

Documents

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Intelligent routing in graded cognitive networks

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Abstract

In recent years, it has become increasingly difficult to operate large networks for performing diagnostics and preventing cascading failures. Hence, there is a requirement for networks to think and learn in a nondeterministic way. This is where cognitive approach plays a vital role to overcome the shortcomings. Cognition is the ability to effectively self-regulate, learn, and evolve. Cognitive network (CN) aspects have become crucial when a system is subject to a complex and varied set of stimuli, which is certainly the case of fast-evolving Internet of Things. CNs require each node to cooperate with the data distribution process and make use of information about the network scenario. To get CN working, there is a need to rethink on the architecture and protocols of the components in the global communication infrastructure. A prominent research direction looks into how to mimic nature-like mechanisms to realize smarter communication networks, which in turn can make sense of the hidden communication patterns and do the self-regulation of the topology. © 2015 by Taylor & Francis Group, LLC.

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