

# CONTENT

CONTENT	7
1. INTRODUCTION	8
2. DISSERTATION GOALS	9
3. SYMBOLIC REGRESSION	9
4. ANALYTIC PROGRAMMING	10
5. EVOLUTIONARY ALGORITHMS	11
6. EXPERIMENTS PERFORMED BY ANALYTIC PROGRAMMING	12
6.1. Approximation data	12
6.2. Electronic circuits design	12
6.3. Optimal setting of robot trajectory	13
7. CREATION OF EVOLUTIONARY ALGORITHMS - PROGRESS	13
7.1. First experiments	13
7.1.1. General Function Set	14
7.1.2. Cost Function	15
7.1.3. Results of the first experiments	16
7.2. Design of new cost function	16
7.2.1. New operators added and renamed	16
7.2.2. Design of cost function	17
7.2.3. Results	18
7.3. Higher dimensional problems	18
7.3.1. Possible approach to giving a name to new algorithms	20
8. CONCLUSIONS	21
9. REFERENCES	24
LIST OF AUTHOR'S PUBLICATION ACTIVITIES	27
CURRICULUM VITAE	29