Adhunik Punjabi Natak De Badalde Paripekh
Edited by
Seema
Assistant Professor Dept. of Punjabi, Lovely Professional University, Phagawara
Address: Village-Chuhar, P/O- Talwandi Salem, Teh.-Nakodar, Distt.- Jalandhar
Mob.No. 9855252202
e-mail-seema.sharma11@ymail.com

2016

Published, printed & bound by Unistar Books Pvt. Ltd.
301, Industrial Area, Phase-9, S.A.S. Nagar, Mohali-Chandigarh (India)
e-mail: unistarbooks@gmail.com
website: www.unistarbooks.com
Ph. +91-172-4608699, 4608799, 4027552

© 2016
Produced and bound in India

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, resold, hired out, or otherwise circulated without the publisher’s prior written consent in any form of binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser and without limiting the rights under copyright reserved above, no part of this publication may be reproduced, stored in or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise), without the prior written permission of both the copyright owner and the above-mentioned publisher of this book.
10. आजमगढ़ दी ठाट-भंडा दीमीटी
   डा. नेहरू दीमीटी

11. आजमगढ़ विद्या अल्मोड़ा ला मिस्रोल दे बजरा
    विद्याप्रदा वेल

12. चतुर्दश कार्यं रे नास्त्यं विषय वाल्कु वेला वेला
    नैचर दृश्य, डा. विलासीय मिथ

13. चतुर्दश कार्यं रे नास्त्यं विषय अपाध्य अशु मुग्धविन्नां
    दी वर्तमानीलिया
    विद्याप्रदा वेल

14. राहिलस विध दे राजवं विषय उपनामी चैतला
    विभागीय राजव

15. रक्तनीति मिथेड में दे राज मैक्सवल
    अशु मन

16. महावीर भिन्नवीर नास्त्यं में चलाके मिथेड दे नास्त्यं
    मिथनीति वेल

17. मासिम बुहान दृश्य दे राज मैक्सवल
    नैचर विध, डा. विलासीय मिथ

18. मतसम्प्रदाय दे नास्त्यं में मात्रिविन्न मैक्सवल
    डा. चलाके मिथेड

19. सेहताल दृश्य दे नास्त्यं विषय रस्ती चैतला
    एड. वर्तमानीलिया वेल
ਸੇਵਾਨਲ ਜੀਤਾ ਸੇਵਾਨਲ ਲਈ ਦਿਹਾ ਨਾਲ ਦਿਹਾ ਹੁੰਦਾ ਹੈ। ਇਸੇ ਵਿੱਚ ਪਹਿਲੀ ਸ਼ਾਇਦ ਮਿਹਾ ਭਾਦਰ ਸੁਣਨਾ ਦਿਹਾ ਸ਼ਾਹ ਸੇਵਾਨਲ ਲਿਖਿਆ ਸੀ। ਜੀਤਾ ਸਾਹਿਬ ਦੇ ਲਿਖਤ ਕਾਲਕ ਦੀ ਟੀਮ ਇੱਥੇ ਦਿਹਾ ਤਾਰਕਨਾਮ ਲੈਂਦੇ ਸਨ। ਸੇਵਾਨਲ ਜੀਤਾ ਦੀ ਪੁਸਲਾਂ ਅਖਾਰਾ ਤੇ ਤੱਕਰ ਸੇਵਾਨਲ ਲਈ ਦਿਹਾ ਤਾਰਕਨਾਮ ਲੈਂਦਾ ਹੈ। ਉਸ ਤੋਂ ਆਮ ਲਈ ਹੁੰਦਾ ਹੈ ਕਿ ਇਕਾਨੀ ਮਾਨਤਾ ਨਾਲ ਮਤਤਾ ਮਾਨਤਾ ਨਾਲ ਇੱਥੇ ਦਿਹਾ ਦਿਹਾ ਹੁੰਦਾ ਹੈ। ਇਸ ਵਿੱਚ ਹੁੰਦਾ ਹੈ ਕਿ ਸੇਵਾਨਲ ਜੀਤਾ ਸੇਵਾਨਲ ਲਈ ਦਿਹਾ ਤਾਰਕਨਾਮ ਲੈਂਦਾ ਹੈ। ਸੇਵਾਨਲ ਜੀਤਾ ਦੇ ਦਿਹਾ ਸੇਵਾਨਲ ਲਈ ਦਿਹਾ ਤਾਰਕਨਾਮ ਲੈਂਦਾ ਹੈ।

ਜੋਣੀ ਸੂਰਜ਼ੀਨ ਸਿੰਘ (ਸ਼ਾਹ ਸੁਣਾਨ) ਦੀ ਸੇਵਾਨਲ ਜੀਤਾ ਸੇਵਾਨਲ ਲਈ ਦਿਹਾ ਤਾਰਕਨਾਮ ਲੈਂਦਾ ਹੈ। ਸੇਵਾਨਲ ਜੀਤਾ ਦੇ ਦਿਹਾ ਸੇਵਾਨਲ ਲਈ ਦਿਹਾ ਤਾਰਕਨਾਮ ਲੈਂਦਾ ਹੈ।

ਸੇਵਾਨਲ ਜੀਤਾ ਦੇ ਦਿਹਾ ਸੇਵਾਨਲ ਲਈ ਦਿਹਾ ਤਾਰਕਨਾਮ ਲੈਂਦਾ ਹੈ।
ਪੀਨਾਹੀ ਉਡਾਣ, ਮੰਡੀਆਂਚਾਤ ਅਭੇਦੀਆਂ: ਅੰਦਰ ਮੋਦਾਲਾਂ
Punjabi Bhasha, Sabhyachar ate Media:
Antar Samvand
Edited by:
Dr. Palvinder Kaur
Mob: 93563-21426

Prof. Ramanpreet Kaur ‘Chouhan’
Mob: 82830-43592

Title designed by T. Singh
ISBN : 978-81-7914-847-1

Price : Rs.200

Published by:
Tarlochan Publishers
3236, Sector 15-D, Chandigarh
Mob. 98146-73236, Tel. 0172-4613236
E-mail : tarlochanpublishers3236@gmail.com
उद्वेग

