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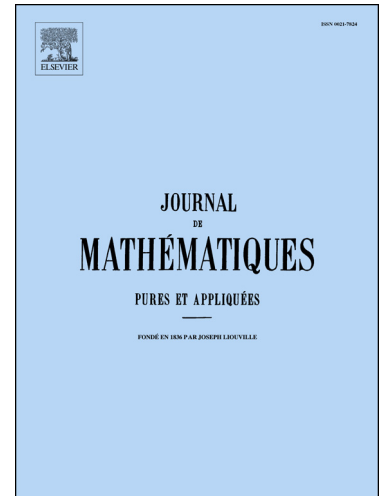
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# Lipschitz stability for the electrostatic inverse boundary value problem with piecewise linear conductivities

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## Abstract

We consider the electrostatic inverse boundary value problem also known as electrical impedance tomography (EIT) for the case where the conductivity is a piecewise linear function on a domain  $\Omega \subset \mathbb{R}^n$  and we show that a Lipschitz stability estimate for the conductivity in terms of the local Dirichlet-to-Neumann map holds true.

Nous nous intéressons à le problème électrostatique inverse également connu comme Tomographie d'Impédance Electrique pour le cas où le conductivité est une fonction linéaire par morceaux sur un domaine  $\Omega \subset \mathbb{R}^n$ . Nous prouvons une estimation de stabilité Lipschitzienne pour le conductivité en relation avec l'opérateur Dirichlet-à-Neumann.

*Keywords:* Electrical impedance tomography, Lipschitz stability, Piecewise linear conductivities.

*MSC:* 35R30 (primary), 35B35, 35J15, 35Q86

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