On fuzzy compact spaces

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This chapter is devoted to introduce the information, motivations, ideas,definitions and results about the notions which we shall use throughoutthe thesis.Chapter 1 -consists of eight sections. In Section 1.2, some informationabout L-sets and L topological spaces are introduced [16, 39, 55, 63].In Section 1.3, we recall the definitions and results of the notions of Lfilters,principal L-filters, L-neighborhood filters and valued L-neighborhoodfilters presented in [21, 23, 27, 29, 31, 32]. In Chapter 2 we are going to introducethe main notion of this thesis namely, G−compact space, and westudy many properties on G-compact spaces. We introduce many kinds ofG-compact spaces. In Chapter 3 we are going to introduce a new bi-fuzzyseparation axioms which are depending on usual points and ordinary sets.These bi-fuzzy separation axioms will be defined using the notions of -Lneighborhoodfilters at a point and at a set.In Section 1.4, the notion of an L proximity defined by Katsaras in [46,1CHAPTER 1. PRELIMINARIES 247, 48] will be recalled.Section 1.5 is devoted to study the relation of the L-uniform spaces definedin [12] with the G-compact spaces.In Section 1.6, we introduce and study the relation of the L-metric spacesdefined in [37] with the G-compact spaces.Section 1.7 is devoted to recall a notion of compactness defined in [32],called G-compactness.In Section 1.8, we introduce and study L-separation axioms denoted byGTi, (i = 0, 1, 2). The information introduce in this section will be the keypoint of the work in the Chapter 3. We defined in Chapter 3 a new bifuzzyseparation axioms (GT□i -spaces) and defined supra fuzzy topologyspaces.For the definitions and results concerning the notions in the classicalcase which we use throughout the thesis we refer to [15, 17, 26, 45, 51].