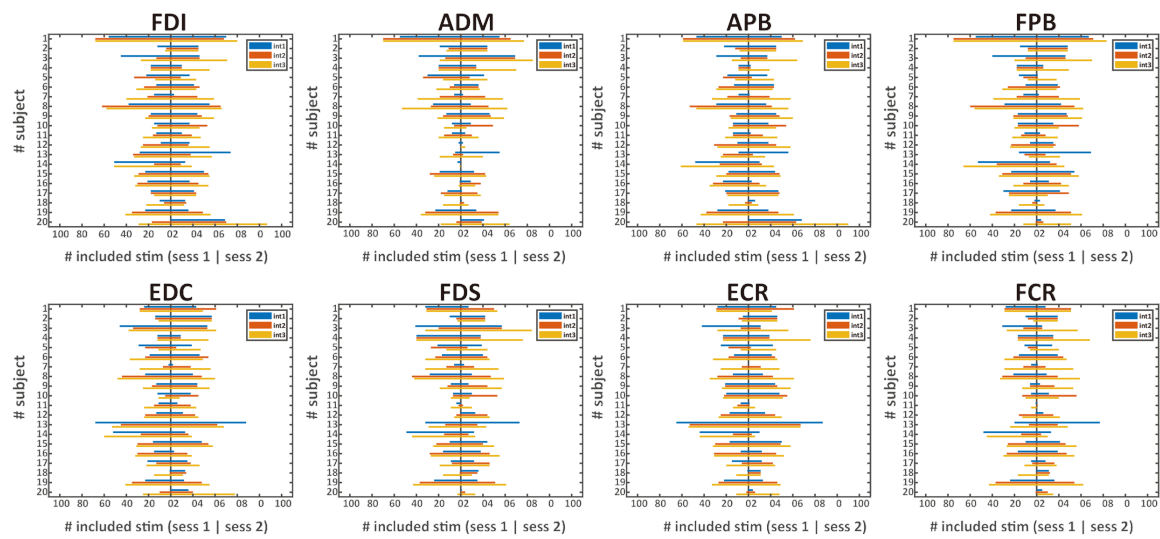


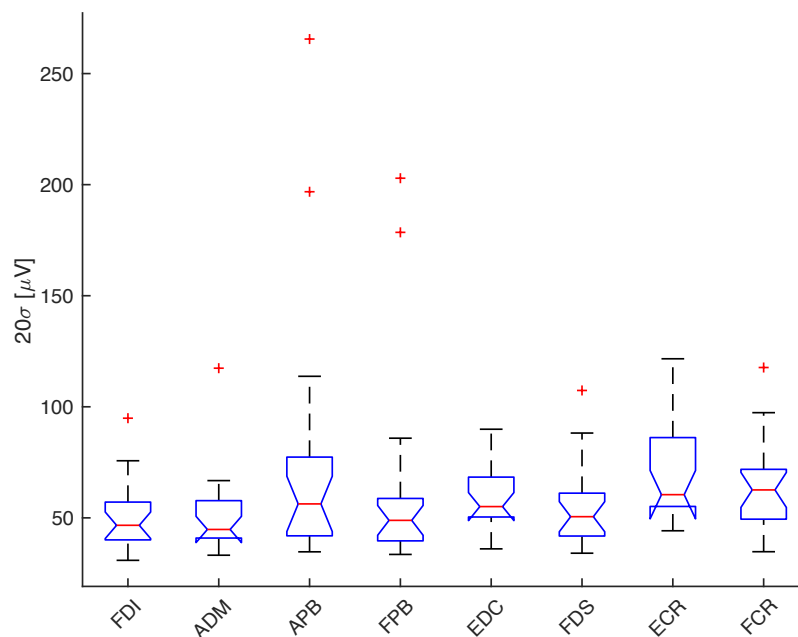
[illegible]

### Number of excitable (active) points



**Figure S1.** The figure depicts the number of active points for all the muscles in all the subjects. The x-axis values show the number of stimulations in session 1 (centre to the left) and session 2 (centre to the right). Y-axis values represent the number of subjects. The blue, red, and yellow colour legends show the intensity 1,2 and 3 values, respectively.

### Standard deviation at baseline



**Figure S2.** Standard deviations  $\sigma$  per muscle (mean over stimulations and session per subject) that served as threshold to define proper MEPs – see body text. While the median values fall in the range of values reported in the literature (medians of  $20 \cdot \sigma = [47, 45, 56, 49, 55, 51, 60, \text{ and } 63] \mu\text{V}$  for FDI, ADM, APB, FPB, EDC, FDS, ECR, and FCR, respectively), some participants clearly appeared as outliers rendering our choice for subject-specific thresholding via the baseline's standard deviation appropriate.

## Supplementary statistics

**Table S2a.** ICC values of area sizes  $A$  and centroids  $C = (C_x, C_y, C_z)^T$  estimated for intensity of 105% RMT of FCR using the cortical meshes with maximum resolution when ignoring non-MEP points (M1) or removing them (M2).\*

|                              | FDI  |      | ADM  |      | APB  |      | FPB  |      | EDC  |      | FDS  |      | ECR  |      | FCR  |      |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                              | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   |
| Resolution: 15,000 vertices  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| $A$                          | 0.28 | 0.43 | 0.65 | 0.75 | 0.67 | 0.45 | 0.86 | 0.60 | 0.76 | 0.73 | 0.33 | 0.30 | 0.72 | 0.61 | 0.24 | 0.23 |
| $C_x$                        | 0.90 | 0.89 | 0.89 | 0.89 | 0.89 | 0.87 | 0.91 | 0.90 | 0.92 | 0.91 | 0.90 | 0.89 | 0.93 | 0.93 | 0.93 | 0.92 |
| $C_y$                        | 0.62 | 0.60 | 0.53 | 0.53 | 0.61 | 0.59 | 0.58 | 0.56 | 0.61 | 0.59 | 0.55 | 0.52 | 0.61 | 0.57 | 0.59 | 0.49 |
| $C_z$                        | 0.82 | 0.80 | 0.72 | 0.71 | 0.75 | 0.72 | 0.79 | 0.78 | 0.81 | 0.80 | 0.70 | 0.70 | 0.81 | 0.79 | 0.82 | 0.77 |
| Resolution: 100,000 vertices |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| $A$                          | 0.36 | 0.39 | 0.72 | 0.74 | 0.56 | 0.55 | 0.77 | 0.75 | 0.84 | 0.84 | 0.49 | 0.47 | 0.76 | 0.76 | 0.31 | 0.28 |
| $C_x$                        | 0.90 | 0.90 | 0.89 | 0.89 | 0.89 | 0.89 | 0.88 | 0.88 | 0.91 | 0.91 | 0.88 | 0.88 | 0.92 | 0.92 | 0.91 | 0.91 |
| $C_y$                        | 0.57 | 0.57 | 0.54 | 0.54 | 0.67 | 0.67 | 0.62 | 0.62 | 0.61 | 0.60 | 0.51 | 0.49 | 0.52 | 0.51 | 0.55 | 0.54 |
| $C_z$                        | 0.82 | 0.83 | 0.69 | 0.68 | 0.77 | 0.79 | 0.81 | 0.81 | 0.78 | 0.78 | 0.67 | 0.67 | 0.79 | 0.79 | 0.85 | 0.85 |

