

ICT Proposers´ Day Budapest, Jan 22th 2009

Institution/Company (name, address):

Fraunhofer Institute of Biomedical Engineering
Group Biomimetics
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Expertise:

Main topic of the Biomimetics group is the development of compliant structures with mechanical functionality inspired by natural motion systems. The expertise of the group are in the fields of material characterization, modeling of structures and production of prototypes from microscopic scale for tools for minimally invasive surgery to macroscopic scale for orthoses, prostheses and biomechanics. Especially, the group has wide experience in the application, usage and processing of silicone (PDMS).

Topics (project idea, fields of interest):

- Own draft proposal:
Service robot combining mechanical support and emergency call function at home of elderly and / or handicapped persons (STREP @ ICT 2009.7.1 ICT and Aging well).
- But furthermore we are interested in every kind of projects in the fields of
 - Intelligent mechanics
 - Compliant structures (mainly based on silicone)
 - Non-rigid instruments for minimally invasive surgery
 - Novell ideas for orthoses, prostheses, rehabilitation and health care

Key words:

Biomimetics; Bionics; compliant structure; silicone; polydimethylsiloxane PDMS; minimally invasive surgery; Orthosis; Prosthesis; Robots for health care