

# **ESTIMATION OF TURBULENT HEAT TRANSFER RATES FOR FLOW OVER BUILDINGS USING OPENFOAM**

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## **Abstract**

Formation of Urban Heat Islands is one of the serious issues faced by the cities in India. Due to anthropogenic activities there are abnormal variations in temperature both in day and night in cities as compared to rural areas. When we consider the governing equations the heating coefficients present, which depend on the buildings and local flow, can accelerate or decelerate the effect of temperature in the urban areas. In this paper the coefficient called eddy diffusivity of heat and its influence around high-rise buildings is analyzed using Computational Fluid Dynamics simulations with the Open FOAM software package.