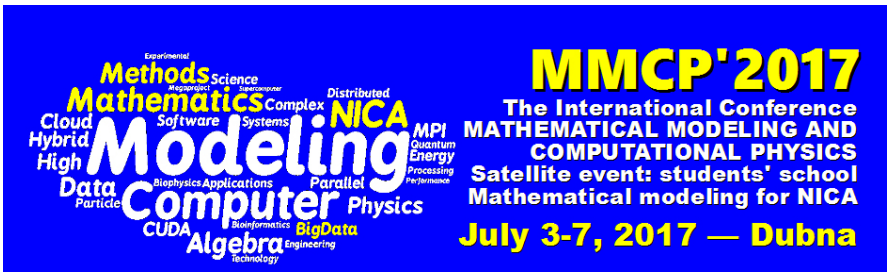

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Modeling of Static Electric Field Effect on Nematic Liquid Crystal Director Orientation in Side-Electrode Cell

Monday 3 July 2017 16:30 (15 minutes)

Two-dimensional model of Fredericks effect was used for the investigation of the static electric field influence on nematic liquid crystal director orientation in the side–electrode cell. The solutions were obtained by finite-difference methods. The programs for numerical solution of two-dimensional parabolic partial differential equation were developed by using both FORTRAN and C++. Fredericks transition threshold for the central part of the cell, as well as dependencies of the distribution of the director orientation patterns on the electric field and location were obtained. The results of the calculation were compared to the experiment.

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