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Title: Simulation-based model predictive control by the multi-objective optimization of building energy performance and thermal comfort

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A novel simulation-based model predictive control procedure is proposed.

The multi-objective optimization of energy cost and thermal comfort is achieved.

The outcome is the optimal strategy for the daily HVAC system control.

The minimum run period is used in energy simulations to cut the computational time.

High benefits are proved for a multi-zone residential building in Naples (Italy).

Simulation-based model predictive control by the multi-objective optimization of building energy performance and thermal comfort

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