



Anand Nagar, Krishnankoil - 626126, Srivilliputtur (via), Virudhunagar District, Tamilnadu.

APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES

Date of Application:21-12-2020

Department	COMPUTER SCIENCE AND ENGINEERING	Application No.	202020150
Area of Research	NETWORK	Research Mode	PART TIME

Name :R.RAMKUMAR
Date of Birth / Age :30-05-1983 / 37 Years
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Category :SC
e-Mail ID :austinramkumar736@gmail.com
Mobile :9042465336



(Signature)

Father's/Husband's Name	K.RAMASAMY	Father's/Husband's Occupation	EX.SERVICEMAN
Family Income	600000	Residential Type	RURAL
Birth Place	VILAPAKKAM	Mother Tongue	TAMIL
Religion	HINDU	Martial Status	MARRIED
Aadhaar No.	345762777973	PAN No.	NIL
Physically Challenged	NO	Type of Disability	-
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Qualification						
Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
M.TECH	COMPUTER SCIENCE AND ENGINEERING	DR.M.G.R UNIVERSITY	2010	84	FIRST	REGULAR
B.TECH	INFORMATION TECHNOLOGY	ANNA UNIVERSITY/S.K.P .ENGINEERING	2006	68	FIRST	REGULAR

Experience				
Organization	Designation	Experience From	Experience TO	Work Nature
RANIPATTAIENGINEERING COLLEGE	LECTURER	2010-06-10	2013-05-21	TEACHING
S.K.P INSTITUTE OF TECHNOLOGY	AST. PROFESSOR	2013-06-10	2014-08-30	TEACHING
DMI.ST.JOHN THE BAPTIST UNIVERSITY	LECTURER	2015-01-21	2020-12-21	TEACHING

Payment Details

Transaction ID	Reference	Date of transaction	Amount	Status
202020150_201221135735	VHD49580042704	21-12-2020	600	SUCCESS

RESEARCH PROPOSAL

SECURITY SERVICES IN GROUP COMMUNICATIONS OVER MOBILE AD- HOC AND WIRELESS SENSOR NETWORKS USING PERFORMANCE ANALYSIS OF ALGORITHMS

RAMKUMAR. R,

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Abstract

Group communications in wireless networks has been facilitating many emerging applications that require packet delivery from one or more sender(s) to multiple receivers. Due to insecure wireless channels, group communications are susceptible to various kinds of attacks. Although a number of proposals have been reported to secure group communications using Group management key (GMK), provisioning security in group communications in wireless networks remains a critical and challenging issue. This article presents a survey of recent advances in security requirements and services in group communications in three types of wireless networks, and discusses challenges in designing secure group communications in these networks: wireless infrastructure networks, mobile ad hoc networks, and wireless sensor networks. This article presents a survey of recent advances in security requirements and services in group communications in three types of wireless networks, and discusses challenges in designing secure group communications in these networks: wireless infrastructure networks, mobile ad hoc networks, and wireless sensor networks.

Introduction

any Wireless Sensor Networks (WSNs) are being en-visage in military, emergency and surveillance applications today, where sensor nodes need to send sensed data to the sink. In many applications under hostile environment, sensor nodes cannot be deployed deterministically and thus are randomly deployed into the field. An important requirement in network management of many mission critical applications is to secure end to end sensor networks data from being eavesdropped by the attacker. While there have been many works devoted to hop by hop secure communications in WSNs, the issue of end to end secure communications is largely ignored. This is mainly due to the fact that there exist two intuitive approaches to provide a high

degree of end to end secure communications. Mobile ad hoc networks are formed by a collection of, potentially mobile, wireless nodes; communication links form and disappear as nodes come into and go out of each other's communication range. Wireless networking has received a boost from the development of standards such as IEEE 802.11 and Bluetooth. Much of this activity has focused on the design of routing and medium access control protocols, since efficiency of these protocols can have a significant impact on performance.

