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**Sanwar Uddin Ahmad\*** (suahmad@colostate.edu), Department of Mathematics, Fort Collins, CO 80523, and **Jennifer L. Mueller**. *A Fast Approach for Solving Electrical Impedance Tomography Using Iteratively Regularized Kaczmarz Method*. Preliminary report.

Electrical impedance tomography (EIT) is an imaging modality that determines the internal conductivity and permittivity distribution based on the voltage measurements made on an object's surface when currents are applied. Due to its non-invasiveness, non-ionizing characteristics and cost-effectiveness, EIT is gaining a lot of attention in recent years. In this presentation, we propose a fast approach for solving 2D EIT inverse problems for the complete electrode model using Iteratively Regularized Kaczmarz method. We also present a comparative analysis of the proposed method with the regular Kaczmarz method. (Received August 16, 2020)