\* Excellent:  $.8 \leq \text{ICC}$  (dark green, bold); good:  $.65 \leq \text{ICC} < .8$  (light green); moderate:  $.5 \leq \text{ICC} < .65$  (yellow); poor:  $\text{ICC} < .5$  (light red).**Table S2b.** ICC values of area sizes  $A$  and centroids  $C = (C_x, C_y, C_z)^T$  estimated for intensity of 105% RMT of FDI using the cortical meshes with maximum resolution when ignoring non-MEP points (M1) or removing them (M2).\*

|                              | FDI  |      | ADM  |      | APB  |      | FPB  |      | EDC  |      | FDS  |      | ECR  |      | FCR  |      |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                              | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   |
| Resolution: 15,000 vertices  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| $A$                          | 0.64 | 0.63 | 0.26 | 0.32 | 0.71 | 0.74 | 0.40 | 0.39 | 0.47 | 0.16 | 0.51 | 0.54 | 0.60 | 0.45 | 0.45 | 0.44 |
| $C_x$                        | 0.92 | 0.91 | 0.90 | 0.90 | 0.87 | 0.87 | 0.87 | 0.86 | 0.95 | 0.96 | 0.94 | 0.93 | 0.94 | 0.94 | 0.93 | 0.93 |
| $C_y$                        | 0.67 | 0.66 | 0.51 | 0.48 | 0.68 | 0.69 | 0.70 | 0.70 | 0.64 | 0.63 | 0.64 | 0.64 | 0.64 | 0.63 | 0.68 | 0.67 |
| $C_z$                        | 0.82 | 0.81 | 0.80 | 0.79 | 0.74 | 0.73 | 0.71 | 0.71 | 0.79 | 0.76 | 0.82 | 0.82 | 0.81 | 0.79 | 0.74 | 0.73 |
| Resolution: 100,000 vertices |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| $A$                          | 0.57 | 0.56 | 0.09 | 0.08 | 0.71 | 0.70 | 0.44 | 0.44 | 0.40 | 0.32 | 0.48 | 0.51 | 0.64 | 0.55 | 0.38 | 0.37 |
| $C_x$                        | 0.89 | 0.89 | 0.86 | 0.86 | 0.85 | 0.85 | 0.84 | 0.85 | 0.96 | 0.95 | 0.90 | 0.90 | 0.95 | 0.95 | 0.89 | 0.88 |
| $C_y$                        | 0.75 | 0.75 | 0.61 | 0.55 | 0.71 | 0.71 | 0.70 | 0.70 | 0.69 | 0.67 | 0.70 | 0.70 | 0.75 | 0.70 | 0.65 | 0.61 |
| $C_z$                        | 0.83 | 0.83 | 0.84 | 0.84 | 0.77 | 0.77 | 0.73 | 0.73 | 0.86 | 0.86 | 0.80 | 0.79 | 0.86 | 0.78 | 0.77 | 0.80 |
| Maximum resolution           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| $A$                          | 0.46 | 0.46 | 0.10 | 0.06 | 0.61 | 0.61 | 0.48 | 0.48 | 0.51 | 0.49 | 0.30 | 0.31 | 0.60 | 0.57 | 0.34 | 0.29 |
| $C_x$                        | 0.88 | 0.89 | 0.86 | 0.86 | 0.85 | 0.85 | 0.85 | 0.85 | 0.94 | 0.94 | 0.89 | 0.89 | 0.93 | 0.93 | 0.87 | 0.87 |
| $C_y$                        | 0.75 | 0.75 | 0.59 | 0.75 | 0.69 | 0.69 | 0.67 | 0.67 | 0.67 | 0.66 | 0.69 | 0.69 | 0.72 | 0.67 | 0.62 | 0.57 |
| $C_z$                        | 0.80 | 0.80 | 0.81 | 0.82 | 0.74 | 0.74 | 0.70 | 0.71 | 0.83 | 0.83 | 0.77 | 0.77 | 0.82 | 0.76 | 0.70 | 0.72 |

\* Excellent:  $.8 \leq \text{ICC}$  (dark green, bold); good:  $.65 \leq \text{ICC} < .8$  (light green); moderate:  $.5 \leq \text{ICC} < .65$  (yellow); poor:  $\text{ICC} < .5$  (light red).**Table S2c.** ICC values of area sizes  $A$  and centroids  $C = (C_x, C_y, C_z)^T$  estimated for intensity of 105% RMT of EDC using the cortical meshes with maximum resolution when ignoring non-MEP points (M1) or removing them (M2).\*

