The 1st International Symposium on Formation Control & Distributed Coordination

September 12-17, 2016, GIST, Gwangju, Korea

September 12 (114 Mechanical Eng. Building)

<u>10:00 – 12:00 - Session 1</u>

10:00-10:50 Zhiyong Sun (Australian National University) - Formation feasibility and motion generation for networked heterogeneous systems, with application to coordination control of constant-speed agents

11:00-11:50 Brian D O Anderson (Australian National University, Data61-CSIRO) - A problem of real algebraic geometry and localization

<u>12:00-2:00: Lunch at Student Union Building (2nd Floor)</u>

<u>2:00-4:00 – Session 2</u>

2:00-2:20 Myoung-Chul Park (GIST) - Distance-based Control of K4 Formation with Almost Global Convergence

2:20-2:40 You-Bin Bae (GIST) - Decentralized Minimally Rigidity Maintenance Control using range measurements for Multi-Agent Systems

2:40-3:00 Young-Hun John (GIST) - Weight Distribution of a position-fixed rigid graph using Distributed optimization

3:00-3:20 Byung-Hun Lee (GIST) - Distributed formation control via global orientation estimation and alignment

3:20-3:40 Pham Hoang Viet (GIST) - Gradient control laws for generalized formations and some unsolved problems

3:40-4:00 Mohamed Ali Belabbas (University of Illinois at Urbana–Champaign) - Groups and cluster consensus over graphs

<u>Welcome Party (5:30 –9:00 pm) – All DCASL members + All guests</u>

September 13 (114 Mechanical Eng. Building)

<u>10:00 – 12:00 - Session 3</u>

10:00-10:50 Hyungbo Shim (Seoul National University) - Averaged dynamics for synchronization of heterogeneous agents and its applications

11:00-11:50 Mohamed Ali Belabbas (University of Illinois at Urbana–Champaign) - On formation control with localized objectives

<u>2:00-4:00 – Session 4</u>

2:20-2:40 Hoang Huu Phuong (GIST) - Distributed Coordination in AC-MT HVDC Transmission Systems

2:40-3:00 Minh Hoang Trinh (GIST) - The rigidity indices problems and physical meaning of eigenvalues/eigenvectors

3:00-3:20 Young-Hun Lim (GIST) - PI consensus-based motor synchronization with input saturation

3:20-3:40 Zhiyong Sun - Multi-agent coordination in nonlinear spaces

3:40-4:00 Hyo-Sung Ahn (GIST) – Distributed coordination for optimal energy distribution in smart grid networks with batteries

September 14 (114 Mechanical Eng. Building)

<u>10:00 – 12:00 - Session 5: On-going quadcopter research in DCASL</u>

Jae-Gyeong/ Gwi-Han/ Seong-Ho/ Kyu-Hwan

Real Live Demonstration (Performance show of a group of quadcopters)

September 16

9:30-10:30 AM Brian D O Anderson (Australian National University, Data61-CSIRO) – Localization of airborne vehicles in a GPS-denied environment

September 16: Excursion – Gangcheonsan