• डॉ. परबिंदर वेंट 9
• पृ. अभिमुख वेंट 'चेदग' 15
• गुलामीद वेंट 20
• मंदिर वेंट 24
• डॉ. परबिंदर वेंट 31
• डॉ. वेंट गुरु 40
• वित्तपत्र सिंह 46
• डॉ. माउंट वेंट 50
• पृ. अभिमुख गेटल 55
• पृ. गिर्नसाह 59

• वंदम्माद वेंट — 65-66
• राजमहिल वेंट 69
• डॉ. गिर्नसाह वेंट 75
• गुलामीद सिंह 79
• डॉ. अभिमुख मंदिर 85
• छुंडा गदी 90
• अभिमुख वेंट 93
• डॉ. गिर्नसाह वेंट 97
• अभिमुख गेटल 101
• पृ. गिर्नसाह वेंट 105
• डॉ. गिर्नसाह वेंट 109
• डॉ. गिर्नसाह वेंट पुंजाल 116
• मंदिर ग्राह वेंट 121
• भलबीउ वेंट 124
भज्जी सीखना गर थै, उद घरी उनी तावस बढ़त निकाल है। भज्जी दे चित्र
अंदह घटन तावस बढ़ी दें हरी उकसी उनी तावस बढ़े उद घरी निकाल है। भज्जी
भज्जी हुँ घरी दें बढ़त निकाल है। भज्जी उकसी तावस बढ़त घरी घरी घरी तावस
भज्जी दे चित्र अंदह घटन तावस बढ़त निकाल है। खित्र उकसी तावस बढ़त घरी
भज्जी दे चित्र अंदह घटन तावस बढ़त निकाल है। खित्र उकसी तावस बढ़त घरी
भज्जी दे चित्र अंदह घटन तावस बढ़त निकाल है।
ABOUT THE COLLEGE

Mehr Chand Mahajan DAV College for Women, Chandigarh popularly known as MCM DAV, was established in 1968 by the DAV College Managing Committee, New Delhi, to commemorate the meritorious services rendered by Justice Mehr Chand Mahajan, former Chief Justice of India, a distinguished legal luminary, administrator par excellence and committed educationist.

MCM, in the service of Quality Education in the region for the last 48 years, stands fully prepared today to meet the challenges of the changing times. The aim of the college has always been to produce enlightened and potential women, the future decision and policy makers who would repay the society through maximum utilization of their educational input. The college thrives on a unique blend of retaining traditional values and incorporating technological advancements as well as creating a consciousness about rights and duties towards the nation, which have fully been internalized by the faculty and the stakeholders - the students.

Excellence in sports has become synonymous with MCM and the laudable achievements of our peerless sportswomen is corroborated by the fact that the college, in its existence of 48 years, has been awarded the Panjab University General Efficiency Sports Shield 37 times.

Known for its academic excellence, intellectual vigor and moral sensitivity, the college has been awarded STAR STATUS by DBT in 2015. MCM DAV has secured the TOP Position in Arts and Science stream and has been placed at No. 3 in the Commerce stream in the city, whereas at All India Level, we are at No. 27 in the Arts and Science stream and at No. 42 in the Commerce stream in a survey of THE BEST COLLEGES OF INDIA published recently by India Today.

Twentyfirst Century Publications

# 79, Sheikhpura, P.O. Punjabi University, Patiala (Punjab)- 147002
Contact : 90564-53888 (Office), 92167-53888 (Mobile)
e-mail : tfcpublications11@gmail.com
rniku_randhawa77@yahoo.com
3

PROBIOTICS: PROMISING ALTERNATIVE IN ANIMAL HEALTH CARE

Gurpreet Kaur Deol* & Parneet Kaur Deol**

Food products of animal origin have an important role in a balanced diet and must be safe for human consumption. The health status of animals that are destined to enter the human food chain is an important factor in predicting the risk of human food borne infections. Of approximately 200 infectious food borne diseases emerging in both developed and developing countries, 75% are zoonotic i.e. transmitted between humans and animals. The control of zoonotic diseases has become an important part of public health policy and relies majorly on the control of microorganisms either in animals, food chain, or humans. As many zoonoses find their origin in animals before being transmitted to humans, the most effective intervention is often achieved at the source. Most commonly employed interventions include use of broad spectrum antibiotics. However, its indiscriminate use has led to emergence of antibiotic resistant zoonotic bacteria which pose serious threats to human health. There is the need to look for viable alternatives that could enhance the natural defense mechanisms of animals and reduce the massive use of antibiotics. One such promising alternative are probiotics. They are live microbial food supplements that beneficially affect the host by improving its gut microbial balance. A balanced gut micro biota constitutes an efficient barrier against pathogen colonization and stimulates the immune system in a non-inflammatory manner. In this review, the potential benefits of probiotic administration on animal health and nutrition, as reported in the recent scientific literature, are discussed. Additionally, the underlying mechanism of probiotic action and the issues and concerns in their use is also highlighted in detail.

Keywords: Food borne diseases, zoonosis, microbiota

INTRODUCTION

The globalization of the food trade have not only benefited the consumers by bringing to the market a wider variety of foods that are accessible, affordable, and high in nutritional status but has also provided opportunities for food-exporting countries to earn foreign exchange for developing their economy and improving the living standard of their people. On the other hand, this globalisation has presented a new challenge to food safety by creating an environment in which both known and new food borne diseases may occur at a greater magnitude. In the present scenario, a single source of contamination may become widespread, with global consequences (World Health

* Department of Zoology, G.H.G. Khalsa College Gurusar Sadhar, Ludhiana, gkdeol29@gmail.com
** University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh.
Animal Diseases
Impact on Human Health and Control Issues


Organized by
Department of Zoology
MCM DAV COLLEGE FOR WOMEN, CHANDIGARH
Re- accredited by NAAC with "A" grade

Editors: Dr. Vandana Sharma • Dr. Neetu • Dr. Sarabjeet Kaur
ANIMAL DISEASES:
IMPACT ON HUMAN HEALTH AND
CONTROL ISSUES

Proceedings of the UGC & INSA Sponsored
Two Days National Seminar on
30th & 31st August, 2016