Review of literature

A group communication service forms an important building block for applications in dynamic distributed systems and is useful in many applications that involve collaborations among a group of people. The key features of a group communication service are:

(1) Maintaining information regarding group membership.

(2) Letting nodes within a group communicate with each other in an ordered manner.

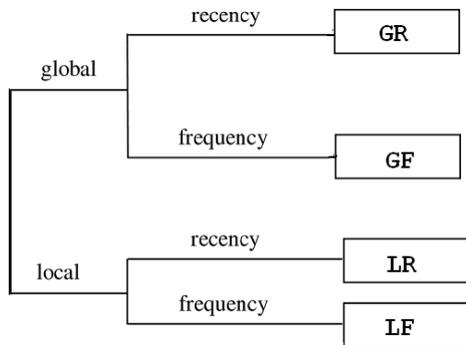
There has been significant research activity on group communication in traditional wired networks. The vast body of this research is an indicator of the significance of the group communication service paradigm.

Objective of the proposal:

The aim of the proposed system is "Distributed Token Ring circulation in mobile Ad-hoc Networks", to measure the performance of the local and global connectivity between the nodes. This research will present recent advances in security requirements and services in group communications in three types of wireless networks, and will discuss challenges in designing secure group communications in these networks: wireless infrastructure networks, mobile ad hoc networks and wireless sensor networks.

Research Design

Mobile Ad - Hoc and Wireless Sensor Networks & Distributed Token Ring circulation in mobile Ad-hoc Networks. The researcher follows experimental Design for the research.



Materials & Method

SOFTWARE REQUIREMENTS

Platform	: JDK 1.5
Program Language	: JAVA
Tool	: NETBEANS 5.5
Operating System	: Microsoft Windows NT 4.0 or Windows 2000 or XP

HARDWARE REQUIREMENTS

Processor	: 733 MHz Pentium III Processor
RAM	: 128 MB
Hard Drive	: 10GB
Monitor	: 14" VGA COLOR MONITOR
Keyboard	: 104 Keys
Floppy Drive	: 1.44 MB

Mouse : Logitech Serial Mouse

Disk Space : 1 GB

Expected Outcome:

Tokens Carrying Messages

The research will result with an alternative approach to store the messages in the token itself – since the token visits all nodes in a virtual ring, the messages will eventually reach all the nodes, the order in which messages are added to the token determining the order in which they are delivered to the nodes. Both these approaches depend on the existence of a virtual ring in the network. But the prior work has not sufficiently addressed the issue of determining efficient embeddings of rings in networks with dynamically changing topology. The expected result of the research is to create Security Services in group communications over Mobile Ad- Hoc and wireless sensor networks using performance analysis of algorithms.

References

- [1] S. K. S. Gupta and S. Cherukuri, “An Adaptive Protocol for Efficient and Secure Multicasting in IEEE 802.11 Based Wireless LANs,” Proc. IEEE WCNC 2003, vol. 3, Mar. 2003, pp. 2021–26
- [2] A. Wadaa et al., “On Providing Anonymity in Wireless Sensor Networks,” Proc. 10th Int’l. Conf. Parallel and Distrib. Syst., July 2004, pp. 411–18.
- [3] C. Karlof and D. Wagner, “Secure Routing in Wireless Sensor Networks: Attacks and Countermeasures,” Elsevier’s Ad Hoc Networks J., Special Issue on Sensor Network Applications Protocols, vol. 1, no. 2–3, Sep. 2002, pp. 293–315.
- [4] R. Maheshwari, J. Gao, and S. R. Das, “Detecting Wormhole Attacks in Wireless Networks Using Connectivity Information,” Proc. IEEE INFOCOM ’07, Mar. 2007.

