

CONTENTS

CONTENTS.....	3
1 INTRODUCTION.....	5
2 REPRESENTATION OF FREQUENCY AND INTENSITY, INFLUENCE OF ACOUSTIC ENVIRONMENT DURING ONTOGENY.....	7
2.1 Influence of acoustic environment during early ontogeny.....	8
3 COMPUTATIONAL AND ANALYTICAL MODELS OF AUDITORY PROCESSING.....	10
3.1 Computational models of the auditory pathway.....	10
3.1.1 <i>Modeling the influence of brief noise exposure during development on neuronal responses</i>	11
3.1.2 <i>Modeling the neuronal processing of binaural parameters using coincidence detection</i>	12
3.2 Analytical models of auditory pathway.....	13
3.2.1 <i>Representation of sound intensity in the auditory nerve</i>	13
3.2.2 <i>The influence of stochastic properties of input spike trains on neuronal arithmetic</i>	14
3.2.3 <i>Precise coding of interaural level differences in the auditory brainstem</i>	14
4 APPLICATIONS AND EXTENSIONS.....	15
5 SUMMARY AND CONCLUSIONS.....	16
6 REFERENCES.....	19
SOUHRN.....	22