

**MD.119.**

**Title**

**Fuzzy controlled system for hypothermic brain therapy**

**Authors**

**Victor Cojocaru, Teodor Fedorisin, Rihart Galus**

**Institution**

**„D. Ghitu” Institute of Electronic Engineering and Nanotechnologies**

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**Description  
EN**

Hypothermia for medical therapeutic purposes can be implemented using invasive methods, if the transfer of heat is directed by a catheter inserted into the femoral vein. It is an efficient method; however, it requires specially designed rooms and patient care by a specialist. There are non-invasive methods involving water/ice applications in the required zone. It is a cheap method; however, the blood temperature in the required area is out of control. For these reasons, a mobile device with elements that can form controlled cooling zones with Peltier elements is required. To reduce the intervention time (which is a major factor in brain attacks), these devices should be mobile to be placed in ambulances. With all the advances in contemporary neurology, the problem of the treatment of cerebral stroke is still not satisfactorily solved. Treatment can be successful for most patients only at the initial stages of trauma. A large part of patients is transported to clinics too late, when ischemic trauma is already extended. Therefore, the priority objectives for this device are to equip the doctors from the emergency hospitals with the technology and equipment required to deliver the aid as fast as possible

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