|                              | FDI  |      | ADM  |      | APB  |      | FPB  |      | EDC  |      | FDS  |      | ECR  |      | FCR  |      |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                              | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   | M1   | M2   |
| Resolution: 15,000 vertices  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| $A$                          | 0.74 | 0.66 | 0.68 | 0.59 | 0.48 | 0.55 | 0.76 | 0.78 | 0.55 | 0.53 | 0.55 | 0.52 | 0.84 | 0.82 | 0.50 | 0.52 |
| $C_x$                        | 0.92 | 0.93 | 0.89 | 0.89 | 0.93 | 0.93 | 0.92 | 0.93 | 0.88 | 0.88 | 0.89 | 0.90 | 0.89 | 0.90 | 0.87 | 0.87 |
| $C_y$                        | 0.52 | 0.56 | 0.46 | 0.46 | 0.63 | 0.64 | 0.73 | 0.75 | 0.64 | 0.64 | 0.51 | 0.52 | 0.62 | 0.64 | 0.61 | 0.61 |
| $C_z$                        | 0.75 | 0.75 | 0.64 | 0.66 | 0.76 | 0.77 | 0.71 | 0.88 | 0.78 | 0.79 | 0.75 | 0.75 | 0.77 | 0.79 | 0.73 | 0.73 |
| Resolution: 100,000 vertices |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| $A$                          | 0.77 | 0.75 | 0.48 | 0.32 | 0.50 | 0.51 | 0.79 | 0.81 | 0.23 | 0.19 | 0.37 | 0.37 | 0.74 | 0.73 | 0.23 | 0.22 |
| $C_x$                        | 0.94 | 0.94 | 0.87 | 0.86 | 0.96 | 0.95 | 0.95 | 0.95 | 0.90 | 0.91 | 0.90 | 0.90 | 0.92 | 0.92 | 0.88 | 0.88 |
| $C_y$                        | 0.58 | 0.59 | 0.54 | 0.60 | 0.51 | 0.50 | 0.77 | 0.77 | 0.37 | 0.63 | 0.52 | 0.50 | 0.68 | 0.68 | 0.66 | 0.67 |
| $C_z$                        | 0.78 | 0.77 | 0.60 | 0.62 | 0.68 | 0.68 | 0.67 | 0.81 | 0.67 | 0.74 | 0.75 | 0.75 | 0.70 | 0.71 | 0.71 | 0.72 |
| Maximum resolution           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| $A$                          | 0.75 | 0.75 | 0.49 | 0.38 | 0.56 | 0.56 | 0.75 | 0.74 | 0.22 | 0.19 | 0.38 | 0.38 | 0.78 | 0.78 | 0.24 | 0.23 |
| $C_x$                        | 0.93 | 0.93 | 0.83 | 0.86 | 0.95 | 0.95 | 0.94 | 0.95 | 0.89 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.87 | 0.87 |
| $C_y$                        | 0.59 | 0.59 | 0.52 | 0.56 | 0.54 | 0.55 | 0.72 | 0.72 | 0.41 | 0.66 | 0.48 | 0.48 | 0.68 | 0.66 | 0.68 | 0.68 |
| $C_z$                        | 0.77 | 0.77 | 0.58 | 0.57 | 0.68 | 0.68 | 0.67 | 0.81 | 0.67 | 0.74 | 0.79 | 0.79 | 0.69 | 0.68 | 0.74 | 0.74 |

\* Excellent:  $.8 \leq \text{ICC}$  (dark green, bold); good:  $.65 \leq \text{ICC} < .8$  (light green); moderate:  $.5 \leq \text{ICC} < .65$  (yellow); poor:  $\text{ICC} < .5$  (light red).

**Table S3a.** Outcome of the two-way ANOVA for the area sizes  $A$  (in  $\text{mm}^2 \cdot \mu\text{V} \cdot 10^5$ ) with factors of *intensity* and *session* when considering the 15,000 mesh resolution and when removing the non-MEP points (M2).\*

|     | (A) at 105% RMT |           |           | intensity     |     | session       |     | intensity × session |     | p-value pairwise comparison |         |         |
|-----|-----------------|-----------|-----------|---------------|-----|---------------|-----|---------------------|-----|-----------------------------|---------|---------|
|     | FDI             | EDC       | FCR       | F             | p   | F             | p   | F                   | p   | FDI/EDC                     | FDI/FCR | EDC/FCR |
| FDI | 1.51±0.20       | 2.32±0.46 | 3.88±0.99 | F(2,36)=4.883 | .03 | F(1,18)=1.128 | .30 | F(2,36)=0.163       | .71 | .16                         | .06     | .27     |
| ADM | 0.72±0.13       | 0.91±0.13 | 1.46±0.35 | F(2,30)=4.921 | .03 | F(1,15)=0.854 | .37 | F(2,30)=0.018       | .98 | .43                         | .08     | .19     |
| APB | 1.55±0.41       | 1.69±0.36 | 2.96±0.89 | F(2,34)=3.412 | .07 | F(1,17)=1.819 | .20 | F(2,34)=1.903       | .18 | 1.00                        | .16     | .29     |
| FPB | 1.16±0.24       | 1.43±0.31 | 1.82±0.37 | F(2,34)=3.866 | .03 | F(1,17)=5.534 | .03 | F(2,34)=0.627       | .48 | .35                         | .09     | .46     |
| EDC | 1.00±0.14       | 1.01±0.14 | 1.44±0.26 | F(2,34)=4.115 | .04 | F(1,17)=0.265 | .61 | F(2,34)=0.045       | .96 | 1.00                        | .14     | .13     |
| FDS | 0.86±0.16       | 1.00±0.14 | 1.39±0.19 | F(2,30)=5.594 | .01 | F(1,15)=0.142 | .71 | F(2,30)=1.163       | .32 | 1.00                        | .03     | .06     |
| ECR | 1.24±0.20       | 1.64±0.42 | 2.02±0.39 | F(2,32)=3.520 | .04 | F(1,16)=0.716 | .41 | F(2,32)=0.241       | .79 | .48                         | .04     | .79     |
| FCR | 0.68±0.11       | 1.00±0.18 | 1.35±0.19 | F(2,32)=6.245 | .01 | F(1,16)=0.662 | .43 | F(2,32)=1.003       | .38 | .36                         | .01     | .27     |

