

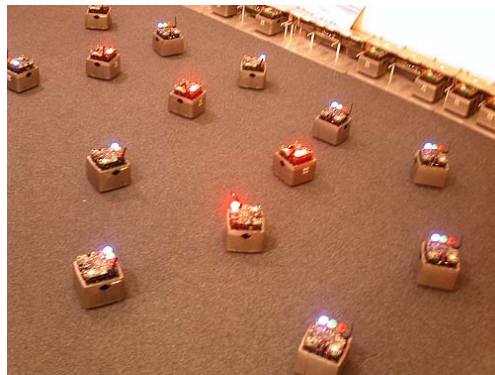
Cooperative Control of Multi-robot Network Systems

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Basic Research Method Used

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$$\dot{\mathbf{x}}(t) = f(\mathbf{x}(t)) + G\mathbf{x}(t)$$

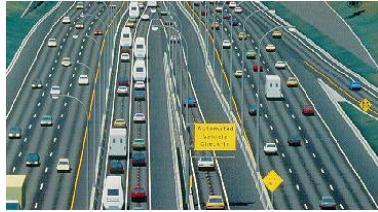
- Nonlinear system theory
- Graph theory

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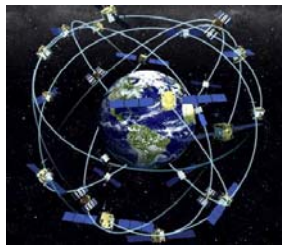
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Research Results and Possible Applications

- civil and military

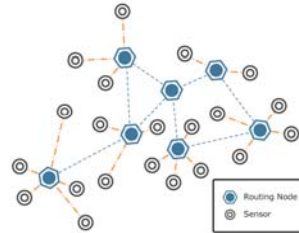


vehicles in a automated highway system

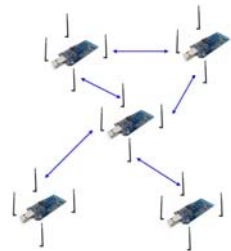


satellite network

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sensor network for surveillance



wireless mobile devices communication

Advantages of this Research

- 1. distributed and scalable;
- 2. stable for the agents with nonlinear dynamics;
- 3. able to adopt various communication topologies according to the network situation;
- 4. automatically maintain the connectivity of the network

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