

### Supplementary Materials:

The following are available online at

- (1) Dancers during T-pose and calibration Video S1

[https://www.youtube.com/watch?v=llyVVT\\_1x\\_4](https://www.youtube.com/watch?v=llyVVT_1x_4)

- (2) Modules and coupling behavior with avatar representation for Dancing condition Video S2

<https://www.youtube.com/watch?v=XbPbUmu8ZZ0>

- (3) Modules and coupling behavior with avatar representation for Non-Dancing condition Video S3

[https://www.youtube.com/watch?v=MJw\\_UHwMWBk](https://www.youtube.com/watch?v=MJw_UHwMWBk)

- (4) Dancers and avatar during a routine Video S4

<https://www.youtube.com/watch?v=pHJ8qYgCg0k>

- (5) Avatars' representation of the NSR bodily maps Dancing condition Video S5

<https://www.youtube.com/watch?v=FY98PxsDIdQ>

- (6) Avatars' representation of the NSR bodily maps Non-Dancing condition Video S6

<https://www.youtube.com/watch?v=2qXg8bRQZ8c>

Table S1: Segments of raw data (some had to be cleaned of occlusions)

| Name             | Dance segment  |               | Length<br>(Frames) | Length<br>(sec) | Link                                                                    |
|------------------|----------------|---------------|--------------------|-----------------|-------------------------------------------------------------------------|
|                  | First<br>Frame | Last<br>Frame |                    |                 |                                                                         |
| <b>Routine1</b>  | 16000          | 19300         | 6710               | 13.33           | <a href="https://youtu.be/KHp5uyawm4Y">https://youtu.be/KHp5uyawm4Y</a> |
| <b>Routine3</b>  | 12890          | 19600         | 6710               | 13.96           | <a href="https://youtu.be/_zbKB_vYOTc">https://youtu.be/_zbKB_vYOTc</a> |
| <b>Routine4</b>  | 6600           | 10800         | 4200               | 8.75            | <a href="https://youtu.be/pK8tTc76lr4">https://youtu.be/pK8tTc76lr4</a> |
| <b>Routine5</b>  | 5500           | 17900         | 12400              | 25.83           | <a href="https://youtu.be/73DsonVp5BU">https://youtu.be/73DsonVp5BU</a> |
| <b>Routine6</b>  | 8000           | 48400         | 40400              | 84.16           | <a href="https://youtu.be/yC0nTQBfQ4">https://youtu.be/yC0nTQBfQ4</a>   |
| <b>Routine7</b>  | 7400           | 22800         | 15400              | 32.08           | <a href="https://youtu.be/wNYZrzy26yU">https://youtu.be/wNYZrzy26yU</a> |
| <b>Routine8</b>  | 25000          | 52500         | 27500              | 57.29           | <a href="https://youtu.be/yKREUOi_mWs">https://youtu.be/yKREUOi_mWs</a> |
| <b>Routine9</b>  | 5200           | 10500         | 5300               | 11.04           | <a href="https://youtu.be/9RVJQYO4nWE">https://youtu.be/9RVJQYO4nWE</a> |
| <b>Routine11</b> | 1200           | 19500         | 7500               | 15.62           | <a href="https://youtu.be/b8kFFscZsaY">https://youtu.be/b8kFFscZsaY</a> |
| <b>Routine12</b> | 9000           | 28000         | 19000              | 39.58           | <a href="https://youtu.be/vFCFyKGIAsQ">https://youtu.be/vFCFyKGIAsQ</a> |
| <b>Routine13</b> | 19000          | 55000         | 36000              | 75.00           | <a href="https://youtu.be/Kpp33rjC7L0">https://youtu.be/Kpp33rjC7L0</a> |
| <b>Routine14</b> | 7500           | 29800         | 22300              | 46.46           | <a href="https://youtu.be/5RhaSvwQL6c">https://youtu.be/5RhaSvwQL6c</a> |
| <b>Routine15</b> | 6800           | 56600         | 49800              | 103.75          | <a href="https://youtu.be/QtC-EdXwDQ4">https://youtu.be/QtC-EdXwDQ4</a> |
| <b>Routine16</b> | 5700           | 24660         | 18960              | 39.50           | <a href="https://youtu.be/YBIFk1me3hs">https://youtu.be/YBIFk1me3hs</a> |
| <b>Routine17</b> | 16100          | 50500         | 34400              | 71.66           | <a href="https://youtu.be/kPILd-m8xHg">https://youtu.be/kPILd-m8xHg</a> |
| <b>Routine18</b> | 11500          | 45400         | 33900              | 70.62           | <a href="https://youtu.be/M-UVxZMgsZI">https://youtu.be/M-UVxZMgsZI</a> |