Functional Electrical Stimulation Cycling: an Electrifying Sport

Vance BERGERON, Phd, directeur de recherche CNRS, president association ANTS

Ecole Normale Supérieure de Lyon (Univ Lyon, ENS de Lyon, Univ Claude Bernard, CNRS, Laboratoire de Physique, Lyon, France)

Functional Electrical Stimulation (FES) is a method that uses weak electric fields to trigger action potentials, which provoke nerve impulses leading to muscle contractions. When contractions are properly sequenced, the muscle activity can produce movement which has functional outcomes such as; standing, ambulation, grasp-to-reach and other practical movements. This method is particularly useful to actuate paretic muscles in the physically disabled, allowing them to gain autonomy and improve their health through participation in physical activities.

©NicolaPitaro

Cybathlon 2016 FES Bike Race