



SATHYABAMA UNIVERSITY

(Established under Section 3 of the UGC Act, 1956)

Declared as Category "A" University by Ministry of HRD, Govt. of India

(A CHRISTIAN MINORITY INSTITUTION)

Jeppiaar Nagar, Rajiv Gandhi Road, Chennai - 600 119, Tamil Nadu, India.



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E-mail : deanresearch@sathyabamauniversity.ac.in Website : www.sathyabamauniversity.ac.in

Ref : Sathyabama/VC/Ph.D/January 2017

Date: 01st December, 2016

To

Dr.M.Vadivel,

Assistant Professor,
Dept.of ETCE,
Sathyabama University,
Chennai-119.

Sir / Madam,

Sub: Ph.D Programme - Provisional Registration - Orders - Issued.

I am directed to inform you that **Mr.Abdul Ali** is permitted to register provisionally for Ph.D Programme on **Part-Time (External)** basis under the Faculty of Computer Science and Engineering in this University under your guidance with effect from **January 2017**.

You are requested to convene a Doctoral Committee meeting* in the University campus with the following two experts, strictly on or before **15th December, 2016** and submit the Minutes of the Doctoral Committee meeting, prescribing the course work to this office, which will facilitate the candidate to undergo course work at the earliest.

1. Dr.R.Amutha, Professor, Dept. of ECE, SSN College of Engg., Kalavakkam-603 110.
2. Dr.S.Jayashri, Professor & Director, Dept. of ECE, Adhiparasakthi Engg., College, Melmaruvathur-603 319.

The research scholar may also be directed to submit the Registration / Enrolment form (form 4 can be downloaded from the University website www.sathyabamauniv.ac.in/phd) and the first semester fee of **Rs.10,000/- (Rupees Ten Thousand only)** as a demand draft drawn in favour of **Sathyabama University** payable at **Chennai** on the day of Doctoral Committee meeting, failing which, it will be construed that the research scholar has not completed the Ph.D admission formalities in full and the provisional registration granted to him / her in this letter is likely to be cancelled.

The Registration Number of the research scholar is **2017191108**. In all future correspondence please quote the Registration Number for reference. The Half yearly progress report in the prescribed format commencing from the date of provisional registration, should be obtained by the research scholar duly signed by you at the end of each semester and should be submitted on the day of review meeting conducted in July / January by the candidate.

Yours

Dr. B. Sheela Rani
Vice Chancellor

Dr. B. Sheela Rani M.S (By Research), Ph.D
Vice Chancellor
Sathyabama University
Jeppiaar Nagar, Rajiv Gandhi Salai,
Chennai - 600 119.

Copy to

1. Dr.R.Amutha, Professor, Dept. of ECE, SSN College of Engg., Kalavakkam-603 110.
2. Dr.S.Jayashri, Professor & Director, Dept. of ECE, Adhiparasakthi Engg., College, Melmaruvathur-603 319.
3. Head, Dept. of CSE, Sathyabama University, Jeppiaar Nagar, Chennai - 119
4. Mr.Abdul Ali, Ph.D. Scholar.
5. Candidate file.

PRINCIPAL

Vidya Jyothi Institute of Technology
Hinayalnagar (Vill), C. B. Road
Hyderabad-75.

* KINDLY ADHERE TO THE FOLLOWING

The date of conducting the DC Meeting should be informed through an official letter duly signed in by the supervisor which should positively reach the Vice Chancellor's office, at least One Week before the meeting either by Fax (044-24500646) or by post, failing which the meeting will be cancelled.

The meetings are to be held mostly on week days and under special circumstances during Week Ends (Saturdays only)
Timings: 9.00 AM - 4.00PM.

It is a first DC Meeting and hence requires completion in a short time period as mentioned in the order issued. Then they have to register for course work which commences from 8th January, 2017 onwards. Course work Registration form 2 (filled in all aspects) to be submitted on or before 4th January, 2017.

Under exceptional circumstances with prior intimation, conduct of First DC meeting will be permitted till 30th June, 2017. If still not conducted then candidates provisional registration will be cancelled and they have to do Re-registration.


A Modified Energy Efficient Hybrid Congestion Control Algorithm Using Fuzzy Logic for Wireless Sensor Networks (WSN)

Abstract:-

Congestion control is an extremely important area within wireless sensor networks (WSN), where traffic becomes greater than the aggregated or individual capacity of the underlying channels. Congestion in Wireless Sensor Networks (WSNs) was happen due to buffer overflow, channel competition and packet collisions, and has a direct impact on the efficiency and quality of service in WSNs. Therefore, special considerations are required to develop more sophisticated techniques to avoid, detect, and resolve congestion.

