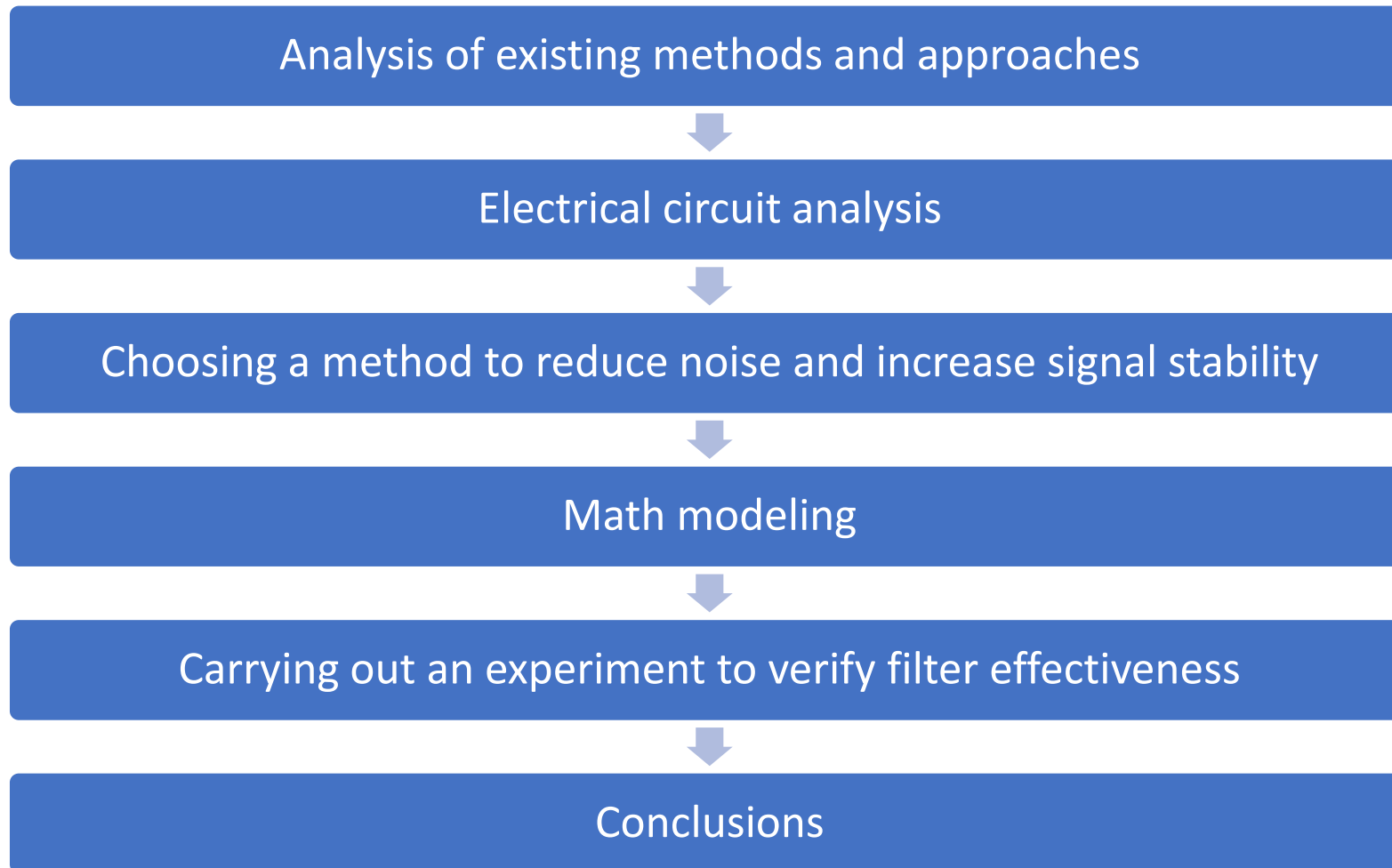


INCREASING FAULT TOLERANCE OF ADC AD7799

Postgraduate student Basko Artem
Ph.D., Associate Professor Ponomaryova Elena



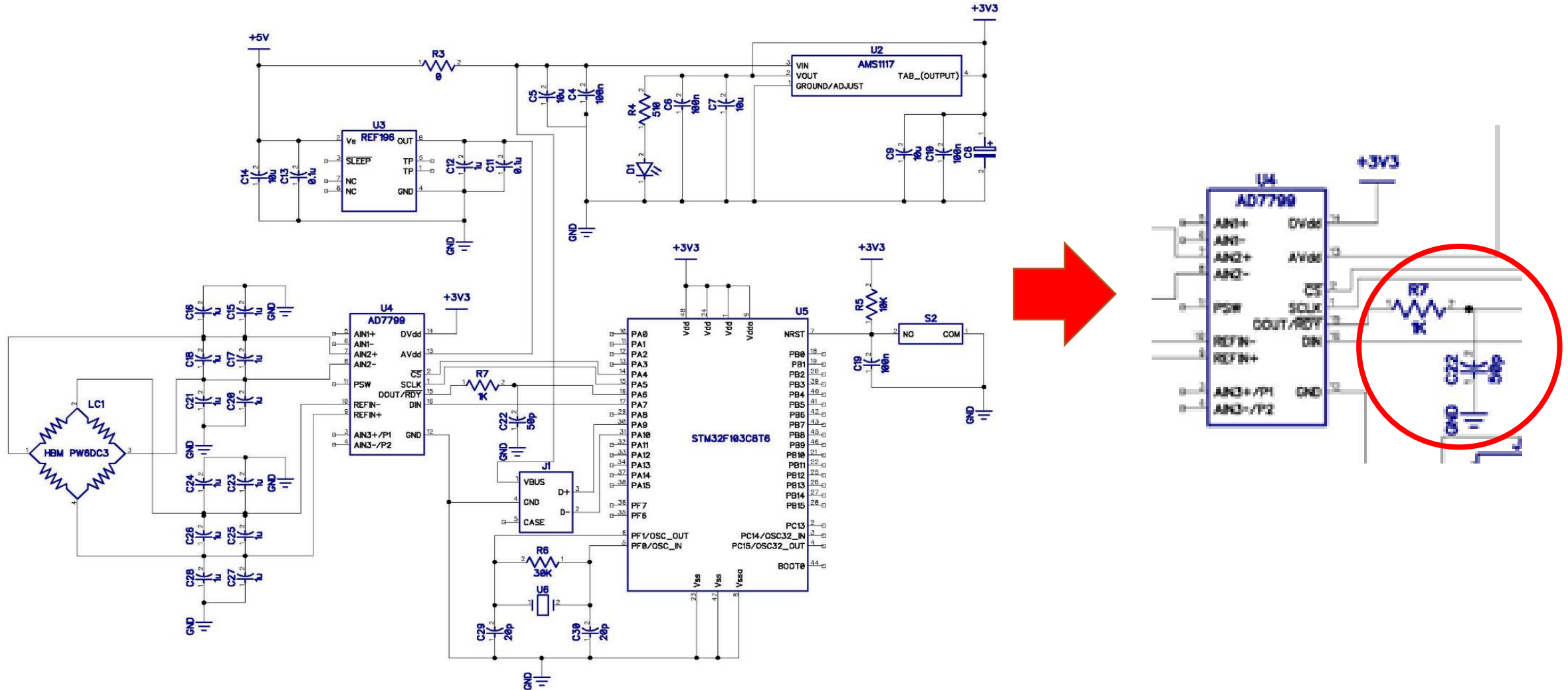