\* Bold face implies  $p < .05$ .**Table S3b.** Outcome of the two-way ANOVA for the area sizes  $A$  (in  $\text{mm}^2 \cdot \mu\text{V} \cdot 10^5$ ) with factors of *intensity* and *session* when considering the 100,000 mesh resolution and when removing the non-MEP points (M2).\*

|     | (A) at 105% RMT |           |           | intensity     |     | session       |     | intensity × session |     | p-value pairwise comparison |         |         |
|-----|-----------------|-----------|-----------|---------------|-----|---------------|-----|---------------------|-----|-----------------------------|---------|---------|
|     | FDI             | EDC       | FCR       | F             | p   | F             | p   | F                   | p   | FDI/EDC                     | FDI/FCR | EDC/FCR |
| FDI | 1.48±0.19       | 2.30±0.53 | 4.69±1.52 | F(2,36)=3.959 | .06 | F(1,18)=0.84  | .37 | F(2,36)=0.372       | .56 | .25                         | .12     | .31     |
| ADM | 0.71±0.15       | 0.85±0.14 | 1.74±0.52 | F(2,30)=4.261 | .05 | F(1,15)=1.054 | .32 | F(2,30)=0.203       | .82 | 1.00                        | .09     | .25     |
| APB | 1.44±0.35       | 1.75±0.41 | 3.63±1.26 | F(2,34)=3.345 | .08 | F(1,17)=1.397 | .25 | F(2,34)=1.444       | .25 | 1.00                        | .17     | .34     |
| FPB | 1.11±0.24       | 1.41±0.35 | 2.30±0.67 | F(2,34)=3.035 | .09 | F(1,17)=4.891 | .04 | F(2,34)=1.345       | .27 | .39                         | .18     | .49     |
| EDC | 0.92±0.17       | 0.87±0.11 | 1.61±0.34 | F(2,34)=5.798 | .02 | F(1,17)=0.04  | .85 | F(2,34)=0.016       | .98 | 1.00                        | .04     | .09     |
| FDS | 0.80±0.13       | 0.93±0.16 | 1.50±0.23 | F(2,30)=6.808 | .00 | F(1,15)=1.021 | .33 | F(2,30)=1.488       | .24 | 1.00                        | .02     | .07     |
| ECR | 1.16±0.18       | 1.50±0.39 | 2.14±0.46 | F(2,30)=3.444 | .05 | F(1,15)=0.249 | .63 | F(2,30)=0.796       | .46 | 0.88                        | .05     | .52     |
| FCR | 0.66±0.11       | 0.92±0.16 | 1.35±0.19 | F(2,30)=6.093 | .01 | F(1,15)=1.666 | .22 | F(2,30)=1.77        | .19 | .41                         | .01     | .25     |

\* Bold face implies  $p < .05$ .**Table S4.** Outcome of the two-way ANOVA for the  $C_x$  (in mm) with factors of *intensity* and *session* when considering the 15,000, 100,000 and maximum mesh resolution and when removing the non-MEP points (M2).\*

|                                   | (A) at 105% RMT |            |            | intensity     |     | session       |     | intensity × session |     | p-value pairwise comparison |         |         |
|-----------------------------------|-----------------|------------|------------|---------------|-----|---------------|-----|---------------------|-----|-----------------------------|---------|---------|
|                                   | FDI             | EDC        | FCR        | F             | p   | F             | p   | F                   | p   | FDI/EDC                     | FDI/FCR | EDC/FCR |
| S4a: Resolution: 15,000 vertices  |                 |            |            |               |     |               |     |                     |     |                             |         |         |
| FDI                               | 21.26±2.06      | 20.71±2.03 | 20.95±1.95 | F(2,36)=0.676 | .52 | F(1,18)=0.316 | .58 | F(2,36)=1.273       | .29 | .52                         | 1.00    | 1.00    |
| ADM                               | 21.06±2.08      | 20.81±2.06 | 20.99±2.13 | F(2,30)=0.112 | .89 | F(1,15)=0.072 | .79 | F(2,30)=4.687       | .02 | 1.00                        | 1.00    | 1.00    |
| APB                               | 21.02±2.06      | 20.56±2.00 | 20.42±2.09 | F(2,34)=0.901 | .42 | F(1,17)=0.008 | .93 | F(2,34)=1.468       | .25 | .78                         | .65     | 1.00    |
| FPB                               | 20.66±1.93      | 20.56±2.04 | 20.44±1.97 | F(2,34)=0.105 | .90 | F(1,17)=0.022 | .88 | F(2,34)=0.017       | .94 | 1.00                        | 1.00    | 1.00    |
| EDC                               | 19.74±2.00      | 19.92±2.01 | 19.87±1.91 | F(2,34)=0.115 | .89 | F(1,17)=0.688 | .42 | F(2,34)=1.001       | .38 | 1.00                        | 1.00    | 1.00    |
