

CONTENT

ABOUT AUTHOR	4
1 INTRODUCTION.....	5
2 DEVELOPMENT OF ACTIVE DEVICES.....	6
3 TUNABILITY AND ADJUSTABILITY RANGE EXTENSION	9
3.1 Active filter	10
3.2 Oscillator.....	12
3.3 Capacitance multiplier	14
4 FRACTIONAL-ORDER CIRCUITS AND APPLICATIONS	15
4.1 Fractional-order transfer block.....	15
4.2 Constant phase block	17
4.3 Adjustable fractional-order immittances.....	18
5 READOUTS FOR SENSOR SIGNAL PROCESSING	19
5.1 Illuminance measurement	19
5.2 Distance measurement	20
5.3 Temperature measurement.....	22
6 CONCLUSION	23
ACKNOWLEDGEMENTS	24
REFERENCES.....	25
ABSTRACT.....	27
ABSTRAKT.....	27