

Analysis of research papers pertaining to cellular automata: Forest fires spread modelling using cellular automata approach

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Abstract –Analysis of research paper will present how we can predict *forest fire spread* using cellular automata. The analysis plays an essential role in designing quick risk management and implementing effective suppression policies. As a preferable modeling approach, the cellular automaton (CA) has been used to understand the complex mechanisms of fire spreading.

Keywords –

Forest fire: A wildfire or wild land fire is a fire in an area of combustible vegetation that occurs in the countryside or rural area.

Cellular automata: A cellular automaton is a collection of "colored" cells on a grid of specified shape that evolves through a number of discrete time steps according to a set of rules based on the states of neighboring cells. The rules are then applied iteratively for as many time steps as desired.

References-

<http://www.sciencedirect.com/science/article/pii/S0307904X06000916>

<http://www.sciencedirect.com/science/article/pii/S0304380016303064>

<http://www.sciencedirect.com/science/article/pii/S0304380096019424>

https://en.wikipedia.org/wiki/Cellular_automaton

<http://www.wolframscience.com/>

<http://natureofcode.com/>

Forest Fire Modeling Using Cellular Automata and Percolation Threshold, Analysis Sang Il Pak and Tomohisa Hayakawa, Department of Mechanical and Environmental InformaticsTokyo Institute of Technology, Tokyo 152-8552, JAPAN

A simulation software of forest fires based on two-level cellular automata, Giorgio Guariso & Matteo Baracani, Politecnico di Milano, Milan, Italy

Stephen Wolfram's A New Kind Of Science