| FDS                               | 21.40±2.09      | 21.07±2.22 | 21.51±2.06 | F(2,30)=0.293 | .75 | F(1,15)=0.127 | .73 | F(2,30)=0.011       | .99 | 1.00                        | 1.00    | 1.00    |
| ECR                               | 19.86±2.06      | 19.43±2.12 | 19.40±2.14 | F(2,32)=0.631 | .54 | F(1,16)=0.229 | .64 | F(2,32)=1.054       | .36 | 1.00                        | .91     | 1.00    |
| FCR                               | 20.32±2.15      | 20.46±1.99 | 20.82±2.12 | F(2,32)=0.365 | .70 | F(1,16)=0.093 | .76 | F(2,32)=0.871       | .43 | 1.00                        | 1.00    | 1.00    |
| S4b: Resolution: 100,000 vertices |                 |            |            |               |     |               |     |                     |     |                             |         |         |
| FDI                               | 21.62±2.09      | 20.91±1.95 | 21.03±2.03 | F(2,36)=1.618 | .21 | F(1,18)=0.044 | .84 | F(2,36)=1.734       | .19 | .16                         | .71     | 1.00    |
| ADM                               | 21.16±2.16      | 20.95±2.06 | 21.14±2.04 | F(2,30)=0.152 | .86 | F(1,15)=0.041 | .84 | F(2,30)=1.968       | .16 | 1.00                        | 1.00    | 1.00    |
| APB                               | 21.42±2.13      | 20.96±2.07 | 20.23±2.09 | F(2,34)=3.04  | .06 | F(1,17)=0.019 | .89 | F(2,34)=2.077       | .14 | .93                         | .13     | .43     |
| FPB                               | 20.88±2.03      | 20.53±2.07 | 20.31±1.95 | F(2,34)=0.733 | .49 | F(1,17)=0.014 | .91 | F(2,34)=0.221       | .80 | 1.00                        | .83     | 1.00    |
| EDC                               | 20.14±2.08      | 19.94±2.06 | 19.84±1.99 | F(2,34)=0.658 | .52 | F(1,17)=0.41  | .53 | F(2,34)=0.054       | .95 | 1.00                        | .93     | 1.00    |
| FDS                               | 21.72±2.10      | 21.24±2.25 | 21.30±2.04 | F(2,30)=0.396 | .68 | F(1,15)=0.014 | .91 | F(2,30)=0.043       | .96 | 1.00                        | 1.00    | 1.00    |
| ECR                               | 20.46±2.27      | 20.23±2.25 | 20.22±2.2  | F(2,30)=0.227 | .80 | F(1,15)=0.08  | .78 | F(2,30)=0.629       | .54 | 1.00                        | 1.00    | 1.00    |
| FCR                               | 20.15±2.29      | 20.56±2.12 | 20.57±2.28 | F(2,30)=0.359 | .70 | F(1,15)=0.037 | .85 | F(2,30)=0.161       | .85 | 1.00                        | 1.00    | 1.00    |
| S4c: Maximum resolution           |                 |            |            |               |     |               |     |                     |     |                             |         |         |
| FDI                               | 21.08±2.07      | 20.59±1.94 | 20.95±2.03 | F(2,36)=0.677 | .52 | F(1,18)=0.012 | .91 | F(2,36)=0.825       | .45 | .46                         | 1.00    | 1.00    |
| ADM                               | 20.51±2.60      | 20.07±2.49 | 20.18±2.45 | F(2,24)=0.477 | .63 | F(1,12)=0.558 | .47 | F(2,24)=1.128       | .34 | 1.00                        | 1.00    | 1.00    |
| APB                               | 21.15±2.04      | 20.58±2.02 | 20.22±2.08 | F(2,34)=1.668 | .20 | F(1,17)=0.026 | .87 | F(2,34)=1.235       | .30 | .63                         | .38     | 1.00    |
| FPB                               | 20.59±2.07      | 20.33±2.06 | 20.28±1.97 | F(2,34)=0.238 | .79 | F(1,17)=0.002 | .97 | F(2,34)=0.153       | .86 | 1.00                        | 1.00    | 1.00    |
| EDC                               | 19.94±2.07      | 19.50±2.03 | 19.69±1.99 | F(2,34)=0.674 | .52 | F(1,17)=0.733 | .40 | F(2,34)=0.395       | .68 | .82                         | 1.00    | 1.00    |
| FDS                               | 21.78±2.13      | 20.94±2.20 | 21.41±2.08 | F(2,30)=1.031 | .37 | F(1,15)=0.022 | .88 | F(2,30)=0.204       | .82 | .52                         | 1.00    | 1.00    |
| ECR                               | 20.44±2.27      | 19.81±2.20 | 20.12±2.23 | F(2,30)=0.884 | .42 | F(1,15)=0.065 | .80 | F(2,30)=0.27        | .77 | .55                         | 1.00    | 1.00    |
| FCR                               | 20.17±2.24      | 20.22±2.11 | 20.60±2.24 | F(2,30)=0.321 | .73 | F(1,15)=0.032 | .86 | F(2,30)=0.28        | .76 | 1.00                        | 1.00    | 1.00    |

