## Abstract

Research on convective heat transfer in the [microscale](https://www.sciencedirect.com/topics/engineering/microscale) backward-facing step (MBFS) and microscale forward-facing step (MFFS) has been extensively conducted in the past decade. This review summarizes numerous researches on the three topics; the first section focuses on studying the effect of the geometry on the fluid flow and heat transfer behavior. The second and the third sections concentrate on the effect of the inclination angle and the flow regime on the fluid flow and [heat transfer enhancement](https://www.sciencedirect.com/topics/engineering/heat-transfer-enhancement-for-application). The purpose of this article is to get a clear view and detailed summary of the influence of several parameters such as the geometrical specifications, type of fluids and boundary conditions. The enhancement in the [Nusselt number](https://www.sciencedirect.com/topics/engineering/nusselt-number" \o "Learn more about Nusselt number from ScienceDirect's AI-generated Topic Pages) is the main target of such research where correlation equations were developed in numerical and experimental studies are reported.