Organized by
Department of Zoology
Department of Food Science

MCM DAV COLLEGE FOR WOMEN, CHANDIGARH
Re-accredited by NAAC with “A” grade

Editors:
Dr. Vandana Sharma
Department of Food Science

Dr. Neetu
Department of Zoology

Dr. Sarabjeet Kaur
Department of Zoology

TWENTYFIRST CENTURY PUBLICATIONS
PATIALA
## CONTENTS

<table>
<thead>
<tr>
<th></th>
<th>ROLE OF IMMUNOSTIMULANTS IN COMBATTING THE DISEASE OUTBREAK IN AQUACULTURE: AN OVERVIEW</th>
<th>1-8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>— Dr. Mandeep Kaur &amp; Prof. Rajinder Sindal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A REVIEW ON DIFFERENT ANTIGENS USED AS VACCINE CANDIDATES AGAINST LEISHMANIASIS</td>
<td>9-18</td>
</tr>
<tr>
<td></td>
<td>— Dr. Harpreet Kaur, Dr. Ankita Thakur &amp; Prof. Sukhbir Kaur</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PROBIOTICS: PROMISING ALTERNATIVE IN ANIMAL HEALTH CARE</td>
<td>19-25</td>
</tr>
<tr>
<td></td>
<td>— Gurpreet Kaur Deol &amp; Parneet Kaur Deol</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EMERGING AND REEMERGING MOSQUITO BORNE VIRAL DISEASES: A GLOBAL THREAT</td>
<td>26-31</td>
</tr>
<tr>
<td></td>
<td>— Dr. Jagdish Kaur &amp; Promila Malik</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ECONOMIC RELEVANCE OF STONE BORING CURCULIONIDS (COLEOPTERA: CURCULIONIDAE)</td>
<td>32-35</td>
</tr>
<tr>
<td></td>
<td>— Divya Sharma &amp; Dr. Dalip Kumar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A MINI-REVIEW ON ADJUVANTS AGAINST ZOONOTIC DISEASE LEISHMANIASIS</td>
<td>36-46</td>
</tr>
<tr>
<td></td>
<td>— Dr. Ankita Thakur, Dr. Harpreet Kaur &amp; Prof. Sukhbir Kaur</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ROLE OF GOAT PRODUCTS IN HUMAN HEALTH AND DISEASE MANAGEMENT</td>
<td>47-50</td>
</tr>
<tr>
<td></td>
<td>— Dr. Sonia Batra</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EFFECT OF HARMFUL PLANTS ON ANIMAL AND HUMAN HEALTH</td>
<td>51-58</td>
</tr>
<tr>
<td></td>
<td>— Harpreet Kaur Khurana &amp; Gundeep Kaur</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TECHNIQUES TO DIAGNOSE THE MALARIA PARASITE: A BRIEF REVIEW</td>
<td>59-64</td>
</tr>
<tr>
<td></td>
<td>— Varun Gorki &amp; Prof. Upma Bagai</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FARM ANIMALS: POTENTIAL SOURCE FOR TRANSMISSION OF DRUG RESISTANCE IN HUMANS</td>
<td>65-87</td>
</tr>
<tr>
<td></td>
<td>— Charanjeet Kaur, Divya Bhandari &amp; Dr. Sandeep Kaur</td>
<td></td>
</tr>
</tbody>
</table>
20. APPROACHES TO THE CONCEPTS OF INTEGRATED CONTROL OF NEMATODE PARASITES OF LIVESTOCK IN THE TROPIC AND SUBTROPICS
   — Harjinder Kaur Gill

21. BOVINE ZOONOTIC DISEASES: TRANSMISSION TO HUMANS
   — Dr. Shivani Singla & Prof. Neelima R. Kumar

22. IN VITRO ANTIMALARIAL EFFICACY OF SOME TRADITIONALLY USED MEDICINAL PLANTS AGAINST LETHAL MURINE MALARIA PARASITE PLASMODIUM BERGHEI
   — Neha Sylvia Walter & Prof. Upma Bagai

23. TRANSCOMMUNITY DISEASES OF DOMESTIC MAMMALS: AN EMERGING WORLDWIDE CHALLENGE
   — Ritu Singh & Sonica Sondhi
Small ruminants in the tropical and subtropical regions of the world experience much greater ill effects from internal parasitic diseases than those in the temperate regions because parasites are more abundant in these regions. In the tropics/subtropics, the limiting ecological factor influencing the severity of parasitism is rainfall. Attempts to increase sheep and goat production by replacing traditional village production systems with large scale commercial enterprises leads to complete reliance on antihelminthic drugs to control nematode parasites. This has led to the widespread development of multiple antihelminthic resistances throughout the tropics/subtropics and in certain regions, this leads to total chemotherapeutic failure. Immediate efforts are needed to resolve this crisis. Various approaches to control nematode parasites such as grazing management, worm vaccines, breed selection or controlled breeding and biological control can be used to draw significant benefits. However, it is likely that none, in isolation, will completely replace the need for effective treatment. Thus integration of all methods of parasitic control with the underlying aim of reducing the use and preserving the effectiveness of antihelminthic drug is needed. Resistance to antihelminthic drugs amongst the major nematode parasites of sheep and goats has now reached alarming level throughout the world and threatens the future viability of continued small ruminant production in many countries. Clearly then, the greatest need is the use of technology and education programmes, but these activities are generally found to be chronically under-resourced. So, we must promote the importance of the problem of antihelminthic resistance and ways to tackle it.

INTRODUCTION

The development of nematode parasite control strategies for grazing cattle presents a challenge. The requirement is to focus on the changing and somewhat conflicting needs of the livestock producer (Nansen, 1987). A parasite of livestock causes diseases of major socio-economic importance worldwide. For the small ruminant industries, antihelminthic resistance has now reached an alarming point in some countries (Waller, 1997). However, antihelminthic resistance is not a serious threat for the cattle industry today, it would be unwise to count on antihelminthic drug as a last resort for the future, as research in antihelminthic pharmacology is devalued by governments, universities and the animal industry in general (Geary et al., 1999).

* G.H.G. Khalsa College, Gurusar Sadhar, Ludhiana, rinkigill84@gmail.com
Mehr Chand Mahajan DAV College for Women, Chandigarh popularly known as MCM DAV, was established in 1968 by the DAV College Managing Committee, New Delhi, to commemorate the meritorious services rendered by Justice Mehr Chand Mahajan, former Chief Justice of India, a distinguished legal luminary, administrator par excellence and committed educationist.

