1116-49-2777   **Baasansuren Jadamba*** (`bxjsma@rit.edu`), Center for Applied and Computational Math, Rochester Institute of Technology, Rochester, NY 14623. *Efficient second-order methods for an elastography inverse problem.*

This work is on a computational framework for an inverse problem of detecting cancerous tumors in the human body using an output least-squares (OLS) approach. The proposed framework is based on employing second-order methods. One of the main contributions of this work is a thorough derivation of an efficient computation of the hessian of the OLS functional. Joint work with Akhtar Khan and Miguel Sama. (Received September 22, 2015)