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Authors: Daniel Koska, Jasmin Gaudel, Tobias Hein,

Christian Maiwald

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## ACCEPTED MANUSCRIPT

# Validation of an inertial measurement unit for the quantification of rearfoot kinematics during running

Daniel Koska<sup>1,2\*</sup>, Jasmin Gaudel<sup>2</sup>, Tobias Hein<sup>1</sup> and Christian Maiwald<sup>1,2</sup>

<sup>1</sup>Department of Food and Nutrition, and Sports Science, University of Gothenburg, Sweden

PO Box 300, SE405 30 Göteborg, Läroverksgatan 7, 411 20 Göteborg

<sup>2</sup>Institute of Human Movement Science and Health, Department of Research Methodology and Data Analysis, Technische Universität Chemnitz, Germany

\*Corresponding author: Daniel Koska Institute of Human Movement Science and Health, Technische Universität Chemnitz, Thüringer Weg 11, 09126 Chemnitz, Germany.

E-mail: daniel.koska@hsw.tu-chemnitz.de

Tel.: +49 371 531 32024

Email addresses co-authors:

Jasmin Gaudel: Jasmin.Gaudel@hsw.tu-chemnitz.de

Tobias Hein: Tobias.Hein@gu.se

Christian Maiwald: christian.maiwald@googlemail.com

#### **Highlights**

- Systematic and random measurement error is substantial
- Error distribution is intra-individual and differs between the variables and speeds
- Error appears to be affected considerably by vibration-induced effects

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