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بعض خصائص الفراغات شبه المنتظمة

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Abstract : Quasi-uniformities were created by L. Nachbin since 1948. Very soon researchers have started the work on quasi-uniformities, like Briimmer, Csaszar, Hunsaker, Pervien, Sieber, Ward, Singal, Heath, Junnila, Stoltenberg and others. According to the position of uniform spaces, they are standing somewhere between metric spaces on one hand and general topological spaces on the other. Topological spaces are considered as a generalization of metric spaces, the key to the transition from metric spaces to topological spaces was the concept of open sets. We follow an analogous programme for unifonn spaces. The key for the transition from metric spaces to uniform spaces is the concept of an entourage. Entourage is a French word meaning environment. Quasi-uniformities resembles uniformities very closely, it is construction depends also on entourages. It should be noted that some of the theorems and propositions remain true for not only uniform spaces but also quasi-uniform spaces. In this thesis, we inter the word of quasiunifonnities, by giving notions about the basic concepts, presenting methods of generating quasi-uniformities using quasi-proximities and quasi-pseudo metrics, and showing topologies associated with them. Concerning relations between quasi-uniformities we give notions of the supremum of a family of quasi-unifonnities, the quasi-uniformly isomorphism mappings between quasi-uniform spaces. Totally bounded, totally bounded transitive quasi-uniform spaces, and the fine quasi- unifonnity in which we use it to define the conjugate topology. There has been some interest in the construction of a quasi-uniformity on a set X that can determine a quasi-order (order) and uniformity on X. We believe that the usefulness of quasi-uniformity in the study of general topology has not yet been fully appreciated. The purpose of our presentation, is to collect and organize some work, and some properties of the quasi-unifonnities in order to encourage the use of these structures in general topology. It is our sincere hope that this thesis will substantially contribute to a better understanding of quasi-unifonnities

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