**Nuutti Hyvönen**: Diffusive tomography methods: Special boundary conditions and characterization of inclusions; Helsinki University of Technology Institute of Mathematics Research Reports A471 (2004).

**Abstract:** This thesis presents mathematical analysis of optical and electrical impedance tomography. We introduce papers [I–III], which study these diffusive tomography methods in the situation where the examined object is contaminated with inclusions that have physical properties differing from the background.

**AMS subject classifications:** 35R30, 35Q60, 35J25, 31A25, 31B20, 35R05, 78A70

**Keywords:** inverse boundary value problems, variational principles, optical tomography, non-scattering regions, radiative transfer equation, diffusion approximation, electrical impedance tomography, inverse conductivity problem, electrode models, inclusions, factorization method

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