MCM, in the service of Quality Education in the region for the last 48 years, stands fully prepared today to meet the challenges of the changing times. The aim of the college has always been to produce enlightened and potential women, the future decision and policy makers who would repay the society through maximum utilization of their educational input. The college thrives on a unique blend of retaining traditional values and incorporating technological advancements as well as creating a consciousness about rights and duties towards the nation, which have fully been internalized by the faculty and the stakeholders - the students. Excellence in sports has become synonymous with MCM and the laudable achievements of our peerless sportswomen is corroborated by the fact that the college, in its existence of 48 years, has been awarded the Panjab University General Efficiency Sports Shield 37 times.

Known for its academic excellence, intellectual vigor and moral sensitivity, the college has been awarded STAR STATUS by DBT in 2015. MCM DAV has secured the TOP Position in Arts and Science stream and has been placed at No. 3 in the Commerce stream in the city, whereas at All India Level, we are at No. 27 in the Arts and Science stream and at No. 42 in the Commerce stream in a survey of THE BEST COLLEGES OF INDIA published recently by India Today.
TCP Cubic Implementation Proposal Using OMNET++

Navdeep Singh¹,², Rajesh Kumar²

¹M-Tech Scholar, Computer Science and Engineering Department, BGJET, Sangrur
²Assistant Professor, Computer Science and Engineering Department, BGJET, Sangrur

Abstract. This paper presents the implementation proposal of TCP Cubic based on literature describing the CUBIC algorithm. All TCP congestion algorithms have several features in common. But it is rather vague how one can say a TCP congestion avoidance algorithm is good. In this paper, we will focus on the evaluation of congestion avoidance algorithm i.e. TCP CUBIC and implementation proposal in OMNET++.

1 INTRODUCTION

TCP is a connection oriented protocol which provides a trusted, sequenced of packets between computers connected on the internet. TCP sends add ordered numbers to packets and sends acknowledgement packet receptions. To ensure that packet won’t be lost due to corruption during transmission, unacknowledged TCP packets are retransmitted based on information about successfully received sequence numbers and, in some cases, timeouts. The various TCP congestion control algorithms aim to maximize the throughput while avoiding congestion in the connection flow. All TCP congestion algorithms have several features in common. The TCP sender keeps a dynamic congestion control window (Cwnd) that limits the number of outstanding transmitted packets before and acknowledgement (Ack) need to arrive from the receiver. Most TCP connections operate in two modes, slow start for which the window(Cwnd) size is incremented rapidly and a congestion avoidance mode for which the window(Cwnd) size is incremented in a way to avoid congestion over the link. It is rather vague how one can say a TCP congestion avoidance algorithm is good, however most TCP algorithm tend to utilize the network throughput while maintaining a fairness among other TCP flow. In this paper, we will focus on the speculative implementation of congestion avoidance algorithm i.e. CUBIC and its evaluation.

2 RELATED WORKS

Cubic is an improved version of Binary Increase Congestion control: it simplifies the BIC window control and improves its fairness, and RTO timers. The cubic function controls the window growth function in terms of the elapsing time since the last loss event. According to the experience, the cubic function provides a good stability and scalability. Besides this, the real-time nature of the protocol to maintain the growth rate independent of RTT, which keeps the TCP friendly under both short and long RTT paths [3].

2.1 TCP CUBIC BASIC

Cubic is a transmission control protocol (TCP) for Linux operating systems. The protocol modifies the existing TCP flow control standard for which the growth function is linear to cubic function means to improve the scalability of a TCP over high fast and long distance networks. One way to measure the transmission rate of a network is by measuring the bandwidth delay product (BDP). Fast and long distance networks tend to have high BDP and the standard TCP congestion flow usually do not fully utilize the network link. It also achieves more balance bandwidth allocation among flows with different RTTs by making the growth function to be independent of RTT allowing flows with different RTTs to have the same growth rate. The congestion avoidance growth function is depicted in the following figure 1.

![Cubic Growth Function](attachment:image1.png)

Figure 1: Cubic Growth Function

After a packet loss is detected, the congestion control reduces the window size to be:
Malout Institute of Management & Information Technology, Malout
Organizes
2nd National Conference
on
Role of Information Technology in Management & Engineering
Issues and Prospects
RITME 2016
On August 26-27, 2016
Sponsored by
Science and Engineering Research Board
Department of Science and Technology
Government of India
Malout Institute of Management & Information Technology
(established and managed by govt. of Punjab)
Green Field Enclave, Puda Colony, Malout-152107, Punjab, India
2nd National Conference
On
Role of Information Technology in Management & Engineering: Issues & Prospects

RITME 2016

Date: August 26-27, 2016

ISBN NO: 978-93-85835-34-6

Malout Institute of Management & Information Technology
Green Field Enclave, Malout-152107 (PB), India
A Review on Vehicular Ad-hoc Networks: Architecture, Characteristics, Research Methodologies, Challenges & Future Trends

Harmandeep Kaur
M. Tech Scholar, Department of CSE, Bhai Gurdas Institute of Engineering & Technology, Sangrur, (PB) India

Rajesh Kumar
Assistant Professor, Department of CSE, Bhai Gurdas Institute of Engineering & Technology, Sangrur, (PB) India

Abstract: Vehicular Ad-hoc Network (VANET) is a sub-category of Mobile Ad-hoc Network (MANET). Due to some unique characteristics, VANET has been becoming an attractive area for research since last few years. It has highly dynamic topology, frequent disconnections, mobility modelling, battery power and storage capacity, communication environment and Interconnection with onboard sensors and various other characteristics attract huge attention of both industries as well as academia. In this paper we have given an overview of VANET characteristics and the main aspects of research issues, starting with architecture, characteristics, research issues, and general methodologies ending up with a brief analysis of future trends of VANETs.

Keywords: Vehicular Ad-hoc Networks, Architecture, Characteristics, Research Methodologies, Challenges and Future trends.

