# On a structure-preserving numerical scheme for moving boundary problems

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Let us consider the case where moving boundary problems have properties such as an energy preserving law or a dissipative law. In this talk, we will show a numerical scheme which preserves the properties in discrete sense. The method is close to an idea of the so-called structure-preserving numerical scheme for differential equations. The structure-preserving numerical schemes are numerical schemes of partial differential equations or ordinary differential equations, which preserve structure of an energy preserving law or a dissipative law. In many cases, structure-preserving numerical schemes can stabilize a solution of discretized equations numerically. An $L^\infty$-bound of solutions is a typical example. However, concerning moving boundary problems, numerical instabilities often arise from geometrical shape of moving boundaries. Therefore another idea will be needed. We will talk about an on-going research of the idea.

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