Dear Editor(s),

Available for your review is our manuscript entitled “*Digital reconstruction stage for the FBD Ʃ∆–based ADC in multistandard receiver: theoretical analysis and design*” submitted for publication as a special issue in Acta IMEKO.

In this article the design of a digital reconstruction stage for the FBD Ʃ∆-based ADC architecture and intended for a software defined radio receiver is recalled as it was detailed in the original paper. Moreover, the mixed baseband stage of the multistandard receiver design is presented. This stage is based on a single passive anti-aliasing filter where there is no need for AGC ahead of the ADC. Its role is to attenuate blockers and interfering signals susceptible to fold on the useful signal after sampling operation of the ADC, while ensuring required signal-to-noise ratio at the receiver output of the three wireless standards supported by the software defined radio receiver which are E-GSM, UMTS and IEEE802.11a signals.

The design of this single non-programmable anti-aliasing filter is accomlished in this article using a Butterworth approximation. It was explained that there is need to use a 6th order Butterworth AAF in the baseband stage. The frequency response of the designed anti-aliasing filter is presented.

Otherwise, The design of the digital reconstruction stage based on demodulation is recalled in this article as it was detailed in the original paper. However, in this article the authors focuses on the theoretical analysis of this digital stage using multirate theory.

The FBD Ʃ∆-based ADC architecture using designed digital reconstruction stage is implemented using MATLAB/SIMULINK environment and synthesis results prove that this architecture satisfies the multistandard receiver specifications

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We thank you for your time and consideration of this manuscript.

Sincerely yours,

Rihab Lahouli ,

PHD Student.