

## **Extended conventional finite element method vs. differential quadrature method comparison in two-dimensional heat transfer problem**

### **ABSTRACT**

Presently there are many numerical solution techniques for solving initial and boundary value problems. Finite element method (FEM) and differential quadrature method (DQM) are two important of those techniques. In this paper, these two methods are applied for the solution of two-dimensional heat transfer problem in a rectangular thin fin and the results are compared. It is found that the results agree very well, moreover FEM sometimes exhibit more accurate results than DQM.

**Keyword:** Finite element method; Differential quadrature method; Heat transfer problem