

Advances and Applications of DS_mT for Information Fusion

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The Dezert-Smarandache Theory (DS_mT) of plausible and paradoxical reasoning is a natural extension of the classical Dempster-Shafer Theory (DST) but includes fundamental differences with the DST. DS_mT allows to formally combine any types of independent sources of information represented in term of belief functions, but is mainly focused on the fusion of uncertain, highly conflicting and imprecise quantitative or qualitative sources of evidence. DS_mT is able to solve complex, static or dynamic fusion problems beyond the limits of the DST framework, specially when conflicts between sources become large and when the refinement of the frame of the problem under consideration becomes inaccessible because of vague, relative and imprecise nature of elements of it.