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The gauge of a uniform frame. (English)

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The author characterizes gauge structures for frames, i.e., families of metric diameters which describe frame uniformities. The main purpose of this paper is to present a characterization of frame uniformities that is analogous to the spatial one given in terms of pseudometrics. The author investigates frame uniformities in the sense of Bourbaki and proves the following theorem: There is a one-one correspondence between the class of uniformities on a frame L and the class of gauge structures on L.
Finally, he gives some correspondences: gauge structures make clear the nature of the generalization from metric frames to uniform frames and, moreover, metric frames generate all gauge frames, in the sense that each gauge frame is a quotient of a coproduct of metric frames.

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