عنوان مقاله:

Numerical simulation of radiation heat transfer in a room with a stove

محل انتشار:

ششمین کنفرانس بین المللی پژوهش های کاربردی در علوم و مهندسی (سال: 1401)

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خلاصه مقاله:

Replacing a fireplace with a stove as a heat source is simulated in the present work. Inside the stove, the heat is produced and then transmitted to its surroundings in various ways. This model focuses on the radiation part of the heat transfer. The walls and furniture are considered opaque while doors and windows are transparent. It should be noted that the grid size of ۳۰۰۰۰۰ is selected. The achieved results show that radiosity is the highest at the stove glass and is also high at the stove walls. Also, it can be found that the stove chimney has low radiosity due to a lower temperature and a lower emissivity . The contours demonstrate that radiative heat flux is the highest in the close vicinity of the stove.

کلمات کلیدی:

Heat transfer, Radiation, Stove modeling, Computational Fluid Dynamic