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PARTNER SEARCH PMI7-EU-BSGSME-44

01 dicembre 2017

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centro di ricerca tedesco alla ricerca di partner da includere in un loro progetto da presentare nel programma CAPACITIES tematica RICERCA PER LE PMI .
Per maggiori informazioni sulla Ricerca Partner e per conoscere i contatti del proponente, potete consultare il seguente indirizzo web.
http://www.apre.it/formaAssist/scheda.asp?id=1006

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<Reference n.: PMI7-EU-BSGSME-44>
<Deadline: 11/04/2008>
<Programme: Ricerca per le PMI>
<Project Title: A myo-electrical artificial leg for a more natural and intuitive motion>
<Financial Scheme: Ricerca per il beneficio di gruppi specifici (SME)>
<Description:
There are around 40.000 to 60.000 amputations of the lower extremity each year in Germany, far more than amputation of the upper extremity. Nevertheless it is just for carriers of artificial hands possible to exercise arbitrarily movements. Thereby complex over the skin arranged electrodes detect the activities of the remaining muscle groups and control the motion of the artificial limb. For carriers of an artificial leg a random control of knee- and foot-position would be as well a high improvement to their quality of life, especially because of the decreasing danger of falling and the better cross-country-mobility. Unfortunately the technology is not applicable for artificial legs. The walking of the carrier would effect a permanent load alternation in the artificial leg's shank leading, through changing pressure on the sensors, to failures of the signals. Alternatively implantable electrodes cause severe operational interferences and are yet not developed for an extensive use.
The intention of the here described development project is to make it even for carriers of artificial legs possible to control their artificial limb over electrical muscle signals to give them the possibility of a more natural and intuitive motion.

Therefore a non-vasiv system to capture signals is necessary detecting the above specified load alternation and correcting the appearing failures of signals. This is possible through pressure sensors that are implemented together with the electrodes in the artificial leg's shaft.
The EMG-signal-support by pressure sensor data leads to the generation of more reliable data than the control through electrodes.
Furthermore a medically harmless sensor array can be attached to the persons that translates in short real-time operation the bending and stretching signals reproducible in control signals for mechanical artificial limbs. The array gives the possibility to choose relevant signals through the electronic circuits instead of positioning single electrodes over the muscle groups.
The further development of myo-electrical artificial limbs strengthens especially the competitive capability and ensures the competence of SMEs in the prosthetics branch in international comparisons.

<Organisation Type: Centro di Ricerca>
<Partner Sought: The following companies will be addressed and are potential partners:
-midsized suppliers of the prosthetics industry
-midsized special orthoses producers, as top quality palsy orthoses for arms and legs are not covered by the grand companies of orthopedics technic
-midsized producers of sensor components for "intelligent textiles" for the capture of muscle activities during rehabilitation.
They are still looking for SME partners with these expertise:
- a screen process company who can print silver chlorid on piezo foil
- a manufacturer of Piezo foil.
For further information about this Partner Search, including Contact Person's details, please consult this web address:
http://www.apre.it/formaAssist/scheda.asp?id=1006