Plan of presentation



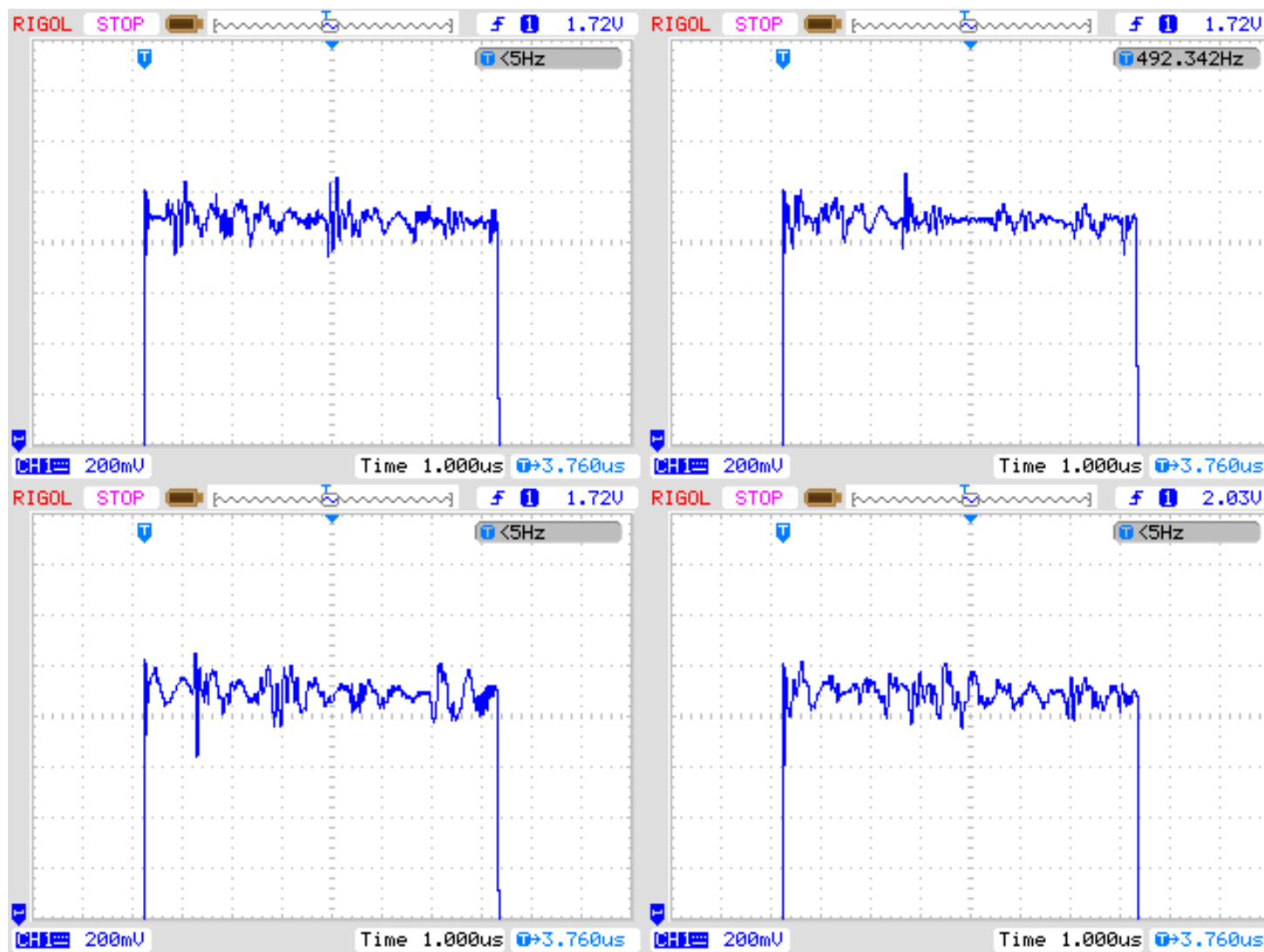
Popular approaches to reduce signal noise

- Pipelined ADC
- Successive-approximation-register (SAR) ADC
- Two-stage pipeline ADC
- Sallen-Key active low analog filters
