

**IES2001 Fourth Italian-Spanish conference
on General Topology and its applications
Bressanone, 27-30 June 2001**

Hypertopologies and quasi-metrics

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We study the relation between the Wijsman topology of a quasi-pseudo-metric space and others like the Vietoris, proximal and Hausdorff quasi-uniform topology, respectively. In particular, we prove that:

if (X, \mathcal{T}) is a quasi-pseudo-metrizable topological space then its Vietoris topology is the supremum of all Wijsman topologies generated by all quasi-pseudo-metrics compatible with \mathcal{T} .

Furthermore, we show that

the Wijsman topology of a quasi-pseudo-metric space (X, d) coincides with the Hausdorff quasi-uniform topology if and only if the conjugate quasi-pseudo-metric d^{-1} is hereditarily precompact.