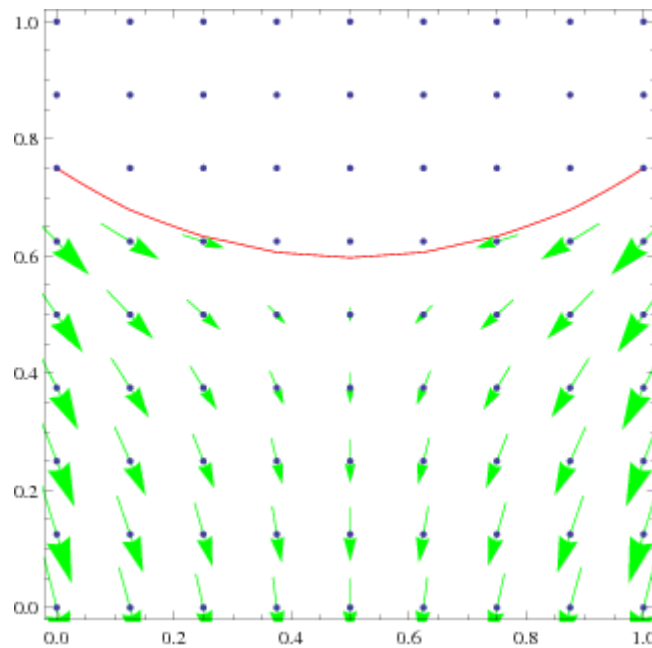


## NUMERICAL MODELLING OF DYNAMIC GROUNDWATER TABLE USING LEVEL SET FORMULATION

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**Summary.** We study a representative mathematical model of groundwater flow where a dynamic position of the water table is a part of unknown solution. To compute the problem on a fixed (enlarged) domain we describe the groundwater table using a level set formulation. A novel discretization method is proposed to solve the problem on a fixed grid. Numerical results confirm the applicability of the method for this type of problems.



Illustrative picture of groundwater table (the red curve), the groundwater flow (the green arrows) and the computational grid (the blue dots).