



# NATIONAL WORKSHOP on QUANTUM COMPUTATION AND CRYPTOGRAPHY

Date : 23<sup>rd</sup> & 24<sup>th</sup> January 2018

## REGISTRATION DETAILS

Academics, Research Scholars / Student	Rs. 300/-
(Registration Fee includes Workshop Kit and Lunch)	
Last date for Registration	: 18-01-2018
Intimation of Selection	: 19-01-2018

## RESOURCE PERSONS

### Prof. ANIL KUMAR

NASI Senior Scientist Platinum Jubilee Fellow,  
Department of Physics and NMR Research Centre,  
Indian Institute of Science, Bangalore

### Prof. N.D. HARI DASS

TIFR Centre for Interdisciplinary Sciences,  
Hyderabad

### Prof. C.M. CHANDRASHEKAR

Optics & Quantum Information Group,  
The Institute of Mathematical Sciences,  
CIT Campus, Taramani, Chennai

### Prof. R. SRIKANTH

Assistant Professor,  
Division of Theoretical Sciences,  
Poornaprajna Institute of Scientific Research (PPISR)  
Bangalore

### FOUNDER

(Late) Shri D. SUDHARSSANAM

### CHIEF PATRONS

Shri. D. DURAISWAMY, Chairman  
Shri. D. PARANTHAMAN, Vice Chairman  
Shri. D. DASARATHAN, Secretary  
Shri. S. AMARNAATH, Treasurer  
Shri. S. GOPINATH, Joint Secretary

### PATRON

Shri. P. VENKATESH RAJA, B.E., M.S.,  
Director

### CO-PATRON

Dr. P. K. NAGARAJAN, M.E., Ph.D.,  
Principal

### HOD

Dr. G. UMARANI SRIKANTH, M.E., Ph.D.,

### ORGANIZING COMMITTEE

Dr. R. GEETHA, Prof./CSE  
Dr. R. PRASANNA KUMAR, Prof./CSE  
Mrs. D. VINODHA, Asso. Prof./CSE  
Mr. M. BALASUBRAMANIAN, Asst. Prof./CSE  
Mr. S. PRABHU, Asst. Prof./CSE

### Mailing Address :

THE COORDINATOR,  
NATIONAL WORKSHOP ON QUANTUM COMPUTATION  
AND CRYPTOGRAPHY  
DEPARTMENT OF CSE  
S.A. ENGINEERING COLLEGE  
Poonamallee - Avadi Main Road,  
Thiruverkadu, Chennai - 600 077  
Phone : 044-26801999  
Mobile : 9443500550, 9840147871  
Email Id : drmaryanita@saec.ac.in

Sponsored by



Science and Engineering Research Board (SERB)  
Department of Science and Technology (DST)  
Government of India

Coordinators

Dr. E.A. MARY ANITA, Professor / CSE  
Dr. S. VEENA, Professor / CSE

Organized by

Department of Computer Science and Engineering



## S.A. ENGINEERING COLLEGE

(Accredited by NBA, NAAC with 'A' Grade &  
ISO 9001: 2008 Certified Institution)  
Poonamallee - Avadi Main Road,  
Thiruverkadu, Chennai - 600 077.  
Phone : 044-2680 1999, 2680 1499  
Fax : 044-2680 1899  
Website : [www.saec.ac.in](http://www.saec.ac.in)

## ABOUT THE INSTITUTION

S.A. Engineering College was established by the Dharma Naidu Educational & Charitable Trust in the year 1998-'99. The college is approved by AICTE Delhi and affiliated to Anna University, Chennai, Tamil Nadu. The college is well-planned with 5 lakhs sq.ft. of constructed area which includes classrooms, drawing halls, laboratories, workshops and associated facilities. In recognition of quality system of high quality policy being implemented by the Institution, M/s TUV NORD has accorded ISO 9001:2008 Certification. The college is accredited by NBA, NAAC with 'A' Grade. The college offers following 6 U.G programmes and 7 P.G programmes.

- B.E. - Civil Engineering
- B.E. - Computer Science and Engineering
- B.E. - Electronics and Communication Engineering
- B.E. - Electrical and Electronics Engineering
- B.E. - Mechanical Engineering
- B.Tech. - Information Technology
- M.E. - CAD/CAM
- M.E. - Communication Systems
- M.E. - Computer Science and Engineering
- M.E. - Embedded System Technologies
- M.E. - Power Electronics and Drives
- M.B.A. - Master of Business Administration
- M.C.A. - Master of Computer Applications

The college maintains high standard of education by providing a wide array of world class academic facilities, employing highly qualified and experienced faculty members and creating an ambience conducive for providing quality education.

## ABOUT THE DEPARTMENT

The Department of Computer Science and Engineering has dedicated and specialized faculty members in different areas with rich experience in academics, industry and research. The department has excellent class rooms equipped with modern audio-video aids, tutorial rooms, well equipped and spacious laboratories with the latest IBM servers, separate library and seminar hall with all latest equipments.

## VISION OF THE DEPARTMENT

To conceive our department as centre of academic excellence by catering quality education with ethical standards.

## MISSION OF THE DEPARTMENT

To create a conducive atmosphere to achieve active professionalism by fortifying academic proficiency with ethical standards and to enhance the confidence level to develop sustainable solutions to upgrade the society forever.

## BENEFITS OF THE WORKSHOP

The field of Quantum Computation, Information, Communications and Cryptography has made explosive progress in recent years. The proposed workshop would be a step to quickly catch up with the broad audience of computer scientists, physicists and mathematicians.

## OBJECTIVES OF THE WORKSHOP

- ❖ To introduce the faculty to the basic principles of quantum computing so that the faculty can pursue their academic/research activities in this field and later disseminate the knowledge..
- ❖ To understand recent developments in quantum communication and explain the differences between idealized classical and quantum computers.
- ❖ To provide an insight into quantum cryptography and key distribution.

## TOPICS TO BE COVERED

- ❖ Basic elements of quantum physics
- ❖ Fundamentals of Quantum Theory
- ❖ Quantum Computation using NMR
- ❖ Quantum information theory
- ❖ Quantum cryptography
- ❖ Quantum Key distribution
- ❖ Principles of Quantum Computation
- ❖ Quantum Algorithms

## NATIONAL WORKSHOP

on

## QUANTUM COMPUTATION AND CRYPTOGRAPHY

Date : 23<sup>rd</sup> & 24<sup>th</sup> January 2018

## REGISTRATION FORM

Name :

Designation :

Institution :

Address for communication :

Mobile :

Mail ID :

Details of DD (in favor of "PIXELS, S.A.ENGINEERING COLLEGE", payable at Chennai)

1. Amount :

2. DD No. :

3. Bank and branch :

Place :

Date :

Signature of Applicant

## SPONSORSHIP

Dr./Mr./Mrs. \_\_\_\_\_  
\_\_\_\_\_ is a Student/Faculty of our institution and is hereby sponsored for the above workshop. He/She will be permitted to attend the programme, if selected.

Place :

Date :

Signature of the Authority