**Dr. M.G.R.
EDUCATIONAL AND RESEARCH INSTITUTE
UNIVERSITY**

(Declared U/S 3 of the UGC Act 1956)



The Board of Management and the Academic Council of

this University hereby make known that

RAM KUMAR.R

has been admitted to the Degree of
MASTER OF TECHNOLOGY
IN
COMPUTER SCIENCE AND ENGINEERING

having completed all the Academic requirements and having been
certified by duly appointed Examiners to be qualified to receive the

same with **FIRST CLASS**

in the Examination conducted during **MAY 2010**

GIVEN under the seal of the University



03 OCT 2010
Chennai 600 095

C. B. Palanivelu
Registrar

[Signature]
Vice-Chancellor

[Signature]
President



Dr. M.G.R. EDUCATIONAL AND RESEARCH INSTITUTE

(Estd. Under Sec (3) of UGC Act 1956)

Dr. M.G.R. University

Maduravoyal, Chennai - 600 095, Tamil Nadu, India.

Sl. No. : 119351

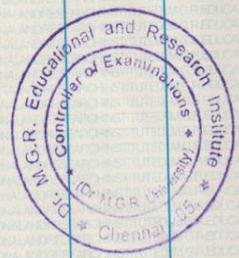
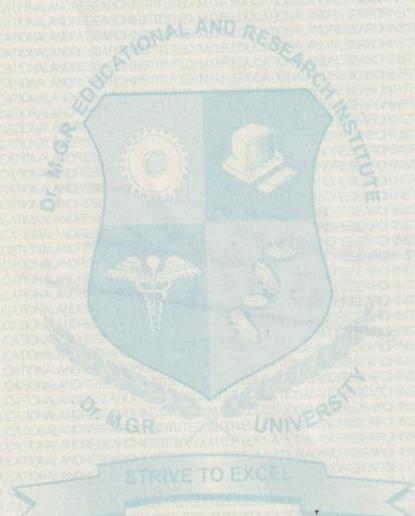


GRADE CARD

Register No. : 081322121015
Name : RAM KUMAR.R
Faculty : Engg. And. Tech.

Month & Year : DEC 2008
Degree : M.TECH - CSE
Branch : COMPUTER SCIENCE AND ENGINEERING

Semester	Code	Subject Title	Marks	Credit	Grade
1	MCS801	COMPUTER ARCHITECTURE	84	4	S
1	MCS803	OPERATING SYSTEMS	82	3	S
1	MCS805	DATA STRUCTURES AND ALGORITHMS	86	3	S
1	MCS807	MICROPROCESSOR BASED SYSTEM DESIGN	83	4	S
1	MCS891	COMPUTER LAB I (OS AND DATA STRUCTURES LAB)	95	3	H
1	MCSE01	OBJECT ORIENTED ANALYSIS AND DESIGN	80	3	S
1	MMA803	MATHEMATICAL FOUNDATION FOR COMPUTER SCIENCE	57	4	F
***** End of Statement *****					



Total Credit Earned : 20 GPA : 7.63 *CGPA : 7.63

Date of Issue : 28-Jan-2009

P. Sivalasa
Controller of Examinations



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(Declared. U/S 3 of UGC Act 1956)

Maduravoyal, Chennai - 600 095, Tamil Nadu, India.

Sl. No. : N 016297

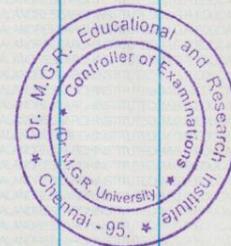
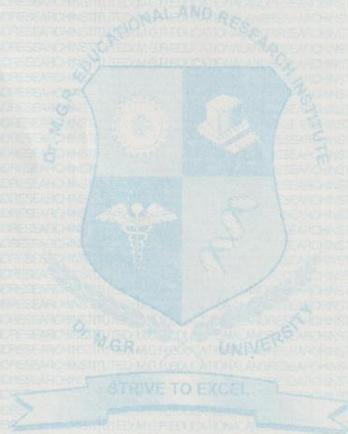


GRADE CARD

Register No. : 081322121015
Name : RAM KUMAR.R
Faculty : Engg.and.Tech

Month & Year : MAY 2009
Degree : M.TECH - CSE
Branch : COMPUTER SCIENCE AND ENGINEERING