\* Bold face implies  $p < .05$ .

**Table S5.** Outcome of the two-way ANOVA for the  $C_y$  (in mm) with factors of *intensity* and *session* when considering the 15,000, 100,000 and maximum mesh resolution and when removing the non-MEP points (M2).\*

|                                          | (A) at 105% RMT |            |            | <i>intensity</i> |          | <i>session</i> |          | <i>intensity × session</i> |            | <i>p</i> -value pairwise comparison |         |         |
|------------------------------------------|-----------------|------------|------------|------------------|----------|----------------|----------|----------------------------|------------|-------------------------------------|---------|---------|
|                                          | FDI             | EDC        | FCR        | <i>F</i>         | <i>p</i> | <i>F</i>       | <i>p</i> | <i>F</i>                   | <i>p</i>   | FDI/EDC                             | FDI/FCR | EDC/FCR |
| <b>S5a:</b> Resolution: 15,000 vertices  |                 |            |            |                  |          |                |          |                            |            |                                     |         |         |
| FDI                                      | 30.94±1.27      | 29.80±1.27 | 30.23±1.05 | F(2,36)=1.026    | .37      | F(1,18)=0.176  | .68      | F(2,36)=3.644              | <b>.04</b> | .60                                 | 1.00    | 1.00    |
| ADM                                      | 30.17±1.65      | 29.20±1.56 | 29.84±1.51 | F(2,30)=0.479    | .62      | F(1,15)=0.65   | .43      | F(2,30)=1.901              | .17        | 1.00                                | 1.00    | 1.00    |
| APB                                      | 31.58±1.62      | 30.00±1.41 | 30.23±1.35 | F(2,34)=2.001    | .15      | F(1,17)=0.006  | .94      | F(2,34)=3.793              | <b>.05</b> | .38                                 | .30     | 1.00    |
| FPB                                      | 30.56±1.67      | 30.20±1.52 | 30.34±1.27 | F(2,34)=0.057    | .90      | F(1,17)=0.252  | .62      | F(2,34)=1.7                | .21        | 1.00                                | 1.00    | 1.00    |
| EDC                                      | 29.44±1.43      | 29.79±1.45 | 29.51±1.27 | F(2,34)=0.100    | .91      | F(1,17)=0.258  | .62      | F(2,34)=1.26               | .30        | 1.00                                | 1.00    | 1.00    |
| FDS                                      | 29.77±1.41      | 28.73±1.51 | 28.97±1.20 | F(2,30)=0.658    | .53      | F(1,15)=0.041  | .84      | F(2,30)=0.57               | .57        | 1.00                                | 1.00    | 1.00    |
| ECR                                      | 29.55±1.61      | 29.19±1.64 | 29.11±1.36 | F(2,32)=0.144    | .87      | F(1,16)=0.255  | .62      | F(2,32)=2.316              | .12        | 1.00                                | 1.00    | 1.00    |
| FCR                                      | 29.68±1.48      | 29.38±1.37 | 28.63±1.25 | F(2,32)=0.587    | .56      | F(1,16)=0.058  | .81      | F(2,32)=0.764              | .47        | 1.00                                | .68     | 1.00    |
| <b>S5b:</b> Resolution: 100,000 vertices |                 |            |            |                  |          |                |          |                            |            |                                     |         |         |
| FDI                                      | 31.32±1.41      | 30.07±1.36 | 30.87±1.09 | F(2,36)=1.226    | .31      | F(1,18)=0.04   | .84      | F(2,36)=3.657              | <b>.04</b> | .45                                 | 1.00    | .99     |
| ADM                                      | 30.27±1.86      | 29.55±1.64 | 30.35±1.53 | F(2,30)=0.426    | .66      | F(1,15)=0.196  | .66      | F(2,30)=1.713              | .20        | 1.00                                | 1.00    | 1.00    |
| APB                                      | 31.78±1.66      | 30.94±1.46 | 30.56±1.41 | F(2,34)=0.905    | .41      | F(1,17)=0.068  | .94      | F(2,34)=2.137              | .13        | 1.00                                | .58     | 1.00    |
| FPB                                      | 30.64±1.73      | 30.33±1.49 | 30.46±1.35 | F(2,34)=0.046    | .90      | F(1,17)=0.069  | .80      | F(2,34)=1.071              | .33        | 1.00                                | 1.00    | 1.00    |
| EDC                                      | 29.73±1.42      | 30.30±1.48 | 29.58±1.28 | F(2,34)=0.487    | .62      | F(1,17)=0.652  | .43      | F(2,34)=2.032              | .15        | 1.00                                | 1.00    | .97     |
| FDS                                      | 29.34±1.44      | 29.49±1.55 | 29.64±1.15 | F(2,30)=0.538    | .59      | F(1,15)=0.104  | .75      | F(2,30)=0.812              | .45        | .96                                 | 1.00    | 1.00    |
| ECR                                      | 28.83±1.61      | 29.12±1.68 | 29.06±1.31 | F(2,30)=0.058    | .94      | F(1,15)=0.109  | .75      | F(2,30)=2.469              | .10        | 1.00                                | 1.00    | 1.00    |
| FCR                                      | 29.46±1.38      | 29.84±1.52 | 29.15±1.27 | F(2,30)=0.32     | .73      | F(1,15)=0.044  | .84      | F(2,30)=0.241              | .79        | 1.00                                | 1.00    | 1.00    |
| <b>S5c:</b> Maximum resolution           |                 |            |            |                  |          |                |          |                            |            |                                     |         |         |
| FDI                                      | 31.01±1.41      | 29.79±1.36 | 30.28±1.12 | F(2,36)=0.994    | .38      | F(1,18)=0.773  | .39      | F(2,36)=4.401              | <b>.02</b> | .42                                 | 1.00    | 1.00    |
| ADM                                      | 30.23±2.25      | 29.23±1.99 | 29.64±1.76 | F(2,24)=0.488    | .62      | F(1,12)=2.171  | .17      | F(2,24)=2.021              | .15        | 1.00                                | 1.00    | 1.00    |
| APB                                      | 31.22±1.65      | 30.58±1.49 | 30.20±1.40 | F(2,34)=0.555    | .58      | F(1,17)=0.05   | .83      | F(2,34)=2.018              | .15        | 1.00                                | .96     | 1.00    |
| FPB                                      | 30.46±1.75      | 30.44±1.56 | 30.17±1.34 | F(2,34)=0.041    | .96      | F(1,17)=0.63   | .44      | F(2,34)=0.596              | .56        | 1.00                                | 1.00    | 1.00    |
| EDC                                      | 29.50±1.47      | 30.07±1.55 | 29.29±1.24 | F(2,34)=0.478    | .62      | F(1,17)=0.799  | .38      | F(2,34)=1.721              | .19        | 1.00                                | 1.00    | 1.00    |
| FDS                                      | 29.74±1.55      | 28.93±1.62 | 28.85±1.24 | F(2,30)=0.468    | .63      | F(1,15)=0.575  | .46      | F(2,30)=1.016              | .37        | 1.00                                | 1.00    | 1.00    |
| ECR                                      | 28.63±1.63      | 28.68±1.74 | 28.87±1.33 | F(2,30)=0.042    | .96      | F(1,15)=0.211  | .65      | F(2,30)=3.445              | <b>.05</b> | 1.00                                | 1.00    | 1.00    |
| FCR                                      | 29.12±1.40      | 29.64±1.62 | 29.03±1.27 | F(2,30)=0.260    | .77      | F(1,15)=0.012  | .91      | F(2,30)=0.795              | .46        | 1.00                                | 1.00    | 1.00    |

\* Bold face implies  $p < .05$ .**Table S6.** Outcome of the two-way ANOVA for the  $C_z$  (in mm) with factors of *intensity* and *session* when considering the 15,000, 100,000 and maximum mesh resolution and when removing the non-MEP points (M2).\*

