

Analysis Model of Communication Network under Complexity

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Abstract

Communication among members in an organization is an important research aspect in organizational processes. Therefore, our research is based on communication networks and a series of studies is developed by applying the information theory and the Markov chain to construct quantitative models that can grasp information distribution for infinitely repeated communication in an organization. However, the constructed models mainly focus on the aspect of randomness in information processing, and do not sufficiently deal with the concept of fuzziness. Dual aspects of ambiguity exist for both randomness and fuzziness in human information processing complexity, which cannot be overlooked when discussing organizational communication.

This study considers a memory communication channel, and proposes an estimation model for both randomness and fuzziness to analyze the prior information allocation ratio to each member in two different organizations. Additionally, we conduct positive analyses on a communication network with isomorphic and non-isomorphic structures, and suggest an inter-organizational communication and the role among members of the organization.

Keywords

randomness, fuzziness, prior information, isomorphic structure, non-isomorphic structure

Biographies

Nyunho Jung is currently professor in Faculty of Regional Management, The University of Fukuchiyama, Japan. He earned Master Degree of Commerce and Doctor of Commerce from Meiji University. His research interests are mainly focused on Innovation Management, Human Resource Management, Management Quality Science and Behavior Science. He is member of Japan Association for Management Systems, Japan Industrial Management Association, Association for the Study of Industrial Management (Japan), Japan Academy of Management Behaviors, and Japan Society of Business Ethics.

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