



Contribution ID: 131

Type: not specified

Estimation of Magnetic Field Growth and Constraction of Adaptive Mesh in Corner Domain for Magnetostatic Problem in 3-Dimensional Space

Monday, 3 July 2017 14:00 (15 minutes)

A magnetostatic problem arises in searching for the distribution of the magnetic field generated by magnet systems of many physics research facilities, e.g., accelerators. The domain in which the boundary-value problem is solved often has a piecewise smooth boundary. In this case, numerical calculations of the problem require the consideration of the solution behavior in the corner domain.

Based on the estimate is obtained by E.E. Perepelkin in his previous works, we propose a method of condensing the differential grid near the corner domain of vacuum in case of 3-dimensional space. An example of the modeling problem calculation in the corner domain is given.

Short biography note

Tarelkin Aleksandr Alekseevich —Phd-student, Moscow State University, faculty of physics, department of quantum statistics and field theory.

Primary author: Dr PEREPELKIN, Evgeny (JINR)

Co-author: Mr TARELKIN, Aleksandr (Moscow State University)

Presenter: Mr TARELKIN, Aleksandr (Moscow State University)

Session Classification: Physical processes modeling and related computational methods (I)