

Movement in Collaborative Robotic Environments Based on the Fish Shoal Emergent Patterns

Cioarga, Razvan; Micea, Mihai V; Cretu, Vladimir; Petriu, Emil M. **Sensors & Transducers, suppl. Special Issue 5** (Mar 2009): 18-36.

Abstract (summary)

Robotic collectives are used for the efficient achievement of complex tasks. There is a significant increase in the interest for emergent, collaborative robotics as a viable alternative to the more centralized classic approach as the dimensions, energy consumption and especially price are becoming required constraints. This paper describes a nature inspired algorithm intended for the movement and communication of such robotic collectives. As a case study, the implementation of the emergent algorithm on a system consisting of LEGO Mindstorm Robots is further discussed along with the most interesting experimental results. [PUBLICATION ABSTRACT]

Full Text

Indexing (details) [Cite](#)

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|--------------------------------|--|
| Subject | Behavior; Studies; Algorithms; Space exploration; Service industries; Information processing; Image processing systems; Energy consumption; Embedded systems |
| Title | Movement in Collaborative Robotic Environments Based on the Fish Shoal Emergent Patterns |
| Author | Cioarga, Razvan; Micea, Mihai V; Cretu, Vladimir; Petriu, Emil M |
| Publication title | Sensors & Transducers |
| Volume | 5 |
| Supplement | Special Issue |
| Pages | 18-36 |
| Number of pages | 19 |
| Publication year | 2009 |
| Publication date | Mar 2009 |
| Year | 2009 |
| Publisher | International Frequency Sensor Association |
| Place of publication | Toronto |
| Country of publication | Spain |
| Journal subject | Engineering--Engineering Mechanics And Materials, Computers |
| ISSN | 17265479 |
| Source type | Scholarly Journals |
| Language of publication | English |
| Document type | Feature |
| Document feature | Diagrams; Equations; Photographs; Tables; References |
| ProQuest document ID | 208172986 |
| Document URL | http://search.proquest.com/docview/208172986?accountid=29398 |
| Copyright | Copyright International Frequency Sensor Association Mar 2009 |
| Last updated | 2012-04-05 |
| Database | ProQuest Central |

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