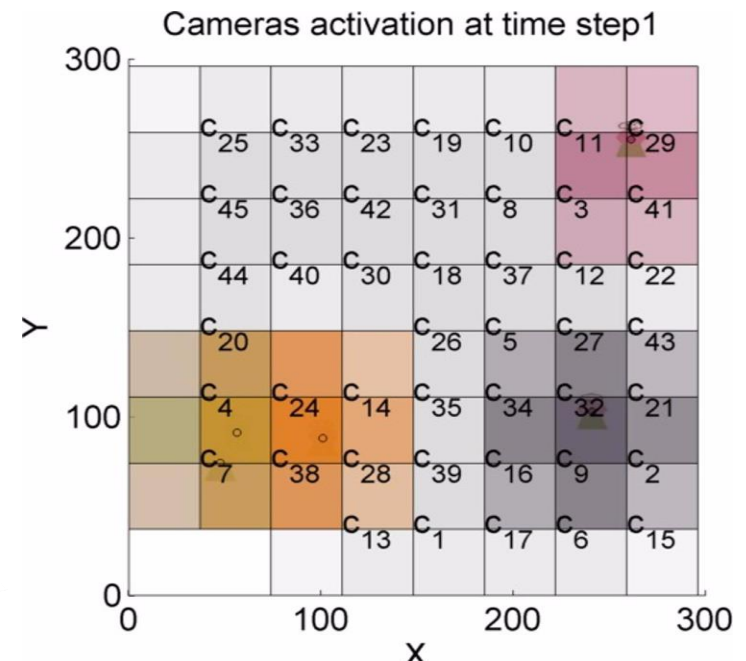
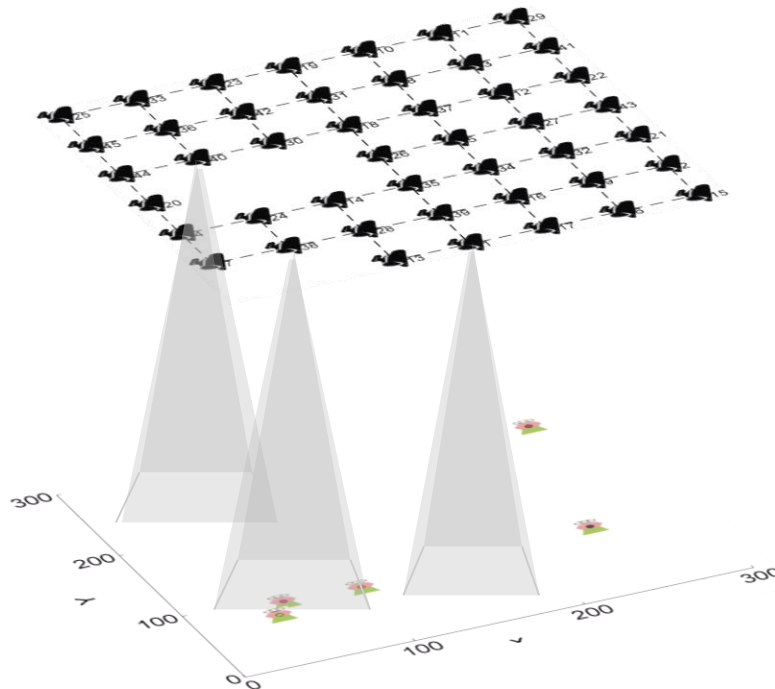