Semester	Code	Subject Title	Marks	Credit	Grade
2	MCS604	DATABASE TECHNOLOGY	78	3	A
2	MCS692	SYSTEM SOFTWARE AND DBMS LAB	94	2	H
2	MCS694	TERM PAPER AND SEMINAR	91	2	H
2	MCS696	INDUSTRIAL TRAINING / INTERDEPARTMENTAL PROJECT	98	1	H
2	MCS751	COMPILER DESIGN	74	4	A
2	MCSE02	MULTIMEDIA SYSTEMS	79	3	A
2	MCSE14	DATA MINING AND DATA WAREHOUSING	78	3	A
2	MMG632	ENGINEERING MANAGEMENT	77	3	A
1	MMA603	MATHEMATICAL FOUNDATION FOR COMPUTER SCIENCE	60	4	F*
***** End of Statement *****					
F* - Fail due to External Marks					



Total Credit Earned: 41 GPA : 7.12 *CGPA : 8.02

*GRADE CARD FORMAT CHANGED EFFECTIVE JAN 2009

Date of Issue : 1-JULY-2009

R. Sivalakshmi
Controller of Examinations



Dr. M.G.R.
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(Declared. U/S 3 of UGC Act 1956)

Maduravoyal, Chennai - 600 095, Tamil Nadu, India.

Sl. No. : N 011493



GRADE CARD

Register No. : 081322121015 Month & Year : DEC 2009
 Name : RAM KUMAR R Degree : M.TECH - CSE
 Faculty : Engg. And Tech. Branch : COMPUTER SCIENCE AND ENGINEERING

Semester	Code	Subject Title	Marks	Credit	Grade
3	MCS703	COMPUTER NETWORKS	89	3	S
3	MCS791	PROJECT WORK PHASE - I	92	6	H
3	MCSE13	NETWORK SECURITY	80	4	S
3	MCS701	SOFTWARE ENGINEERING	85	4	F*
3	MCSE19	DISTRIBUTED COMPUTING	83	3	F*
1	MMA803	MATHEMATICAL FOUNDATION FOR COMPUTER SCIENCE	59	4	F*
***** End of Statement *****					
F* - Fail due to External Marks					



Total Credit Earned : 54 GPA : 5.13 *CGPA : 7.45

*GRADE CARD FORMAT CHANGED EFFECTIVE JAN 2009

Date of Issue : 3-FEB-2010

P. Sivalasam
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Dr. M.G.R.
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Sl. No. : G 030482



GRADE CARD

Register No. : 081322121015 Month & Year : MAY 2010
Name : RAM KUMAR.R Degree : MTECH - CSE
Faculty : Engg. And Tech. Branch : COMPUTER SCIENCE AND ENGINEERING

Semester	Code	Subject Title	Marks	Credit	Grade
4	MCS204	PROJECT PHASE - II	95	15	H
3	MCS701	SOFTWARE ENGINEERING	87	4	S
3	MCSE19	DISTRIBUTED COMPUTING	77	3	A
1	MMA003	MATHEMATICAL FOUNDATION FOR COMPUTER SCIENCE	84	4	S
***** End of Statement *****					



Total Credit Earned: 80 GPA : 9.46 *CGPA : 9.13

*GRADE CARD FORMAT CHANGED EFFECTIVE JAN 2009

Date of Issue 23-06-2010

R. Sivakumar
Controller of Examinations



No. A. : 10602

Dr. M.G.R.
EDUCATIONAL AND RESEARCH INSTITUTE
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(Decl. u/s. 3 of UGC Act 1956)

