

## Model-based assessment of dynamic arterial blood volume flow from ultrasound measurements

C. A. D. Leguy · E. M. H. Bosboom ·

A. P. G. Hoeks · F. N. van de Vosse

Published online: 6 May 2009

© The Author(s) 2009. This article is published with open access at Springerlink.com

### Erratum to: Med Biol Eng Comput

DOI 10.1007/s11517-009-0473-9

Unfortunately, several errors occurred in Sect. 2.3.2 Statistical analysis, second paragraph.

The corrected paragraph is given below.

When considering a parameter  $X$ , the variability between the heartbeats of each measurement was evaluated by the intra-registration variability  $\sigma_h$ , which can be written as follows:

$$\sigma_h = \sqrt{\frac{\sum_v \sum_m \sum_b (X_{v,m,b} - \bar{X}_{v,m})^2}{\sum_v \sum_m (b_{v,m}) - m}} \quad (1)$$

$X_{v,m,b}$  being the parameter value for the volunteer  $v$ , in measurement  $m$  at heartbeat  $b$ ,  $\bar{X}_{v,m}$  the average parameter

for measurement  $m$  of volunteer  $v$ , and,  $b_{v,m}$  and  $m$  being the number of heart beats of the measurement  $m$  for the volunteer  $v$  and the total number of measurements, respectively.

The inter-registration variability  $\sigma_m$  that evaluates the variability between the measurements of the volunteer can be written as:

$$\sigma_m = \sqrt{\frac{\sum_v \sum_m (X_{v,m} - \bar{X}_v)^2}{\sum_v (m_v) - v}}. \quad (2)$$

In this equation,  $X_{v,m}$  is the parameter value of measurement  $m$  for volunteer  $v$  and  $\bar{X}_v$  the average parameter for each volunteer  $v$ . The number of measurements for the volunteer  $v$  and the number of volunteers are represented by  $m_v$  and  $v$  respectively.

---

The online version of the original article can be found under doi:[10.1007/s11517-009-0473-9](https://doi.org/10.1007/s11517-009-0473-9).

C. A. D. Leguy (✉) · F. N. van de Vosse  
Eindhoven University of Technology,  
Eindhoven, The Netherlands  
e-mail: c.a.d.leguy@tue.nl

E. M. H. Bosboom  
Maastricht University Medical Centre,  
Maastricht, The Netherlands

A. P. G. Hoeks  
Cardiovascular Research Institute Maastricht,  
Maastricht University, Maastricht, The Netherlands