- Band-pass analog filters
- High-pass analog filters
- A/D antialiasing

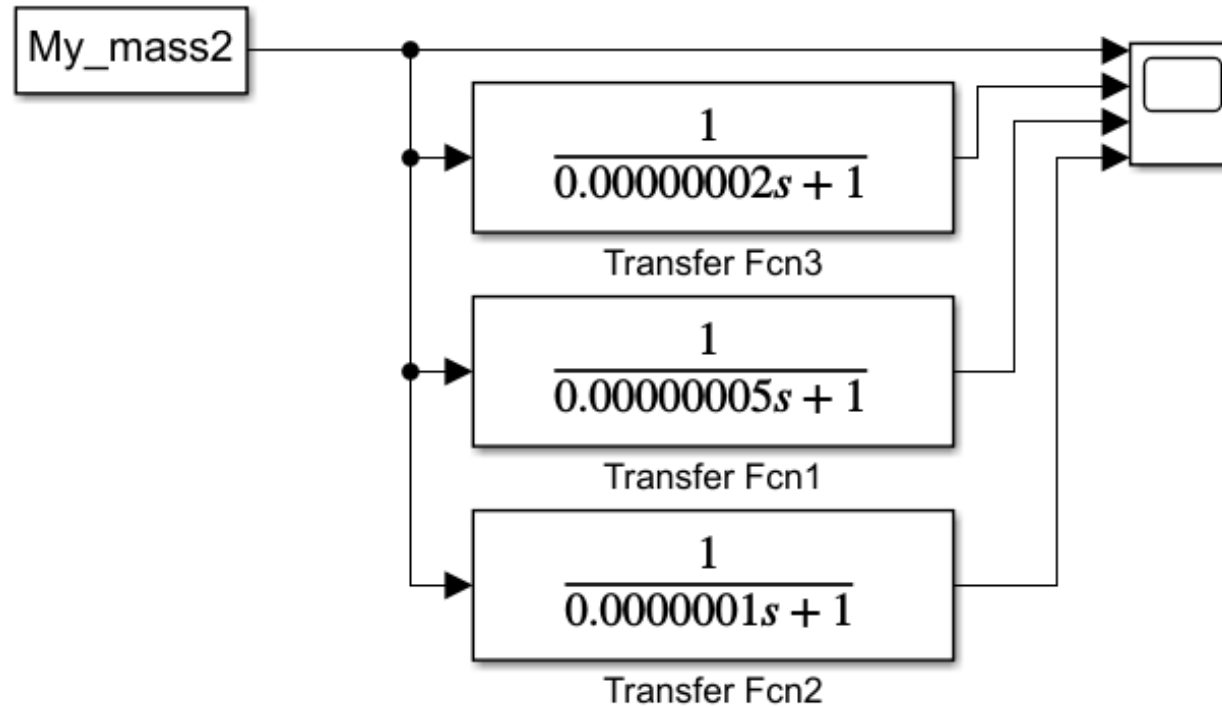
Electrical schematic diagram of the test bench with solution of fault tolerance



