

Stanford engineer publicly refutes claim by Cambridge that a human Spider-Man could not exist

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Credit: *Journal of the Royal Society Interface*

(Tech Xplore)—Engineer Elliot Hawkes and colleagues at Stanford University have dramatically rejected the claims made recently by zoologist David Labonte, of Cambridge University who in a press release stated that for a human to be able to climb up a wall the way Spider-Man does, he would have to have a size 114 foot. His claims were based on a

study he and colleagues conducted that led to a paper being published in *PNAS*.

Rather than simply refute the claim, Hawkes made a video where he dons adhesive tiles, goes outside and climbs a glass door—he then promptly posted the video on Youtube. To further abase his colleagues across the sea, he added a backing soundtrack by the Stanford Mendicants singing the theme song for the sixties era Spider-Man show.

The in-your-face video rebuttal by the Stanford team came after late night talk show host Steven Colbert announced the sad findings of the Cambridge team on his show. Hawkes references the show in his video and the Cambridge findings and then reminds viewers that he and his team had invented a device for allowing spidey wall climbing almost three years ago.

Labonte's assertions were based on physiology, of course—after studying geckos and other creatures able to walk up walls, the team had found that the size of the sticky portion of the feet was directly proportional to the size of the creature itself, which rather set a limit that ruled out a human being ever being able to pull off the feat, and in the process, as Colbert reported, being "a real buzzkill." But, as Hawkes notes, that excludes the possibility of using a wholly different type of technology to get the job done. As he and his team [explained back in 2014](#), the pads they developed were made from 24 tiles, each glued onto a backing pad and coated with a special adhesive (made of sawtooth-shaped nano fibers) which caused gravitational forces to be evenly distributed across the pads when pressed against a surface, to the extent that they could hold a 200 pound person in place—and then to just as easily unstick when pulled in another direction. Hawkes concludes his video by admonishing Colbert, telling him that yes, "Spider-Man is plausible."

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