I. INTRODUCTION

Vehicular Ad-hoc Networks in which vehicles are used as mobile nodes to provide communication between a vehicle and a nearby vehicle (V2V) & between the vehicle and a nearby roadside infrastructure (V2I), VANET is also facing several challenges as potentially large scale and highly mobile nodes in the vehicular environment are very dynamic and change their position constantly. This leads to dynamic topology and frequent disconnections because of these unique characteristics VANET draws the huge attention from both industries as well as academia [2].

Therefore, several articles have summarized the issues about VANETs. In [3] and [4] the authors have discussed the routing challenges in VANET also compared their performances. Hartenstein and Laberteaux present an overview of the communication and the networking. In [5], [6] authors provides security protocols. In [7] authors discussed a taxonomy of large range of mobile models available for VANETs. In [8] provides an overview of applications protocols and challenges.

We organize the overview of VANETs in a novel way. We have covered architecture of VANET, characteristics, research issues, research methodologies, followed by challenges and future trends providing an overall reference on VANETs.

II. LITERATURE REVIEW

Various articles summarized the characteristics and issues with respect to VANETs. As in [3, 4] authors have discussed the challenges in research for routing in VANET also compared the performance of routing protocols.
Malout Institute of Management & Information Technology, Malout
Organizes
2nd National Conference
on
Role of Information Technology in Management & Engineering
Issues and Prospects
RITME 2016
On August 26-27, 2016
Sponsored by
Science and Engineering Research Board
Department of Science and Technology
Government of India

Malout Institute of Management & Information Technology
(established and managed by Govt. of Punjab)
Green Field Enclave, Puda Colony, Malout-152107, Punjab, India
2nd National Conference
On
Role of Information Technology in Management & Engineering: Issues & Prospects

RITME 2016

Date: August 26-27, 2016

Malout Institute of Management & Information Technology
Green Field Enclave, Malout-152107 (PB), India

Ramandeep Kaur
Department of computer science & Engineering, Bhai Gurdas Group of Institution, Sangrur, India

Mr. Rajesh Kumar
Associate Prof. Department of computer sci & Enng, Bhai Gurdas Group of Institution, Sangrur, India
E-Mail: rajeshkengp@gmail.com

Abstract: Wireless sensor network serves as a nursery for uncountable cosmic fields such as defense, security, scientific applications and environment. One of the contemporary areas of research in wireless sensor network is the area coverage. In wireless sensor network, the actual trait of network is measured by the area covered by the sensor nodes. The quality of service is achieved by the maximum area coverage but the quality of service is inversely proportional to vendor’s cost. There is a need to place the more sensor than existing. The web of issues in the network coverage includes homogenous or heterogeneous sensor nodes, random or deterministic deployment of sensor nodes and centralized and distributed algorithms. Other than that, the network coverage relies upon the deployment of sensor nodes. The sensor nodes can be deployed in one of the following manners, deterministic or random. Random deployment of sensor nodes is surveyed in this paper. The random deployment of sensor nodes pose the knot of intersection of sensor nodes which further arises the problem of high power consumption and minimum area coverage.

Keywords: deployment, intersection, maximum area coverage, wireless sensor network

I. Introduction

In the recent years, wireless sensor network have its applications in every fields such as industrial sensing, habitat monitoring, infrastructure security, environment, military and traffic control to name a few. The wireless sensor network is a combination of small devices called sensor nodes. The sensor nodes are operated by the battery power which is rechargeable. The wireless sensor nodes itself has the capabilities of signal processing, communication and computations. The sensor nodes communicate with each other to establish a network to monitor a geographical region. The sensor nodes also communicate through the base stations to report sensed data to each other. In wireless sensor network the nodes are deployed either in deterministic or random fashion. In deterministic manner the nodes are placed on the predetermined locations which is very easy to design a network but it is impractical or impossible to place the sensor nodes in deterministic manner. On the other hand, in the random fashion the sensor nodes are dropped by plane on non-determined locations.

The main research area in wireless sensor network is area coverage. The wireless sensor network coverage is usually interpreted as how well the nodes will cover the area of interest. The coverage will help to achieve the better quality of service as well as the good transmission rate. Coverage in wireless sensor network is classified as [3]:

1. Point coverage
2. Barrier coverage
3. Area coverage

In point coverage the specific points of interest are sensed rather than the whole area.

In the barrier coverage, boundary of a particular region is covered. Barrier coverage is particularly used in the protection areas to prevent the unwanted events.

In area coverage, the particular area of interest is covered. The area coverage has the number of sensor nodes to cover a specific area. Area coverage is used for the problem of maximization or the problem of minimization. In the maximization problem the coverage of network is increased. In the minimization problem, total area of the hole coverage is reduced.

The main active area of our research is the area coverage because the area coverage is directly or indirectly concerned with the issues in wireless sensor network. In the area coverage small or large number of sensor nodes are used. In the small network area, the nodes are manually deployed but in the large network the nodes are deployed randomly. When the nodes are randomly deployed, mostly the problem of intersection occurs which further arise the problem of high power consumption.

In the survey of these problem the various algorithm proposed to maximize the area coverage and to reduce the intersection of nodes. The maximum coverage is achieved by the re-deployment of nodes. Different techniques studied to find the required number of sensor nodes to cover maximum area.

II. Literature Review

Kamneet et al. [1] use Flower Pollination algorithm for selecting optimum number of Base Transceiver stations (BTS) and optimizing site locations. The survey of this paper is based on how optimally locate BTS to obtain maximum coverage with minimum infrastructure cost. In the proposed work to find the optimum number of cell sites, the base stations are located and calculate SINR, network performance and capacity. Thereafter, the flower pollination algorithm is used to find the optimum number of sites. Furthermore the proposed algorithm is compared with Artificial Bee Colony (ABC). In future the authors suggest that, the techniques can be applied to achieve 100% coverage with minimum number of BTS.
Malout Institute of Management & Information Technology, Malout
Organizes
2nd National Conference on Role of Information Technology in Management & Engineering
Issues and Prospects
RITME 2016
On August 26-27, 2016
Sponsored by
Science and Engineering Research Board
Department of Science and Technology
Government of India
Malout Institute of Management & Information Technology
(Established and Managed by Govt. of Punjab)
Green Field Enclave, Puda Colony, Malout-152107, Punjab, INDIA
2nd National Conference
On
Role of Information Technology in Management & Engineering: Issues & Prospects