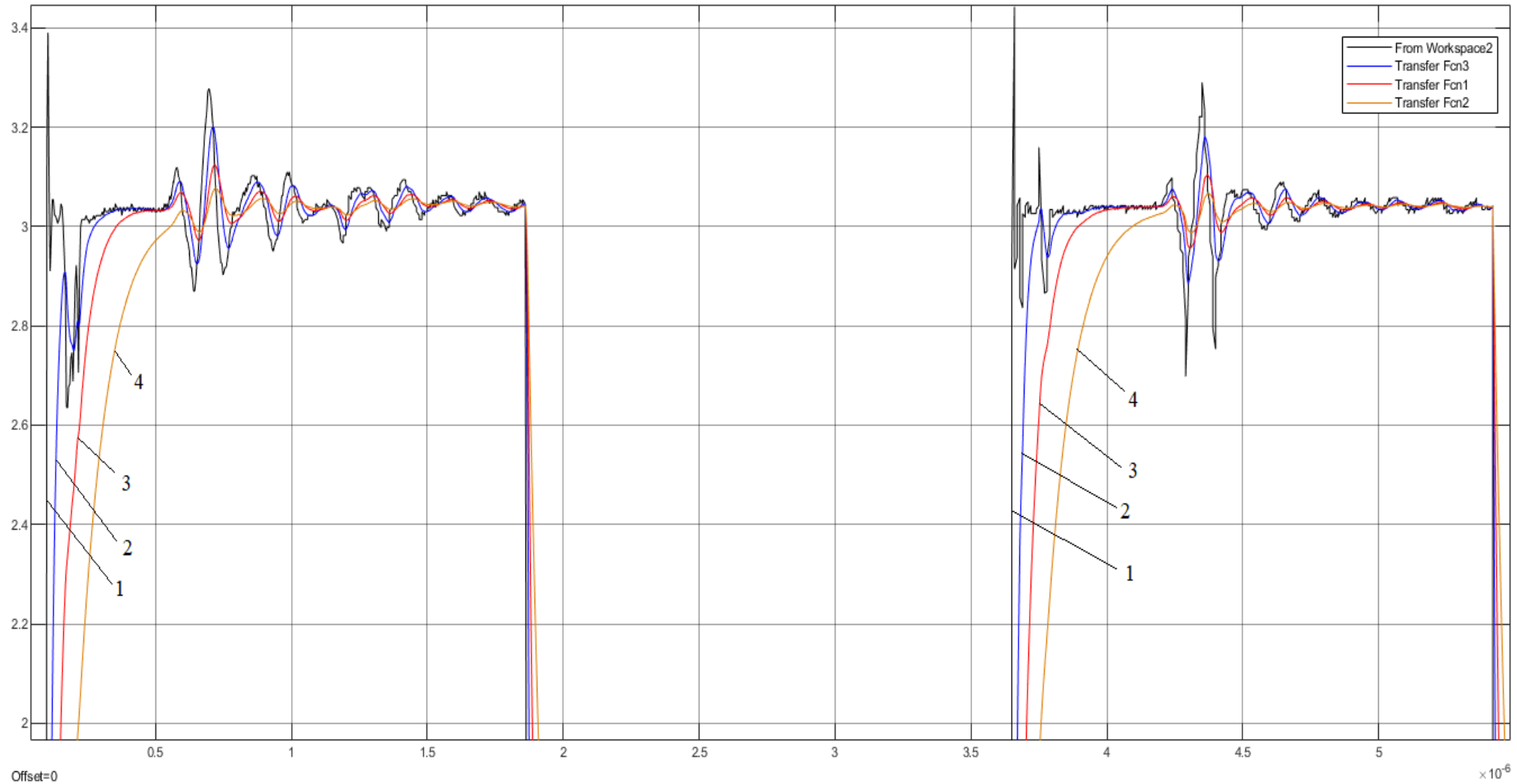
The top view of square data signal without the use of a RC filter



