

[P18] Correlated multiplexity in co-evolving multiplex networks*Jung Yeol Kim, Korea University*

Nodes in a complex networked system often engage in multiple types of interactions among them; they form a multiplex network with multiple layers that can be interdependent and co-evolve. In many real-world complex systems, such multiple network layers are not randomly coupled but correlated. Such a correlated multiplexity can imprint nontrivial structural correlations in the multiplex network, which in turn can impact the dynamical processes on it. Here, we introduce an evolution model of co-evolving multiplex networks by generalizing the well-known Barabási-Albert-type model, to show how the co-evolution of network layers can induce and modulate the degree of correlated multiplexity.