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Titolo	Aging, neuropsychology, and cognition
Pubbl/distr/stampa	Philadelphia, : Taylor and Francis
ISSN	1744-4128
Soggetti	Cognitive neuroscience Cognition in old age Older people - Psychology Neuropsychology Aging - psychology Cognition Cognition Disorders Geriatrics Periodical Periodicals.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Periodico
Note generali	Refereed/Peer-reviewed

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Autore	Ye Mengbin
Titolo	Opinion Dynamics and the Evolution of Social Power in Social Networks / / by Mengbin Ye
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-10606-3
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XXIII, 209 p. 53 illus., 51 illus. in color.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	629.8 302.3015118
Soggetti	Automatic control Mass media Communication Computational complexity Graph theory Control and Systems Theory Media Sociology Complexity Graph Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Preliminaries -- A Novel Model for Opinion Dynamics Under Pressure to Conform -- The EPO Model’s Connections with Social Psychology Concepts -- Evolution of Social Power in Networks with Constant Topology -- Dynamic Social Networks: Exponential Forgetting of Perceived Social Power -- Modication of Social Dominance in Autocratic Networks -- Nonlinear Mapping Convergence and Application to Social Power Analysis -- Continuous-Time Opinion Dynamics with Interdependent Topics -- Conclusions and Future Work.
Sommario/riassunto	This book uses rigorous mathematical analysis to advance opinion dynamics models for social networks in three major directions. First, a novel model is proposed to capture how a discrepancy between an individual’s private and expressed opinions can develop due to social

pressures that arise in group situations or through extremists deliberately shaping public opinion. Detailed theoretical analysis of the final opinion distribution is followed by use of the model to study Asch' s seminal experiments on conformity, and the phenomenon of pluralistic ignorance. Second, the DeGroot-Friedkin model for evolution of an individual's social power (self-confidence) is developed in a number of directions. The key result establishes that an individual's initial social power is forgotten exponentially fast, even when the network changes over time; eventually, an individual's social power depends only on the (changing) network structure. Last, a model for the simultaneous discussion of multiple logically interdependent topics is proposed. To ensure that a consensus across the opinions of all individuals is achieved, it turns out that the interpersonal interactions must be weaker than an individual's introspective cognitive process for establishing logical consistency among the topics. Otherwise, the individual may experience cognitive overload and the opinion system becomes unstable. Conclusions of interest to control engineers, social scientists, and researchers from other relevant disciplines are discussed throughout the thesis with support from both social science and control literature.