

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202211002933 A

(19) INDIA

(22) Date of filing of Application :18/01/2022

(43) Publication Date : 28/01/2022

(54) Title of the invention : MULTICLASS ELM BASED SMART TRUSTWORTHY IDS FOR MANETS

(51) International classification :H04L0029060000, G06K0009620000, G06F0021570000, G06F0021500000, G06N0003080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

1)Dr. Devendra Singh

Address of Applicant :Associate Professor, Department of Computer Science & Engineering, SCS & A, IFTM University, Moradabad, Uttar Pradesh - 244102 -----

2)Dr. Abhishek Kumar Mishra

3)Dr. Rakesh Kumar Yadav

4)Mr. Harpreet Singh Chawla

5)Abhay Katiyar

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)Dr. Devendra Singh

Address of Applicant :Associate Professor, Department of Computer Science & Engineering, SCS & A, IFTM University, Moradabad, Uttar Pradesh - 244102 -----

2)Dr. Abhishek Kumar Mishra

Address of Applicant :Associate Professor, Department of Computer Science & Engineering , SCS & A, IFTM University, Moradabad, Uttar Pradesh - 244102 -----

3)Dr. Rakesh Kumar Yadav

Address of Applicant :Assistant Professor, Department of Computer Science & Engineering , SCS & A, IFTM University, Moradabad, Uttar Pradesh - 244102 -----

4)Mr. Harpreet Singh Chawla

Address of Applicant :Assistant Professor, Department of Computer Science & Engineering , SCS & A, IFTM University, Moradabad, Uttar Pradesh - 244102 -----

5)Abhay Katiyar

Address of Applicant :Assistant Professor, Department of Computer Science & Engineering, Jabalpur Engineering College, Gokulpur, Jabalpur, Madhya Pradesh - 482011 -----

(57) Abstract :

The present invention relates to the dynamic nature of MANET makes it susceptible to several security breaches. The proposed work is organized into several phases such as feature selection, trust degree computation, classification and decision making. Intelligent agents are employed to handle all the aforementioned phases. Features of KDD cup'99 is reduced from 41 to 17, so as to minimize the training time and to improve the accuracy of the system. The trust degree is computed by the combination of packet delivery ratio, behaviour and available energy of a node. Extreme Learning Machine (ELM) is employed as the classifier, so as to categorize nodes into trustworthy, partially trustworthy and malicious. Finally, the process of decision making takes place and a decision is made, whether or not to punish the node. The performance of the proposed work is tested and the significance of trust level, feature reduction and the efficiency of classifier are substantiated, through the experimental results.

No. of Pages : 26 No. of Claims : 2