

**Agent field sensor model of citation
networks using cognitive agent-based
computing**

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Abstract

Research is an organized way to investigate existing studies to form the new facts. Citation network is one way to understand the complexity of research. Previous work has demonstrated how Temporal Cognitive Level Networks (TCLN) framework is developed in 2D by using h-index to visualize the cognitive growth of authors in citation networks. There do not exist any model which provides the visualization of the authors' impact and interest to a specific field by using three different indexes. We improve previous Temporal Cognitive Level Networks (TCLN) framework to include three indexes (h, g and hc) and visualize the authors' impact and interest to a specific field in 3D. In the validation case study, we take data from google scholar by using the tool Publish or Perish and prove validation. The result shows that 3D models give a better visualization of the impact of the authors than 2D. We also present updated framework to compile the new updated network models.

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