# UNSTEADY HEAT TRANSFER INSIDE AN ELLIPTIC CYLINDER

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**Abstract**

Considering the importance of transfer phenomena in chemical engineering and environmental protection, in particular heat transfer modelling, numerical methods are applied to investigate the transient heat transfer inside an elliptic cylinder. The temperature of the surrounding medium was considered constant and equal to the temperature on the surface of the cylinder. The heat balance equation was solved numerically in elliptic coordinate system. The computations were focused on the influence of the axis ratio on the heat transfer.

*Keywords:* elliptic cylinder, finite difference, multigrid, unsteady heat transfer