

Summary

The Exodus method is applied to solve Fourier-Kirchoff's equation in heat transfer problems for flat plate solar collectors. Probabilistic models have been presented for the steady and non-steady conditions. The mathematical description of these models has been derived on the basis of the analogy between the conduction difference equation and the equation describing walking particle movement. The results of computations performed by the Exodus method have been compared to the results obtained by the Equivalent Thermal Network and the Finite Difference methods. The Exodus procedure allows the influence of changeable weather and operating conditions to be considered in calculations.