CHENNAI - 600 095, Tamil Nadu, INDIA

GO No. F.9-1/2002-U.3 dt 21.01.03 UGC No. F6-6/2002 (CPP-1) dt. 13.03.03

TRANSFER CERTIFICATE

1. Name of the Student : RAM KUMAR. R
2. Sex : Male / Female
3. Name of the Parent / Guradian : Thiru. K. RAMASWAMY
4. Nationality and Religion : INDIAN/HINDU
5. Community : S C
6. Date of Birth (in words) : 30.05.1983 (Thirty May Nineteen Eighty Three)
7. Date of Admission : July 2008
(a) Course in which admitted : M.Tech (Computer Science & Engineering)
(b) Semester : I YEAR I SEMESTER
8. Date of Leaving : May 2010
(a) Course in which studied : M.Tech (Computer Science & Engineering)
(b) Semester : FINAL YEAR IV SEMESTER
9. Conduct : GOOD
10. Whether qualified for higher studies : REFER THE MARKSHEETS

11. Date of Transfer Certificate : 07.07.2010

Place : Chennai - 600 095.

Date : 07.07.2010


REGISTRAR
PROF. Dr. S. DINAKARAN, Ph.D.

REGISTRAR
Dr. M.G.R.
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Ref .No: SJB/DYVCADMN/EST/01314 – 133

Date: 03-12-2018

SERVICE CERTIFICATE

This is to certify that **MR. R. RAMKUMAR** served as **LECTURER - II** in the **SCHOOL OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY** at **DMI - ST. JOHN THE BAPTIST UNIVERSITY**, Mangochi, Malawi, from June 06th, 2017 to December 03rd, 2018. During his period of service he has performed his duties well and appreciable.

We wish him all success in his future career and endeavors.

Other Responsibilities:

1. Worked in the Controller of Examination Office

Dr. G. Anand Binod Singh

DEPUTY VICE CHANCELLOR (Admin & Finance)-Incharge

DEPUTY VICE CHANCELLOR (Admin. & Finance)
DMI-ST. JOHN THE BAPTIST UNIVERSITY
P.O.Box: 406, Mangochi,
Malawi, Central Africa.



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Tamil Nadu 632521

7305162441



MD411389724FH



உங்கள் **ஆதார்** எண் / Your **Aadhaar** No. :

3457 6277 7973

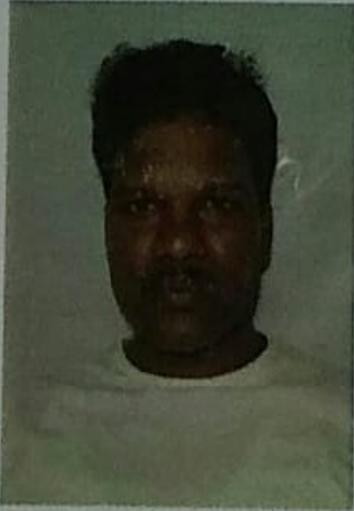
எனது **ஆதார்**, எனது அடையாளம்



सत्यमेव जयते

இந்திய அரசாங்கம்

Government of India



ராம்குமார்

Ramkumar

பிறந்த நாள் / DOB : 30/05/1983

ஆண்பால் / Male

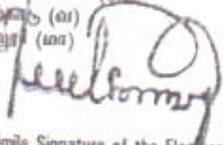


3457 6277 7973

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Vilapakkam (TP)
Arcot (Tk)
Vellore (Dt)

11 புதிய காலனி
விளாப்பாக்கம் (TP)
ஆற்காடு (TK)
வேலூர் (DT)



Facsimile Signature of the Electoral Registration Officer
for 035 - Arcot Assembly Constituency

035 - ஆற்காடு
சட்டமன்றத் தொகுதிகளை உள்ளடக்கிய பதிவு
அதிகாரியின் அடையாள அட்டை

Place : Ranipet

இடம் : இராணிப்பேட்டை

Date / நாள் : 01.02.2008

This Card may be used as an Identity Card
under different Government Schemes.

இந்த அட்டையை அரசின் பல்வேறு திட்டங்களின்
கீழ் அடையாள அட்டையாகப் பயன்படுத்தலாம்.



