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**Second-order elliptic integro-differential equations: viscosity solutions' theory revisited.** (English) [Zbl 1155.45004](#)

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Three types of viscosity solution of second order nonlinear elliptic integrodifferential equations are defined to account for solutions with arbitrary growth at infinity. Stability results for these viscosity solutions are derived. The Jensen-Ishii lemma is generalized and applied to prove comparison theorems.

Reviewer: [Cornelis van der Mee \(Cagliari\)](#)

**MSC:**

- [45K05](#) Integro-partial differential equations
- [45M10](#) Stability theory for integral equations
- [49L25](#) Viscosity solutions to Hamilton-Jacobi equations in optimal control and differential games
- [45G10](#) Other nonlinear integral equations

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**Keywords:**

viscosity solution; Jensen-Ishii lemma; comparison theorems; Lévy operators; stability; nonlinear elliptic integrodifferential equations; limiting semi-jets

**Full Text:** [DOI](#) [EuDML](#) [arXiv](#)

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