

Control formulation for Euler flow

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Abstract

Shape variational formulation for Euler flow has already been considered in [1] and [2]. We develop here the control approach considering the conection as the “state equation” while the speed is the control and we introduce a new weak curvature which turns to be transversely shape differentiable.

References

- [1] J.P.Z. Variational Formulation for Incompressible Euler equation by Weak Shape evolution, Intern. Series of Num. Math., vol 133, 309-323, Birkhauser, 1999;
- [2] J.P.Z. Control of Moving Domains, Shape Stabilization and Variational Tube Formulation, Intern. Series of Num. Math., vol 153, 329-382, Birkhauser, 2007;