Node level and link level congestion are two basic kinds of congestion in WSNs. Various approaches have been introduced in the past few years that include routing protocols aided with congestion detection and control mechanism, and dedicated congestion control protocols. Node level congestion occurs when there is no space left in the buffer of the node where the packets arrive. This leads to the loss of data packets and hence the retransmission of packets is required. This causes extra consumption of energy. Link level congestion happens when several neighbouring nodes transmit packets simultaneously leading to collisions. This reduces the link utilization and overall throughput. Congestion in WSN can be controlled using either traffic control or resource control. Traffic control methods attempt to decrease the traffic load whereas resource control methods try to increase the resources to manage the increasing traffic.

A hybrid of rate control and resource control algorithms can be used to control congestion considering the priority of the packets called hybrid algorithm. In this proposal, a hybrid algorithm using fuzzy logic to congestion control in wireless sensor networks is proposed. Here congestion is detected when the service time is greater than the inter-arrival time of packets. The inter-arrival time can be increased by a certain factor computed as congestion degree, thus reducing the rate of sending packets. The congestion degree which is the ratio of service time to inter-arrival time can be sent to the sources. The sources can then adjust the rate of sending packets accordingly to control congestion in the upstream nodes. At the time of congestion, high priority packets are sent using multiple paths after increasing the time between generations of packets thus decreasing the rate of sending packets. Low priority packets are sent using a single path after decreasing the packet sending rate thus increasing the time between sending consecutive packets. The Hybrid congestion control algorithm increases the total number of packets that are finally delivered to the base station thus increasing the throughput. Along with this it also increases the lifetime of the network and reduces the number of


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Date: 02-12-2016

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- Before the doctoral committee meeting, Research scholars are requested to visit and discuss with the concerned Head of the departments of Sathyabama University, regarding the subjects(which are related to your field of research) and syllabus which are available in PG Courses (weekend programmes) and submit it to the guide/supervisor. This will be helpful to the supervisor and Doctoral Committee members to decide the course work during the First Doctoral Committee Meeting.
- Doctoral Committee is empowered to allot the subjects to the research scholars both from Sathyabama University and from any other recognized Universities, National institutes, autonomous colleges and various private universities in India.
- All the research scholars are requested to submit their Post Graduate level subjects and syllabus to Doctoral Committee members which will be helpful to them for not repeating the same as a course work subject.
- "Research Methodology Tools and Techniques" is a compulsory regular course work to be taken by every research scholar.
- Only one subject may be prescribed as directed study out of 2 subjects (for M. Phil degree holders) / out of 4 subjects (for all Master degree holders). The syllabus for the direct study subject should be framed and forwarded to Vice Chancellor/Research Incharge for approval by the supervisor. Direct study subject should be taken up as a last subject by the research scholar after getting prior approval from Vice Chancellor/Research Incharge. All the remaining subjects should be allotted only from the Engineering/Technology discipline in PG level.
- The Research scholars are requested to submit form 2(Application for Course work permission for Research scholars) to Vice Chancellor/Research Incharge to attend the course work classes at Sathyabama University. Last date for submitting the form 2(Application for Course work permission for Research Scholars) will be 04th January, 2017. At the end of the semester based on the attendance certificate (minimum 80%) from the concerned Head of the Departments to Vice Chancellor/Research Incharge the research scholars will be permitted to attend the examination. A minimum of 80% attendance is compulsory to appear for the examination. In the case of Directed Study, the attendance certificate should be obtained from the Supervisor.
- A Ph.D scholar will have to necessary complete all his/her course work subjects (including Directed Study) within three years from the date of registration of Ph.D, failing which he/she will have to apply for re-registration of Ph.D.
- A candidate cannot appear for a course work subject for a third time if he/she fails to pass in more than two successive attempts.
- Research scholars can log on to <http://sathyabamauniversity.ac.in/phd/login.php> by entering their 10 digit register number and verify their details in website. Any discrepancies can be mailed to deanresearch@sathyabamauniversity.ac.in.
- Visit our website www.sathyabamauniversity.ac.in/phd for regular updates and information
- Note: DC Meetings are not to be conducted from 21st December 2016 - 03rd January 2017.

B. Sheela Rani
Dr.B.Sheela Rani
Vice Chancellor

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