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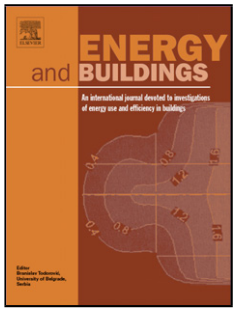

Title: Optimization of thermal and daylight performance of school buildings based on a multi-objective genetic algorithm in the cold climate of China

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Research highlights

• An optimization method that couples a genetic algorithm with thermal and daylight simulations is presented and applied to the design of a school building in China.

• The double-sided corridor design shows the best performance in the cold climate of China while the one-sided enclosed corridor type is the least suitable.

• The best passive design parameters for each spatial configuration are presented.

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