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Dear Dr. Koponen,

I am sending you our manuscript entitled "A method for the dynamic calibration of torque transducers using angular speed steps" by the authors Rafael Oliveira, Renato Machado, both researchers at the National Institute of Metrology, Quality and Technology (Brazil), Herman Lepikson, professor of the Federation of Industries of the State of Bahia (Brazil), Thomas Fröhlich and René Theska, professors at the Ilmenau University of Technology (Germany).

We would like to have the manuscript considered for publication in ACTA Imeko, as a contribution from the technical committee TC3 - Measurement of Force, Mass and Torque and an extension version of the paper entitled "Dynamic calibration of torque transducers applying angular acceleration pulses", presented in the IMEKO 23<sup>rd</sup> TC3, 13<sup>th</sup> TC5 and 4<sup>th</sup> TC22 International Conference, held in Helsinki, Finland, in 2017. This paper presented a method for providing torque traceability to rotating sensors under higher torque variation rates, using the physical principle of generating inertial torque from applying acceleration pulses to rotating shafts with mounted reference mass moments of inertia.

Beyond a revision on the original text and a reorganization of contents, this extended version amplifies the discussion around the uncertainty budget. A new figure is implemented (Figure 12), showing the behavior of the values for the uncertainty of the measurement error. It is possible for instance to evaluate an asymmetry between the components in relation to the central axis of the torque curve.

The author have no conflict of interest to declare.

Thank you for your time and consideration.

Yours sincerely,

Rafael S. Oliveira, PhD

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