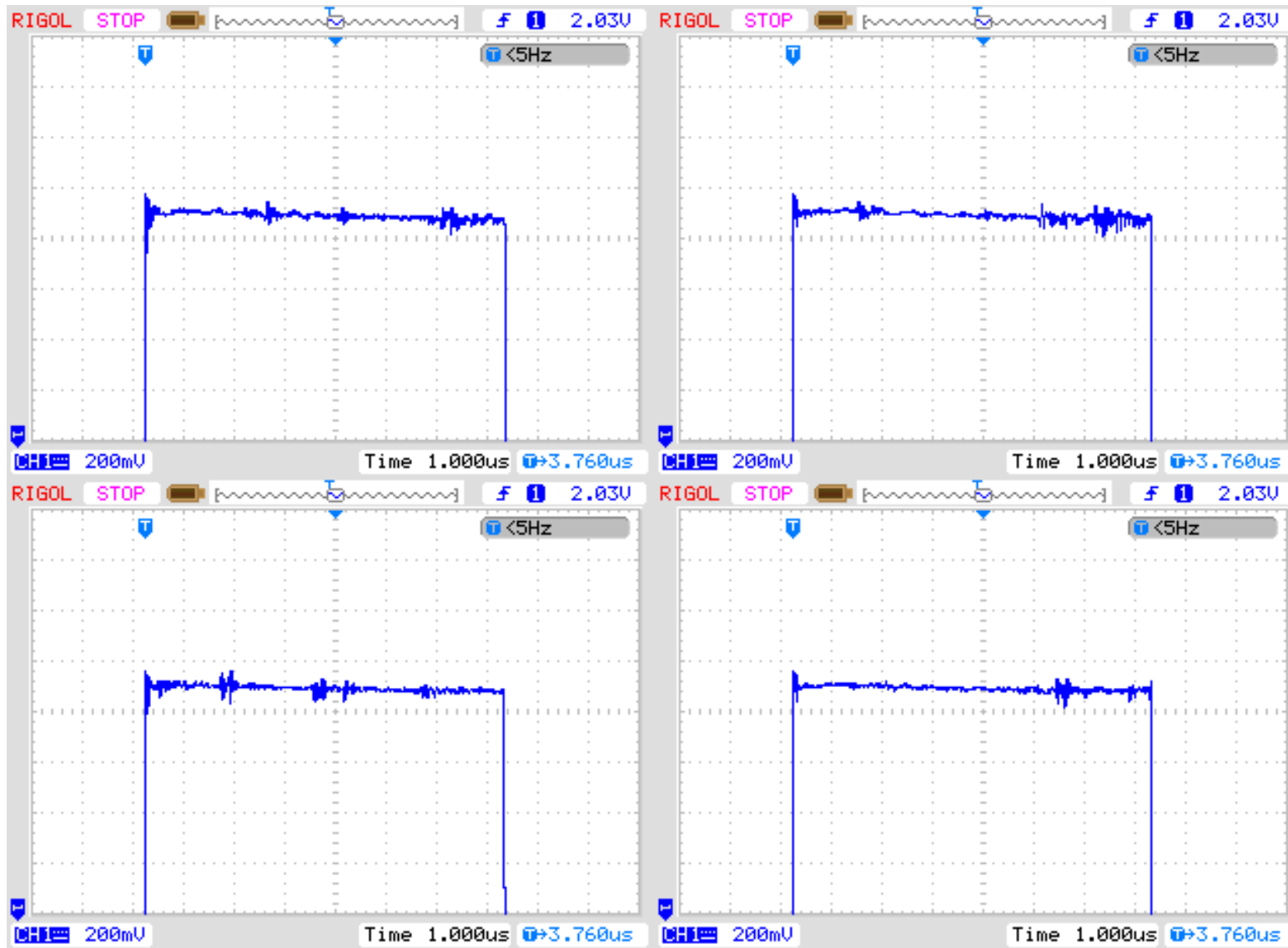
Math modeling in MATLAB



Plots of transfer functions modelling and testing of the proposed method



RC is used for filter data signal



Conclusions

- Analysis of existing methods and approaches were conducted
- Electrical circuit was investigated
- The effective method to reduce noise and increase signal stability was choose
- The math modeling in MATLAB was conducted
- A test bench was assembled and an experiment was carried out

So the results presented can be used in radio engineering to design modern automatic and automated control systems of varying degrees of complexity.