ELECTION COMMISSION OF INDIA
IDENTITY CARD

இந்தியத் தேர்தல் ஆணையம்
அடையாள அட்டை

TN/06/035/0030685



Elector's Name : Ramkumar

வாக்காளரின் பெயர் : ராம்குமார்

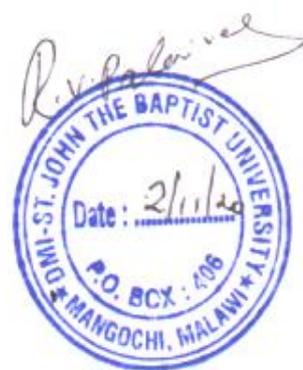
Father / Mother /
Husband's Name : Ramasamy

தந்தை/தாய்/கணவர்
பெயர் : இராமசாமி

Sex / பாலினம் : Male / ஆண்

Age as on 1.1.1998

1.1.1998 அன்று வயது : 18



R.Dis 47/2000 dt

SC

சான்றிதழ் எண்
Certificate No

2133072



மாவட்டக் குறியீடு எண்
District Code

வட்டக் குறியீடு எண்
Taluk Code

கிராமக் குறியீடு எண்
Village Code

08
05
034

சாதிச் சான்றிதழ்
COMMUNITY CERTIFICATE

வேலூர் ஜனாபகம் இலங்கை வட்டம்
இலங்கை இலங்கை
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வகுப்பைச் சார்ந்தவர் தாய்ந்தாய் இரா சாரம் பழங்குடியினர்
உத்தரவுகள் (திருத்தப்பட்ட) சட்டம், 1976, வரிசை எண் 02, பழ
தாய்ந்தாய், பிள்ளை சாரத்தவர் எனச் சான்றளிக்கப்படுகிறது.

This is to certify that Son / Daughter
of Thiru of
Village / Town Taluk
District of the State of Tamil Nadu belongs to
Community which is recognised as
a Scheduled Caste as per the Scheduled Castes and Scheduled Tribes Orders
(Amendment) Act, 1976 vide Serial No.

2. திரு. திருமதி செல்வன் / செல்வி
என்பவருள் அவருள் / டி குடும்பத்தினரும் தமிழ்நாட்டில்
மாவட்டத்தில் வட்டத்தில்

கிராமத்தில் / நகரத்தில் வசித்து வருகிறார்கள் எனச் சான்றளிக்கப்படுகிறது.

2. It is certified that Thiru/Tmt./Selvan/Selvi and
his/her family ordinarily reside(s) at Village/Town
District of Tamil Nadu.

முத்திரை
Seal

கையொப்பம் :
Signature :
நாள் :
Date :
தலை எழுத்துகளில் பெயர் :
Name in Capital Letters :
தலைப் பெயர் :
Designation :
14/2000

S. MURUGAN
TAHSILDAR,
ARCOT, N.A.D.

ANNEXURE-I

CERTIFICATE FROM THE ORGANISATION WHERE THE CANDIDATE IS EMPLOYED

Certified that Mr./Ms./Mrs: MR. R. RANKUMAR is employed as (Designation) LECTURER-II in the (Department/Division Name) SCHOOL OF COMPUTER SCIENCE of (Institution/Industry Name) DMI - ST. JOHN THE BAPTIST UNIVERSITY, MALAWI

We have no objection in forwarding his/her application for the Ph. D Research Programme

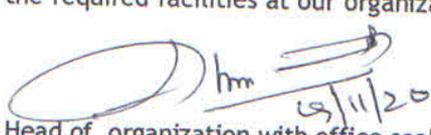
FOR FULL TIME :

The candidate will be sanctioned leave for the duration of the research programme and will be relieved from duty from _____ to _____ to undertake the full time research work in the University.

✓ **FOR PART TIME :**

The candidate will be permitted to undertake part time study in the University/College and will be allowed to be present for discussions with the supervisor, attending course works, conduct of experiments and participations in seminars and related presentations. Further the required facilities at our organization will also be provided to the candidate for doing research.

Date: 9/11/2020


Signature of the Head of organization with office seal

DMI - ST. JOHN THE BAPTIST UNIVERSITY
P.O. BOX : 406, MANGOCHI,
MALAWI