" is predicted as a potential candidate for dark matter. This model offers a way to potentially explain both the observed dark matter abundance and the GW signals detected in pulsar timing arrays.

Presenter: YAMADA, Masaki (Tohoku University) **Session Classification:** Topological Defects