

# International Journal of Scientific Development and Research

## IJSDR.ORG | ISSN : 2455-2631



*An International Open Access, Peer-reviewed, Refereed Journal*

The Board of  
International Journal of Scientific Development and Research

Is hereby awarding certificate to

**Ramakanth Reddy Malladi**

In recognition of the publication of the paper entitled

**Black hole detection using improved Hierarchical Detection algorithm in MANET**

Published in Volume 4 Issue 7, July-2019, | Impact Factor: 9.15 by Google Scholar

Co-Authors - Dr.A.Govardhan



Paper ID - IJSDR1907054  
Registration ID - 190827

  
Editor-in Chief

An International Scholarly, Open Access, Multi-disciplinary, Monthly, Indexing in all Major Database & Metadata, Citation Generator

**IJSDR - International Journal of Scientific Development and Research | ESTD: 2016**

[www.ijedr.org](http://www.ijedr.org) | [editor@ijedr.org](mailto:editor@ijedr.org)

Certificate of Publication

IJSDR | ISSN : 2455-2631

# International Journal of Scientific Development and Research

## IJSDR.ORG | ISSN : 2455-2631



*An International Open Access, Peer-reviewed, Refereed Journal*

The Board of  
International Journal of Scientific Development and Research

Is hereby awarding certificate to

**Dr.A.Govardhan**

In recognition of the publication of the paper entitled  
**Black hole detection using improved Hierarchical Detection algorithm in MANET**  
Published in Volume 4 Issue 7, July-2019, | Impact Factor: 9.15 by Google Scholar

Co-Authors - Ramakanth Reddy Malladi



Paper ID - IJSDR1907054  
Registration ID - 190827

  
Editor-In Chief

An International Scholarly, Open Access, Multi-disciplinary, Monthly, Indexing in all Major Database & Metadata, Citation Generator

**IJSDR - International Journal of Scientific Development and Research | ESTD: 2016**

[www.ijedr.org](http://www.ijedr.org) | [editor@ijedr.org](mailto:editor@ijedr.org)

Certificate of Publication

IJSDR | ISSN : 2455-2631