# Coalition formation for distributed tracking in wireless camera networks

Yiming Wang

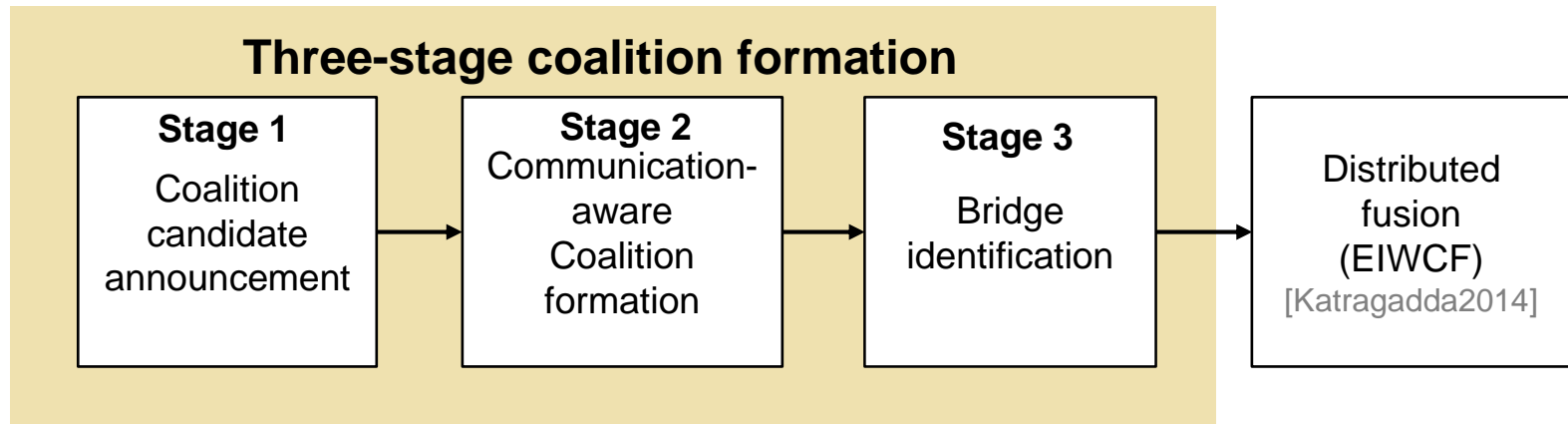


- Multi-target tracking
- Wireless camera network
- Camera grouping under limited bandwidth



# Three-stage coalition formation

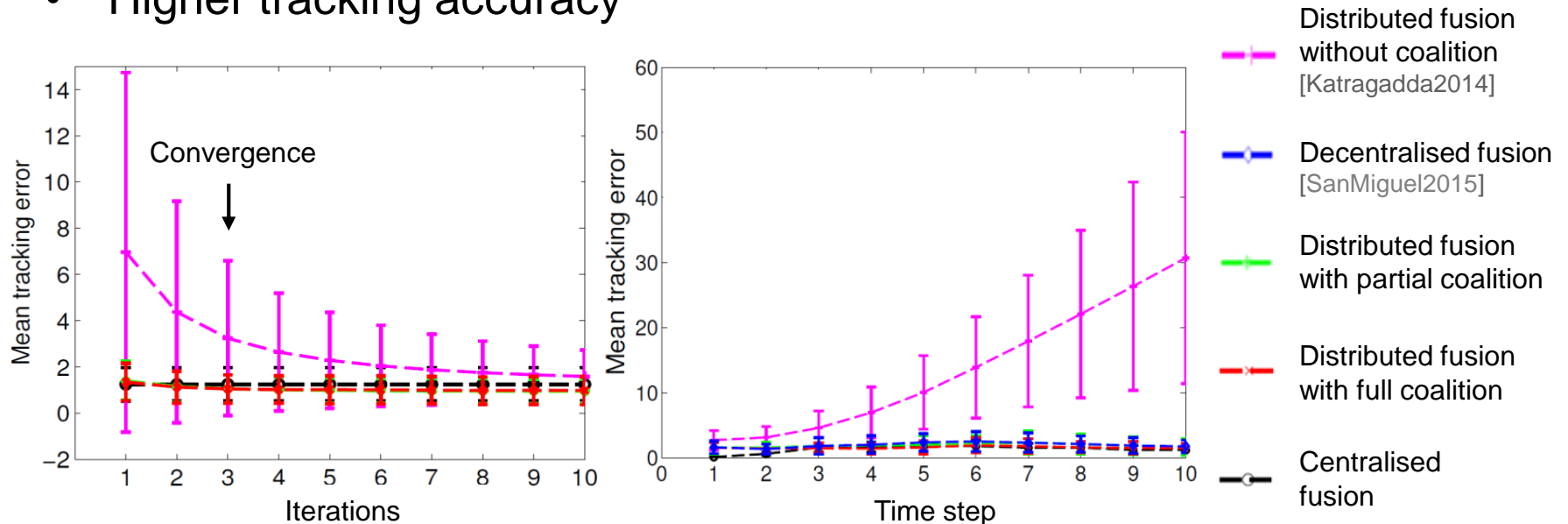
- Announce as candidate cameras if have target-related information
- Refine the coalition based on the communication performance
- Identify non-candidate cameras to form a connected group



S. Katragadda, J. SanMiguel, and A. Cavallaro. Consensus protocols for distributed tracking in wireless camera networks. In Proc. of Information Fusion, pages 1–8, Jul 2014.

# Results and conclusion

- Quicker convergence speed
- Higher tracking accuracy



[SanMiguel2015] J. SanMiguel and A. Cavallaro. Cost-aware coalitions for collaborative tracking in resource-constrained camera networks. IEEE Sensors J., 15(5):2657–2668, Nov 2015.

[Katragadda2014] S. Katragadda, J. SanMiguel, and A. Cavallaro. Consensus protocols for distributed tracking in wireless camera networks. In Proc. of Information Fusion, pages 1–8, Jul 2014.

## Coalition formation for distributed multi-target tracking using information consensus

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