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Variational principle for non-Newtonian lubrication: Rabinowitsch fluid model. (English)

Zbl 1095.76046

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The author discusses a semi-inverse method for deriving a one-dimensional Reynolds-type equation by using variational arguments. The key arguments can be extended to other classes of nonlinear equations, including two- or three-dimensional problems and other non-Newtonian lubrications.

Reviewer: Teodora-Liliana Rădulescu (Craiova)

MSC:

[76M30](#) Variational methods applied to problems in fluid mechanics

[76A05](#) Non-Newtonian fluids

[76D08](#) Lubrication theory

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