In the last decades, heat transfer enhancement techniques have been varied and increased rapidly to produce more efficient heat exchange equipment and in turn save energy and cost. One of the effective methods used for augmenting heat transfer is employing corrugations on heat exchanger equipment surfaces. Different applications of using corrugations such as circular and non-circular channels, microchannel heat sink, mini-channel heat sink, and solar air collector have been presented and reviewed in this paper. Researchers investigated various shapes of corrugations along with several corrugation configurations. In addition, using corrugations with other heat transfer enhancement techniques, namely perforations, phase change materials, and nanofluids was discussed. From this overview study, it was found that some research topics are still attractive and need more investigations, while other topics have some limitations either in the application or side effects such as additional pressure drop penalty, further machining costs, more additional material, or more costs for synthesizing the coolants such as nanofluids or sedimentation.