

SWARM-II Related Formations and Sensor Network Publications

(19 March 2009)

Abstract: This is a comprehensive list of publications by SWARM-II participants since November 2008 (in terms of initial submission date) dealing with any aspect of formations and sensor networks. They are categorized in terms of the SWARM-II topic to which each publication is related the most.

Topic 1: Network Functional Health, Robustness and Capabilities

A. Articles/notes/communications in refereed journals:

1. C. Yu, B. Fidan, B.D.O. Anderson, "Information architecture for merging of rigid formations", submitted to *IET Control Theory & Applications*.
2. X. Ta, G. Mao and B.D.O. Anderson, "On the Connectivity of Wireless Multi-hop Networks with Arbitrary Wireless Channel Models," to appear in *IEEE Communications Letters*.
3. X. Ta, G. Mao and B.D.O. Anderson, "On the giant component Wireless Multi-hop Networks in the Presence of Shadowing," to appear in *IEEE Trans on Vehicular Technology*.

B. Refereed conference papers

4. B. Fidan, J.M. Hendrickx and B.D.O. Anderson, "Edge contraction based maintenance of rigidity in multi-agent formations during agent loss," submitted to *17th Mediterranean Conference on Control and Automation*, Thessaloniki, Greece, June 2009.
5. Cao, M., Yu, C. and Anderson, B.D.O., "Coordination with the leader in a robotic team without active communication," in *Proc. 17th Mediterranean Conference on Control and Automation*, Thessaloniki, Greece, June 2009.
6. X. Ta, G. Mao and B.D.O. Anderson, "Phase Transition Width of Connectivity of Wireless Multi-hop Networks in Shadowing Environment," to appear in *IEEE Globecom*, November 2009.
7. Ong, W., Yu, C. and Anderson, B.D.O., "Splitting rigid formations," to appear in *Proc. IEEE Conference on Decision and Control*, Shanghai, China, December 2009.
8. Summers, T., Yu, C., Anderson, B.D.O. and Dasgupta, S., "Formation shape control: global asymptotic stability of a four-agent formation," to appear in *Proc. IEEE Conference on Decision and Control*, Shanghai, China, December 2009.
9. Summers, T., Yu, C., Anderson, B.D.O. and Dasgupta, S., "Control of coleader formations in the plane," to appear in *Proc. IEEE Conference on Decision and Control*, Shanghai, China, December 2009.
10. X. Hou, C. Yu, and T. Summers, "A virtual framework of robotic SWARM testbed," in *Proc. 21th Chinese Conference on Decision and Control*, Guilin, China, Jun 2009.

Topic 2: Development of Discrete Probability Density Maps for Multiple Emitter Representation

Topic 3: Passive Deinterleaving for Localization

11. I. S.P. Drake, B.D.O. Anderson & C. Yu, Causal Association of Electromagnetic Signals Using the Cayley Menger Determinant, *Applied Physics Letters*, (Vol.95, No. 3) appeared online. DOI: 10.1063/1.3180815.

Topic 4: Development of General Tools for Cooperative Target Localization and Self-Localization and Determination of Localization Performance

A. Refereed conference papers

12. I. Shames, P.T. Bibalan, B. Fidan, and B.D.O. Anderson, "Polynomial methods in noisy network localization," submitted to *17th Mediterranean Conference on Control and Automation*, Thessaloniki, Greece, June 2009.
13. B. Fidan, S.P. Drake, B.D.O. Anderson, G. Mao, and A.A. Kannan, "Collinearity problems in passive target localization using direction finding sensors," submitted to *Proc. 5th Int. Conf. on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP)*, Melbourne, Australia, December 2009.
14. Huang, B., Yu, C., and Anderson, B.D.O., "Error Propagation in Sensor Network Localization with Regular Topologies," to appear in *Proc. IEEE Globecom*, November 2009.
15. Huang, B., Yu, C., and Anderson, B.D.O., "Analyzing error propagation in range-based multihop sensor localization," to appear in *Proc. IEEE Conference on Decision and Control*, Shanghai, China, December 2009.
16. Y. Ji, C. Yu, & B.D.O. Anderson, Bias Correction in Localization Algorithms, to appear in *Proc. IEEE GLOBECOM*, Honolulu, Hawaii, Nov 2009.
17. S. Drake, B. Fidan, et. al., "Optimal Geolocation Coverage for UAVs with DF Payloads," in preparation.