

# **Energetic Particles and Burning Plasma Physics**

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Energetic particle physics can have an effect on stability, transport, heating and current drive, edge physics, etc. Therefore it is important to develop integrated simulation, along with theory-based modeling, for energetic particle physics in a burning plasma. This talk will describe several related issues: (1) predictive capabilities, (2) Alfvén cascades, (3) nonlinear fishbone modes, and (4) convective/diffusive transport.