|                                          | (A) at 105% RMT |             |             | <i>intensity</i> |          | <i>session</i> |          | <i>intensity × session</i> |          | <i>p</i> -value pairwise comparison |            |         |
|------------------------------------------|-----------------|-------------|-------------|------------------|----------|----------------|----------|----------------------------|----------|-------------------------------------|------------|---------|
|                                          | FDI             | EDC         | FCR         | <i>F</i>         | <i>p</i> | <i>F</i>       | <i>p</i> | <i>F</i>                   | <i>p</i> | FDI/EDC                             | FDI/FCR    | EDC/FCR |
| <b>S6a:</b> Resolution: 15,000 vertices  |                 |             |             |                  |          |                |          |                            |          |                                     |            |         |
| FDI                                      | 108.18±1.69     | 108.65±1.72 | 107.70±1.55 | F(2,36)=1.097    | .35      | F(1,18)=0.065  | .80      | F(2,36)=2.316              | .11      | 1.00                                | 1.00       | .60     |
| ADM                                      | 109.11±1.80     | 109.14±1.93 | 108.56±1.72 | F(2,30)=0.380    | .69      | F(1,15)=0.144  | .71      | F(2,30)=0.714              | .50      | 1.00                                | 1.00       | 1.00    |
| APB                                      | 108.19±1.60     | 108.75±1.58 | 108.07±1.52 | F(2,34)=0.563    | .53      | F(1,17)=0.035  | .85      | F(2,34)=1.420              | .26      | 1.00                                | 1.00       | 1.00    |
| FPB                                      | 109.12±1.70     | 108.14±1.74 | 108.09±1.71 | F(2,34)=1.031    | .34      | F(1,17)=0.317  | .58      | F(2,34)=0.849              | .44      | 1.00                                | .35        | 1.00    |
| EDC                                      | 109.40±1.66     | 108.55±1.80 | 108.78±1.65 | F(2,34)=0.929    | .37      | F(1,17)=0.244  | .63      | F(2,34)=1.099              | .35      | .89                                 | .18        | 1.00    |
| FDS                                      | 110.07±1.65     | 109.42±1.89 | 109.55±1.66 | F(2,30)=0.602    | .49      | F(1,15)=0.004  | .95      | F(2,30)=0.356              | .70      | 1.00                                | .41        | 1.00    |
| ECR                                      | 108.92±1.85     | 108.81±1.70 | 108.68±1.66 | F(2,32)=0.054    | .95      | F(1,16)=0.012  | .91      | F(2,32)=0.777              | .41      | 1.00                                | 1.00       | 1.00    |
| FCR                                      | 110.35±1.46     | 109.51±1.68 | 109.87±1.57 | F(2,32)=0.741    | .45      | F(1,16)=0.164  | .69      | F(2,32)=0.732              | .49      | .96                                 | .85        | 1.00    |
| <b>S6b:</b> Resolution: 100,000 vertices |                 |             |             |                  |          |                |          |                            |          |                                     |            |         |
| FDI                                      | 108.70±1.67     | 109.35±1.79 | 107.99±1.56 | F(2,36)=2.154    | .15      | F(1,18)=0.074  | .79      | F(2,36)=3.139              | .06      | 1.00                                | .37        | .23     |
| ADM                                      | 109.82±1.85     | 109.73±1.95 | 108.75±1.80 | F(2,30)=1.312    | .28      | F(1,15)=0.003  | .96      | F(2,30)=1.274              | .29      | 1.00                                | .55        | .56     |
| APB                                      | 108.90±1.71     | 109.61±1.66 | 108.51±1.57 | F(2,34)=1.060    | .36      | F(1,17)=0.079  | .78      | F(2,34)=1.572              | .22      | 1.00                                | 1.00       | .43     |
| FPB                                      | 109.83±1.67     | 109.13±1.79 | 108.54±1.72 | F(2,34)=1.245    | .29      | F(1,17)=0.000  | .98      | F(2,34)=0.367              | .70      | 1.00                                | .22        | 1.00    |
| EDC                                      | 110.42±1.66     | 109.35±1.86 | 109.35±1.67 | F(2,34)=1.557    | .23      | F(1,17)=0.324  | .58      | F(2,34)=0.505              | .61      | .67                                 | <b>.04</b> | 1.00    |
| FDS                                      | 110.80±1.63     | 110.44±1.86 | 109.79±1.61 | F(2,30)=1.207    | .30      | F(1,15)=0.002  | .96      | F(2,30)=0.542              | .59      | 1.00                                | .06        | 1.00    |
| ECR                                      | 110.86±1.52     | 110.37±1.73 | 110.11±1.60 | F(2,30)=0.65     | .53      | F(1,15)=0.112  | .74      | F(2,30)=0.577              | .57      | 1.00                                | .32        | 1.00    |
| FCR                                      | 110.99±1.57     | 110.19±1.78 | 110.15±1.67 | F(2,30)=0.897    | .42      | F(1,15)=0.071  | .79      | F(2,30)=0.281              | .76      | 0.88                                | .32        | 1.00    |
| <b>S6c:</b> Maximum resolution           |                 |             |             |                  |          |                |          |                            |          |                                     |            |         |
| FDI                                      | 108.60±1.71     | 109.26±1.80 | 108.02±1.53 | F(2,36)=1.558    | .23      | F(1,18)=0.177  | .68      | F(2,36)=2.879              | .07      | 1.00                                | .87        | .39     |
| ADM                                      | 108.92±2.15     | 108.98±2.31 | 108.54±2.13 | F(2,24)=0.262    | .77      | F(1,12)=0.366  | .56      | F(2,24)=1.155              | .33      | 1.00                                | 1.00       | 1.00    |
| APB                                      | 108.92±1.70     | 109.51±1.66 | 108.47±1.57 | F(2,34)=0.822    | .45      | F(1,17)=0.048  | .83      | F(2,34)=0.844              | .44      | 1.00                                | 1.00       | .65     |
| FPB                                      | 109.78±1.70     | 109.03±1.80 | 108.59±1.69 | F(2,34)=1.103    | .33      | F(1,17)=0.022  | .88      | F(2,34)=0.137              | .87      | 1.00                                | .26        | 1.00    |
| EDC                                      | 110.22±1.66     | 109.14±1.84 | 109.34±1.62 | F(2,34)=1.411    | .26      | F(1,17)=0.281  | .60      | F(2,34)=0.389              | .68      | .56                                 | .19        | 1.00    |
| FDS                                      | 110.75±1.63     | 110.46±1.86 | 109.96±1.62 | F(2,30)=0.663    | .47      | F(1,15)=0.075  | .79      | F(2,30)=0.959              | .40      | 1.00                                | .21        | 1.00    |
| ECR                                      | 110.76±1.53     | 110.35±1.75 | 109.72±1.52 | F(2,30)=1.242    | .30      | F(1,15)=0.128  | .73      | F(2,30)=1.568              | .23      | 1.00                                | .13        | 1.00    |
| FCR                                      | 110.95±1.54     | 110.19±1.80 | 110.15±1.66 | F(2,30)=0.810    | .42      | F(1,15)=0.138  | .72      | F(2,30)=0.199              | .82      | 1.00                                | .22        | 1.00    |

\* Bold face implies  $p < .05$ .

