عنوان مقاله:

Studying the thermal analysis of rectangular cross section porous fin: A numerical approach

محل انتشار:

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خلاصه مقاله:

In this work, a direct computational method has been developed for solving the thermal analysis of porous fins with a rectangular cross-section with the aid of Chebyshev polynomials. The method transforms the nonlinear differential equation into a system of nonlinear algebraic equations and then solved using a novel technique. The solution of the system gives the unknown Chebyshev coefficients. An algorithm for solving this nonlinear system is presented. The results are obtained for different values of the variables and a comparison with other methods is made to demonstrate the effectiveness of the method.

کلمات کلیدی:

Numerical, Porous Fin, Thermal Analysis, Collocation method