RITME 2016

Date: August 26-27, 2016

ISBN NO: 978-93-85835-34-6

Malout Institute of Management & Information Technology
Green Field Enclave, Malout-152107 (PB), India
Implementation of Energy Efficient Clustering Scheme for Prolonging the Lifetime of Wireless Sensor Network with Isolated Nodes Implementation of Enhanced REAC-IN Protocol

Amandeep kaur
M. Tech student, Computer science Department, Bhai Gurdas Institute of Engg. and Tech. Sangrur (PB), India.
E-Mail: Tungannon@gmail.com

Rajesh kumar
Associate prof. Computer Science Department, Bhai Gurdas Institute of Engg. and Tech. Sangrur (PB), India.
E-Mail: rajeshkengg@gmail.com

Abstract: A lot of energy-efficient delivering schemes appear to be devising for WSNs, just like. Clustering is very a good selection for delivering on the basis sensor sites that want scalability to be able to hundreds possibly a large number of nodes. A group composed of at least a group go (CH) along with group customers. But cluster head selection increases the overhead of CH selection and assignment. This paper proposes a energy efficient clustering scheme for prolonging the lifetime of WSN with isolated nodes that is ENHANCED REAC-IN. CH is selected based on weight and weight is calculated based on residual and regional average energy.

For selecting the CH nodes EM algorithm is used to find out the maximum likelihood of nodes to become a cluster head. A bad design of CH selection algorithm may lead to node isolation. Such as nodes can send their data to the server or to the cluster head.

Index terms: energy efficient clustering, EM algorithm, isolated nodes, probabilistic approach

I. INTRODUCTION

In a frequent wireless sensor network (WSN), sensor nodes composed of sensing, communicating, and data processing factors. Sensor nodes can be used in various industrial, military, and agricultural applications, alike transportation traffic supervises, environmental monitoring, smart offices, and battlefield surveillance. In these applications, sensors are displayed in an ad-hoc manner and produce separately. In these unattended environments, sensors cannot be freely replaced and energy utilization is the most analytical problem that must be investigated.

A lot of energy-efficient delivering schemes appear to be devising for WSNs, just like. Clustering is very a good selection for delivering on the basis sensor sites that want scalability to be able to hundreds possibly a large number of nodes. A group composed of at least a group go (CH) along with group customers. CHs are duty for managing your nodes in their group and also occasionally send aggregated facts into a remote onlooker (sink). In the sense of regular re-clustering, nodes along with great residual energy may serve since CHs. System life span can be continuous making use of effectiveness facts aggregation, involving pairing the data through resource nodes right modest number of significant details, and also make facts indication to get far more energy enough.

Wireless Sensor Network supervise the physical and environmental conditions alike temperature, sound, pressure etc and passing the data over the network to the main location. A sensor network comprised of various detection stations called sensor nodes, each of which is small, lightweight and portable. Each wireless network composed of hundreds of nodes which combined with current wired measurement and control system. Node employ more energy for transmission purpose, with this network lifetime of WSN will be reduced. So the nodes are dies promptly in the network.

In this paper a new CH selection scheme is proposed for cluster head selection with isolated nodes called enhanced regional energy aware clustering with isolated nodes (ENHANCED REAC-IN) based on the concept of REAC-IN enables each node to consume energy uniformly by rotating the CH role among all nodes.

II. LITERATURE SURVEY

In [1] In this paper they explained the Energy Efficient Clustering strategy for Prolonging the Lifetime of Wireless Sensor Network with Isolated Nodes. An appropriate clustering algorithm for grouping sensor nodes can enlarged the energy efficiency of WSNs. Hence, clustering needs additional overhead, alike cluster head choice and assignment, and cluster built upon. This paper proposes a new regional energy aware clustering technique with the use of isolated nodes for WSNs, called Regional Energy Aware Clustering with Isolated Nodes (REAC-IN). In REAC-IN, CHs are preferred on the basis of weight.

In [2] In this paper the author explained the Multi-level stable and energy-efficient clustering protocol in divergent wireless sensor networks Classical clustering protocols in wireless sensor networks (WSNs) consider that all nodes are supplied with the same amount of energy. Consequently, they cannot take full benefits of the existence of node heterogeneity. The proposed protocol is a heterogeneous awareness to drag out the stability period, which is important for many purposes. The evaluation of the proposed protocol is compared with current homogeneous and heterogeneous protocols. Simulation
Malout Institute of Management & Information Technology, Malout
Organizes
2nd National Conference on
Role of Information Technology in Management & Engineering
Issues and Prospects
RITME 2016
On August 26-27, 2016
Sponsored by
Science and Engineering Research Board
Department of Science and Technology
Government of India

Malout Institute of Management & Information Technology
(Established and Managed by Govt. of Punjab)
Green Field Enclave, Puda Colony, Malout-152107, Punjab, INDIA
2nd National Conference
On
Role of Information Technology in Management & Engineering: Issues & Prospects

RITME 2016

Date: August 26-27, 2016

ISBN NO: 978-93-85835-34-6

Malout Institute of Management & Information Technology
Green Field Enclave, Malout-152107 (PB), India
Efficient Allocation of Resources at Datacenters Using HOD and GSA

Sahil Goyal
M-Tech Scholar, Computer Science Engineering, Bhal Gurdas Institute Of Engg. & Tech., Sangrur, India
E-Mail: Sahilgoyal@live.in

Rajesh Kumar
Assistant Professor, Computer Science Engineering, Bhal Gurdas Institute Of Engg. & Tech., Sangrur, India
E-Mail: rajeshkengg@gmail.com

Abstract: Enlarge utilization of resources from clients in a smart computing environment poses a greater challenge in allocating optimal energy-efficient resources at the data center. Allocation of these optimal resources should be carried out in such a manner that we can save the energy of data center as well as avoiding the service level agreement (SLA) violation. This paper deals with the design of population-based energy efficient algorithm (MHODGSA) for optimized resources allocation at data center using combined approach of Modified Human Opinion Dynamic (MHOD) and Gravitational Search Algorithm (GSA). The main idea is to integrate ability of exploitation in HOD with the ability of exploration in GSA to synthesize both algorithm’s strength. Improving energy efficiency is multidimensional challenge regarding cloud computing environments management, which can directly reduce the operating costs and carbon dioxide emissions, while increasing the system reliability.