**Table S7.** Outcome of the two-way ANOVA for the amplitude ( $\mu\text{V}$ ) with factors of *intensity* and *session* when considering the 15,000 mesh resolution and when removing the non-MEP points (M2).\*

|     | (A) at 105% RMT |              |               | intensity     |     | session       |     | intensity × session |     | p-value pairwise comparison |             |             |
|-----|-----------------|--------------|---------------|---------------|-----|---------------|-----|---------------------|-----|-----------------------------|-------------|-------------|
|     | FDI             | EDC          | FCR           | F             | p   | F             | p   | F                   | p   | FDI/<br>EDC                 | FDI/<br>FCR | EDC/<br>FCR |
| FDI | 286.59±38.83    | 365.52±64.20 | 561.15±127.18 | F(2,36)=5.913 | .02 | F(1,18)=0.513 | .48 | F(2,36)=0.520       | .50 | .20                         | .05         | .12         |
| ADM | 183.30±34.68    | 187.29±34.84 | 260.86±56.30  | F(2,30)=5.372 | .03 | F(1,15)=0.064 | .80 | F(2,30)=0.792       | .46 | 1.00                        | .07         | .12         |
| APB | 343.04±84.23    | 299.11±55.85 | 407.51±104.16 | F(2,34)=1.191 | .32 | F(1,17)=1.401 | .25 | F(2,34)=0.645       | .53 | 1.00                        | 1.00        | .44         |
| FPB | 236.32±38.56    | 223.33±38.80 | 278.20±53.89  | F(2,34)=2.053 | .16 | F(1,17)=7.836 | .01 | F(2,34)=2.315       | .11 | 1.00                        | .70         | .25         |
| EDC | 170.86±20.53    | 160.85±12.49 | 210.73±21.32  | F(2,36)=6.413 | .00 | F(1,18)=0.626 | .44 | F(2,36)=0.352       | .71 | 1.00                        | .07         | .01         |
| FDS | 168.04±19.51    | 179.02±23.05 | 222.47±27.17  | F(2,30)=4.572 | .02 | F(1,15)=3.047 | .10 | F(2,30)=1.604       | .22 | 1.00                        | .09         | .07         |
| ECR | 222.46±23.31    | 247.82±38.31 | 276.44±37.80  | F(2,32)=2.586 | .09 | F(1,16)=0.320 | .58 | F(2,32)=0.237       | .72 | .99                         | .07         | .75         |
| FCR | 157.21±13.97    | 174.40±18.41 | 203.78±20.27  | F(2,32)=4.645 | .02 | F(1,16)=0.068 | .80 | F(2,32)=0.420       | .66 | .72                         | .07         | .13         |

\* Bold face implies  $p < .05$ .**Table S8.** The ICC values for measurement are shown in the table for all the muscles. Int 1,2,3 represent the intensities of 105% RMT of FDI, EDC and FCR, respectively. The bold font implies that ICC values are excellent (ICC>0.8).

| FDI              | Int1        | Int2        | Int3        | ADM              | Int1        | Int2        | Int3        | APB              | Int1        | Int2        | Int3        | FPB              | Int1        | Int2        | Int3        |
|------------------|-------------|-------------|-------------|------------------|-------------|-------------|-------------|------------------|-------------|-------------|-------------|------------------|-------------|-------------|-------------|
| Amp              | 0.73        | <b>0.83</b> | 0.34        | Amp              | 0.47        | 0.61        | 0.75        | Amp              | 0.58        | 0.59        | 0.69        | Amp              | 0.53        | <b>0.87</b> | 0.73        |
| Lat              | <b>0.81</b> | <b>0.93</b> | <b>0.87</b> | Lat              | 0.78        | 0.64        | 0.66        | Lat              | 0.64        | 0.42        | 0.72        | Lat              | 0.27        | 0.57        | 0.18        |
| CoG <sub>x</sub> | <b>0.93</b> | <b>0.94</b> | <b>0.94</b> | CoG <sub>x</sub> | <b>0.87</b> | <b>0.87</b> | <b>0.90</b> | CoG <sub>x</sub> | <b>0.88</b> | <b>0.93</b> | <b>0.92</b> | CoG <sub>x</sub> | <b>0.84</b> | <b>0.93</b> | <b>0.94</b> |
| CoG <sub>y</sub> | 0.74        | 0.64        | 0.60        | CoG <sub>y</sub> | 0.57        | 0.62        | 0.58        | CoG <sub>y</sub> | 0.75        | 0.62        | 0.65        | CoG <sub>y</sub> | 0.66        | 0.72        | 0.56        |
| CoG <sub>z</sub> | <b>0.91</b> | <b>0.83</b> | <b>0.82</b> | CoG <sub>z</sub> | <b>0.86</b> | 0.78        | 0.77        | CoG <sub>z</sub> | <b>0.84</b> | 0.79        | 0.79        | CoG <sub>z</sub> | 0.77        | <b>0.87</b> | <b>0.80</b> |
| EDC              | Int1        | Int2        | Int3        | FDS              | Int1        | Int2        | Int3        | ECR              | Int1        | Int2        | Int3        | FCR              | Int1        | Int2        | Int3        |
| Amp              | 0.76        | 0.56        | 0.77        | Amp              | 0.71        | 0.74        | 0.42        | Amp              | <b>0.84</b> | <b>0.94</b> | 0.76        | Amp              | 0.53        | 0.60        | 0.30        |
| Lat              | 0.53        | 0.40        | 0.77        | Lat              | 0.46        | 0.51        | 0.67        | Lat              | 0.69        | <b>0.82</b> | <b>0.84</b> | Lat              | 0.45        | 0.73        | 0.76        |
| CoG <sub>x</sub> | <b>0.94</b> | <b>0.93</b> | <b>0.93</b> | CoG <sub>x</sub> | <b>0.92</b> | <b>0.92</b> | <b>0.91</b> | CoG <sub>x</sub> | <b>0.92</b> | <b>0.92</b> | <b>0.93</b> | CoG <sub>x</sub> | <b>0.91</b> | <b>0.89</b> | <b>0.95</b> |
| CoG <sub>y</sub> | 0.75        | 0.50        | 0.63        | CoG <sub>y</sub> | 0.72        | 0.63        | 0.55        | CoG <sub>y</sub> | 0.75        | 0.70        | 0.64        | CoG <sub>y</sub> | 0.68        | 0.70        | 0.64        |
| CoG <sub>z</sub> | <b>0.91</b> | 0.75        | <b>0.83</b> | CoG <sub>z</sub> | <b>0.85</b> | <b>0.87</b> | 0.77        | CoG <sub>z</sub> | <b>0.91</b> | 0.78        | <b>0.84</b> | CoG <sub>z</sub> | <b>0.82</b> | <b>0.81</b> | <b>0.91</b> |