List of Figures

Figure 1.1: Block diagram of Generic Embedded Systems 2
Figure 1.2: Processor used in Embedded Systems 5
Figure 1.3: Programming Languages used in Embedded Systems 6
Figure 1.4: Use of Real-Time Kernels in New Embedded Designs 7
Figure 1.5: Levels of abstraction in Embedded Systems’ Design 10
Figure 2.1: Papers on Processor Selection Techniques 18
Figure 3.1: Hybrid Algorithm for Processor Selection 35
Figure 3.2: Snapshot of Keil IDE with the Simulation Features. 37
Figure 3.3: Algorithm used for Normalization 39
Figure 3.4: Flowchart of the WSA 42
Figure 3.5: Architecture of the System 46
Figure 3.6: LED Application 46
Figure 3.7: Results of WSA for LED application 48
Figure 4.1: Normal Application Development Tool 53
Figure 4.2: Tool Set of a Generic IDE for ES Development 56
Figure 4.3: Tool Chain for ES Development 57
Figure 4.4: Evaluation Results with Actual Cores 81
Figure 4.5: Ranking of the IDEs 81
Figure 5.1: Crossover Operation 92
Figure 5.2: Mutation Operation 92
Figure 5.3: Roulette Wheel Selection 95
Figure 5.4: Fitness values of Chromosomes with Different Generations. 97

Figure 5.5: Population vs. CPU Time 98

Figure 5.6: No. Of Bits for Crossover vs. CPU Time 98

Figure 5.7: Percentage of accuracy Vs CPU time 99

Figure 6.1. Architecture of the PreDES 107