1. INTRODUCTION

Cloud computing is the use of computing resources as a service via internet. The word cloud computing is derived from the word internet. Cloud computing is an evolving technology, through which any computing resource could be accessed through internet, and enables secure sharing of resources. It has started to gain insight in corporate data centers. Cloud computing is evolved from grid computing in recent years due to increased utilization of virtualization at datacenter. It provides updated services and online resources required for the clients without changing their existing infrastructure. Due to the increasing demand of cloud services, size of the data center is exponentially increasing and more servers are needed to full-fill this demand. Hence, the data center generates more heat, and therefore more cooling devices are required to keep the data center at a specified temperature resulting in more energy consumption and CO2 emission. Therefore, this is an important research area of Green Cloud Computing and hence there is a need of an energy efficient resources allocation at the data center in order to reduce the total energy cost. Major cloud service providers like Amazon, Facebook, Google etc., and keep data centers in colder places and thus reduces the energy cost. A recent study shows that these data centers will consume 2% of the total worldwide energy consumption by 2020 [1]. The demand for overall energy requirement at data center is rapidly increasing at the rate of 18% every year.

2. RELATED WORKS

Some algorithms have been proposed to solve the problem using mathematical solvers. In (Xu, Cui, Wang, & Bi, 2009) author propose a mathematical approach to solve heuristic scheduling problem. In their proposal, a preprocessor calculates task priorities according to a fixed formula, which does not necessarily result in an optimal solution according to cost and deadline.

Yu, Buyya, and Tham have a proposed a cost based workflow scheduling method on the grid environment using the Markov decision process. However heuristical algorithms are more efficient in solving such problems, as mathematical solutions do not work well for high scale problems.

Neeraj Kumar Sharma and G. Ram Mohana Reddy et al. proposed genetic algorithm for energy efficient virtual machine allocation at data center. Genetic algorithm (GA) capable of saving energy of data center and also its helps to avoiding the service level agreement violation. This paper deals with the design of an energy efficient algorithm for optimized resources allocation at data center using combined approach of Dynamic Voltage Frequency Scaling (DVFS) and Genetic algorithm (GA).

Anton Beloglazov, Rajkumar Buyya et al. presented an energy efficient resource management in virtualized cloud data centers... this proposed approach helps to minimize the cost and gives essential quality of services. Virtual network topologies established between VMs and thermal state of computing nodes. The results show that the proposed technique brings substantial energy savings, while ensuring reliable QoS.

A. Paulin Florence et al. proposed energy aware cloud computational cloud. In this paper, a new energy aware load balancer is proposed and then implemented in cloud simulator. Proposed approach is implemented by java language. It minimize energy consumption and allocates the job dynamically to a particular VM selected based on best fit strategy and adjust the frequency of the VM depending upon whether job is CPU bound or I/O bound. The VM frequency is adjusted to the maximum if the job is CPU bound or otherwise it is kept to a minimum. Thus proves to be more efficient in terms of energy consumption.
Proceedings

National Conference

on

Advances in Engineering & Technology
Management and Sciences

Saturday 23rd April, 2016

at

Asra College of Engineering & Technology

in

Technical Collaboration with

MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY, BATHINDA

Organized by

Asra College of Engineering & Technology
Patiala-Sangrur Road, Bhawanigrah, Sangrur (Pb.)

www.asracollege.edu.in

INTRODUCTION TO GRID COMPUTING

Harmandeep Kaur1, Er. Rajesh Kumar2

1M. Tech. student, CSE Department, Bhilai Institute of Engg. And Tech., India
2Assistant Professor, CSE Department, Bhilai Institute of Engg. And Tech., India

Abstract: Grid computing is a new information technology from few years. It is a technology to collaborate the different types of computational resources to perform computation with high speed. Resources are databases, network resources, computers etc. In the grid computing the engineers and scientists cross the boundary of organization by decompose the problems in small one to sort out that problem in less time. This technology was born up into mid 1990's. This paper describes introduction, challenges, components, applications, merits and demerits of the grid computing.

Keywords: Architecture, challenges, computation, grid computing

INTRODUCTION

RID combines computers from multiple administrative domains to reach a common goal, to solve a single task, and may then disappear just as quickly. One of the main strategies of grid computing is to use middleware to divide and apportion pieces of a program among several computers, sometimes up to many thousands. "Ian Foster has indicated a definition of the Grid as "a system that coordinates resources which are not subject to centralized control, using standard, open, general-purpose protocols and interfaces to deliver nontrivial qualities of service" [1]. The Globus Project defines Grid as "an infrastructure that enables the integrated, collaborative use of high-end computers, networks, databases, and scientific instruments owned and managed by multiple organizations" [2]. Another definition put by Gridbus Project as "Grid is a type of parallel and distributed system that enables the sharing, selection, and aggregation of geographically distributed "autonomous" resources dynamically at runtime depending on their availability, capability, performance, cost, and user's quality-of-service requirements" [3]. Grid computing involves computation in a distributed fashion, which may also involve the aggregation of large-scale clusters. The size of a grid may vary from small confined to a network of computer workstations within a corporation, for example to large, public collaborations across many companies and networks. "The notion of a confined grid may also be known as an intra-node cooperation whilst the notion of a larger, wider grid may thus refer to inter-node cooperation" Grids are a form of distributed computing whereby a "super virtual computer" is composed of many networked loosely coupled computers acting together to perform very large tasks. This technology has been applied to computationally intensive scientific, mathematical, and academic problems through volunteer computing, and it is used in commercial enterprises for such diverse applications as drug discovery, economic forecasting, seismic analysis, and back office data processing in support for e-commerce and Web services. Coordinating applications on Grids can be a complex task, especially when coordinating the flow of information across distributed computer resources. Grid workflow systems have been designed as a specialized form of a workflow management system designed specifically to compose and execute a series of computation data manipulation steps, or a workflow, in the Grid context.
Education for Sustainable Development
Vision to Reality

Chief Editor
Dr. Monika Sethi

Editors
Mrs. Suprerna Khanna
Dr. Manminder Kaur
Ms. Gagandeep Kaur

Internal Quality Assurance Cell
B.C.M. College of Education, Ludhiana
EDUCATION FOR SUSTAINABLE DEVELOPMENT
VISION TO REALITY

An Anthology of Selected Papers

by

B.C.M. COLLEGE OF EDUCATION, LUDHIANA

Chief Editor
Dr. Monika Sethi

Editors
Mrs. Suprerna Khanna
Dr. Manminder Kaur
Ms. Gagandeep Kaur

TWENTYFIRST CENTURY PUBLICATIONS
PATIALA
The responsibility for the facts or opinions expressed in the papers are entirely of the authors. Neither the College nor the publishers are responsible for the same.

