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Prospects for lattice field theory beyond the Standard Model

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This talk summarises the explorations of theories beyond the Standard Model using lattice simulation methods. After a brief comment on the current status of the Standard Model extensions, the essential contribution made by numerical simulations in various approaches will be discussed. However, this also poses new challenges for simulation methods. The interplay with new theories gives rise to more general theoretical considerations that establish a close relationship with investigations of fundamental concepts such as gauge/gravity duality, confinement, or renormalisation group flow. The investigation of theories beyond standard QCD applications therefore opens up a broader perspective for our fundamental understanding, which could ultimately also lead to alternative ways of thinking about the shortcomings of the Standard Model

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