# Estimation of Flow Geometry and Wall Shear Stress from Magnetic Resonance Imaging Data

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Magnetic resonance velocimetry is a non-invasive imaging technique that provides spatially resolved but noisy measurement of fluid density and flow velocity. We consider the inverse problem of recovering the flow geometry and derivatives of the flow velocity at the boundary of the flow domain. We discuss the conditional stability of the inverse problem and present a numerical algorithm for its stable solution. The performance of the numerical approach is illustrated with experimental data.

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