© Reserved

EDUCATION FOR SUSTAINABLE DEVELOPMENT: VISION TO REALITY

by

Dr. Monika Sethi, Mrs. Suprerna Khanna, Dr. Manminder Kaur & Ms. Gagandeep Kaur


Laser Type Setting
Roshan Dhindsa & Manpreet Singh

Printed in India at
Twentyfirst Century Printing Press, Patiala
56. IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY ON THREE SPHERES OF SUSTAINABLE DEVELOPMENT
— Sofia Singh

57. ICT AND SUSTAINABLE DEVELOPMENT
— Manju Walia

58. ICT AND SUSTAINABLE DEVELOPMENT
— Manpreet Kaur

59. ICTS AND SUSTAINABLE DEVELOPMENT
— Mrs. Navjot Kaur

60. ICT SUPPORT FOR SUSTAINABLE DEVELOPMENT OF LEARNING DISABLED PUPILS
— Nitin Raj

61. ICT AND SUSTAINABLE DEVELOPMENT
— Dr. Pooja Arora

62. ICT AND SUSTAINABLE DEVELOPMENT
— Poonam Mehta

63. ROLE OF ICT IN SUSTAINABLE DEVELOPMENT
— Mrs. Shivani Gulati

64. ICT AND SUSTAINABLE DEVELOPMENT
— Soneet Rani

65. ICT AND SUSTAINABLE DEVELOPMENT
— Ms. Aarti Sharma

66. ICT AND SUSTAINABLE DEVELOPMENT
— Ankur Arora

67. ICT AND SUSTAINABLE DEVELOPMENT
— Sakshi Sharma

68. ICT AND SUSTAINABLE DEVELOPMENT
— Ms. Lakhwinder Kaur
Impact of Information and Communication Technology on Three Spheres of Sustainable Development

Sofia Singh

Sustainable development plays an important role in today's society. It meets the demand of present generation and also takes care the needs of future generation. There are three main pillars of sustainable development that are environment protection, social development and economic development. Information and Communication Technology (ICT) has shown its impacts and opportunities on environment, social and economic sustainability. There are three types of impacts and opportunities that are first order, second order and third order. We examine how economic development, education, environment, and transportation at the country level benefit from ICTs and also considered three orders of effects on global sustainability. Impacts of ICT investments can guide countries in setting policy and making selective investments in ICTs that will promote global sustainability.

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it three key concepts:

- The concept of needs, in particular the essential needs of the world’s poor, to which an overriding priority should be given; and
- The idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs.

It includes three dimensions economic, social and environmental that are equally vital and inter-connected:

- Environmental Protection means not only minimizing impacts on the environment but building natural resources and safeguarding them for the future. For example reducing pollution and other negative impacts on the environment, mitigating the effects of industrialization on human activity, and seeking to achieve sustainable use of resources in the interest of future generations.

* Assistant Professor, PG Department of Computer Science and Applications, GHG Khalsa College, Sadhar, Ludhiana
ABOUT THE COLLEGE

B.C.M College of Education, Ludhiana established in 1998 by BCM Foundation was a dream of Mahatama Satyanand Ji Munjal with the vision of achieving inclusive excellence and transforming society. The college is offering B.Ed. course (150 seats), M.Ed. (50 seats) and B.Ed. Special Education – Learning Disability (30 seats). The college is recognized by NCTE, Panjab University, Chandigarh, RCI & 2f & 12B under the UGC Act 1956. The college is accredited by NAAC with grade 'A'. NCERT, Delhi has awarded the college for innovative practices in the field of Teacher Education. The college has collaborative centres for Indira Gandhi National Open University (IGNOU) for B.Ed., M.A (Education), PGDET, PGDSL and CIG & Panjab University School of Open Learning (USOL) for B.Ed. Apart from the college, BCM foundation is running six schools in different parts of city to serve the purpose of education in society.
Tau Reconstruction and Identification with Upgraded CMS Detector at LHC

Authors

A. K. Kalsi, H. Dhingra, J. B. Singh, V. Bhattacharjee, K. Mazumdar

Conference paper

First Online: 31 December 2015

450

Downloads

Part of the Springer Proceedings in Physics book series (SPPH, volume 174)

Abstract

Tau leptons appear in the final state of many important physics processes such as decay of the Higgs boson, supersymmetric particles and additional heavy gauge bosons corresponding to a new symmetry. Thus, tau leptons play a crucial role in LHC physics programme at all energies. Since majority of the tau lepton decays are hadronic Compact Muon Solenoid (CMS)
Search for Supersymmetry in the Vector Boson Fusion topology in proton-proton collisions at $\sqrt{s} = 8$ TeV

N. Dhirania on behalf of the CMS Collaboration

Pre-published on: February 08, 2017
Published on: April 19, 2017

Abstract
The Vector Boson Fusion (VBF) topology offers a promising avenue for the study of electroweak sector of supersymmetry. The first search for supersymmetry with VBF topology is presented using 19.7 fb$^{-1}$ of pp collision data at 8 TeV collected with the CMS detector. The search targets the final states with at least two leptons, large missing transverse momentum, and two jets with a large separation in rapidity. The observed diphoton invariant mass spectrum after the final selections is found to be consistent with the expected standard model predictions, hence the upper limits are set for the production of charginoes and neutralinos with two associated jets, assuming the supersymmetric partner of the $\chi^-$ lepton to be the lightest slepton and the lightest slepton to be lighter than the charginoes.

DOI: https://doi.org/10.22323/1.282.0750

How to cite

https://pos.sissa.it/282/750/