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ERRATUM

Erratum to: Stable algorithm for event detection in event-driven particle dynamics: logical states

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The original publication of the article contains an error in line number 8 of Algorithm 2. The correct version of the Algorithm 2 is provided in this erratum.

Function BallBallDisjointTime($\mathbf{r}_{ij}$, $\mathbf{v}_{ij}$, σ)
$a \longleftarrow \mathbf{v}_{ij} \cdot \mathbf{v}_{ij}$
$b \longleftarrow \mathbf{r}_{ij} \cdot \mathbf{v}_{ij}$
$c \longleftarrow \mathbf{r}_{ij} \cdot \mathbf{r}_{ij} - \sigma^2$
$arg \longleftarrow b^2 - ac$
if $a = 0$ **then return** $+\infty$
if $arg \leq 0$ **then return** $\max(0, -b/a)$
if $b < 0$ **then**
$\quad |$ **return** $\max(0, (\sqrt{arg} - b)/a)$
else
$\quad |$ **return** $\max(0, -c/(\sqrt{arg} + b))$
end

Algorithm 2: A stable algorithm for detecting when two initially intersecting balls become disjoint. This determines the time until $f_{BB} \geq 0$ and $\dot{f}_{BB} > 0$ or returns $+\infty$ if this does not occur in the future.

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