NUMERICAL ANALYSIS OF A PARABOLIC PROBLEM VIA MIXED FINITE ELEMENT METHODS

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ABSTRACT. In this work we study a parabolic problem arised from Keller-Segel model for chemotaxis. A new formulation of the system of partial differential equations is obtained by the introduction of a new variable, which is approximated via mixed finite element methods. At this point, the applicability of adaptive moving meshes theory is carried out with the purpose of obtain a cheap and better description of the behavior of the particles close to the blow up.

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