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(57) Abstract :
This invention discloses a revolutionary system and method for intelligent prosthetic limb control, leveraging a neural interface and artificial intelligence to achieve seamless, natural movements. The system comprises a neural interface that non-invasively captures neural signals from the user's brain. These signals are then processed by an artificial intelligence unit, which interprets the user's intentions and commands. The robotic prosthetic limb, equipped with sensors for real-time feedback and adaptation, executes precise and intuitive movements based on the processed neural signals. The method and system enhance user comfort, safety, and control, adapting to user preferences and environmental factors. A computer-readable medium stores instructions for implementing this method. This intelligent robotic prosthetic limb system offers a transformative solution for individuals with limb loss, significantly improving their mobility and quality of life.

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