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Imaging system performance evaluation: NETD, least-square error, or correlation (Proceedings Paper)

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Laser Radar Technology and Applications V, [Gary W. Kamerman](#); [Upendra N. Singh](#); [Christian Werner](#); [Vasyl V. Molebny](#), Editors, pp.318-323

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Paper Abstract

There are several techniques for performance evaluation of an imaging system (IS). The first is the classical one: performance is considered as a characteristics called minimum resolvable temperature difference (MRTD). The second one is fidelity which is a parameter based on the least-square error between output signals of the idealized IS and an investigated one. The least-square error takes into account noise and distortions introduced by high spatial frequencies suppression. The third technique is defined via correlation coefficient between output signals of the idealized IS and a definite one. The paper discusses the application of the mentioned approaches for performance evaluation.

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