



Tuesday **November 19, 2019** at 14:30

Politecnico di Torino, DISMA, Aula Buzano (third floor)

Mengbin YE

Postdoctoral Fellow at University of Groningen

Some Recent Advances in Modelling and Analysis of Opinion Dynamics on Social Networks

Prof. Giacomo Como introduces the seminar.

Abstract

Social network analysis is a rich and exciting area of interdisciplinary research that has been tackled by many different scientific communities. Opinion dynamics is a popular topic which uses mathematical models to describe how opinions change as individuals interact over a network. Two recent developments are presented.

In the first part, a novel model is proposed to describe how an individual's private and expressed opinions (which are not the same in general) evolve under pressure to conform to the group norm. We establish sufficient conditions for a discrepancy to arise between an individual's private and expressed opinions on general networks. We then use the model to explore Asch's conformity experiments and the phenomenon of pluralistic ignorance. In the second part, we consider a model that captures a group of individuals simultaneously discussing logically interdependent topics. We show that when heterogeneity exists in the way individuals view the logical interdependencies, disagreement can arise because of the logical interdependence structure, even though all individuals are trying to reach a consensus of opinions.

Biography

Mengbin Ye was born in Guangzhou, China. He received the B.E. degree (with First Class Honours) in mechanical engineering from the University of Auckland, Auckland, New Zealand in 2013, and the Ph.D. degree in engineering at the Australian National University, Canberra, Australia in 2018. He is currently a postdoctoral researcher with the Faculty of Science and Engineering, University of Groningen, Netherlands.

He has been awarded the 2018 Springer PhD Thesis Prize, and was Highly Commended in the Best Student Paper Award at the 2016 Australian Control Conference. His current research interests include opinion dynamics and decision-making networks, epidemic network modelling, consensus and synchronisation of multi-agent systems, and localisation using bearing measurements.

Save the date for the next event: *November 21, 2019*

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