



BME PARIS
BioMedical Engineering
MASTER'S PROGRAM

Faster, Higher, Stronger

Open Your Mind Seminar

Friday, Sept 20 2024
1.30 pm – 2.30 pm

Amphitheater BÉZIER
Arts et Métiers Institute of Technology
155 boulevard de l'Hôpital, 75013 Paris



Technology and Sporting Fairness

Recent developments in carbon fiber running-specific prostheses (RSPs) have allowed individuals with lower extremity amputation to regain the functional capability of running. The world records of Men's 100-m sprint and long jump in T62/64 class (bilateral/unilateral transtibial amputation) at Para-athletics are 10.54 s and 8.72 m, respectively (as of September 10, 2024).

This phenomenon exemplifies how para-athletes are highly motivated and work hard as well as how current prostheses have advanced. This raises the following question: How fast would RSPs allow Para-athletes to run in the future? As shown in these records, there are many para-athletes using RSPs who are now able to run faster and achieve longer jumps than able-bodied athletes. However, ironically, this phenomenon has raised a debate in the scientific community regarding the potential advantages or disadvantages of RSPs compared to able-bodied counterparts in athletics.

In this lecture, the history, current world records, and biomechanics of RSPs in athletics will be introduced. Finally, a debate regarding the advantages or disadvantages of RSPs will be presented.

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