

Journal Special Issue on Control and Intelligent Systems in Humanitarian Technologies

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Journal Special Issue on Control and Intelligent Systems in Humanitarian Technologies

Control and Intelligent Systems

An International Journal published by ACTA press established in 1972

Papers due: 30.07.2008

In an ideal world, all engineering and technology related research should serve humankind and try to solve hard problems facing humanity and therefore should be inherently humanitarian. This call for papers is for the world's first journal special issue on Humanitarian Technologies, focusing on the use of control and intelligent systems. The special issue will also attempt to identify technological challenges in control and intelligent systems in this vast area. In the spirit of this unique special issue that is expected to be circulated widely crossing boundaries between rich and poor nations on earth the publishers have kindly agreed to make all accepted papers freely available electronically.

What constitutes humanitarian technology? Any technology serving humanity to solve urgent humanitarian problems is the simple answer. Control and intelligent systems are extensively applied in these areas. The world witnessed innovative solutions after natural catastrophes, human created destructions and a combination of both in the recent past. The Boxing Day tsunami in 2004 challenged engineering practices ranging from building constructions to early warning systems. It prompted international research collaboration to limit destruction in possible future tsunamis. The destruction of life and resources due to acts of terrorism has created the need for a range of humanitarian technologies. Tens of millions of mines are still active in 80 or more countries and it is believed that a victim of this human made disaster is found every 20 minutes. Demining is a prominent technology that has a strong use of control and intelligent systems. Rehabilitation and research on prostheses and biomechanical systems are other examples of engineering research that uses control and intelligent systems. The wide area of environmental engineering supporting to limit the effects of overuse of resources and control emissions is another important area of humanitarian technology.

Topics and examples that use and extend control and intelligent systems research are:

1. Humanitarian Engineering

Humanitarian demining robotics, biological and biomimetic systems
Sensors and sensor systems in Humanitarian applications
Early warning systems for natural disasters
On-line monitoring of natural disasters
Image processing for humanitarian actions such as location of missing airplanes
Technology Transfer for Humanitarian use

2. Health and Medical applications

Artificial organs and rehabilitation
Genetic and medical research
Emergency disease control and tracking

3. Environmental applications

Environmental sustainability of industries
Water purification and preservation
Environmental Bioengineering

4. Logistics

Disaster management
Supply Chain Management in Humanitarian work
Command and control of multiple organizations in humanitarian missions

5. Arts and Culture

User friendly and culturally sensitive humanitarian product design and deployment
Technological innovation in preserving cultural heritage of indigenous communities

Deadlines:

Paper Submissions: 30.07.2008

Reviews available: 30.09.2008

Publication of the issue: 15.12.2008

Submission Instructions:

The authors directly upload their papers by the deadline using the electronic submission site at <http://www.actapress.com/review> and by choosing the correct journal Control and Intelligent Systems. Please include in the title field of the paper the text "Humanitarian Technology Special Issue" to ensure that the paper is considered for the special issue.

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