

## About the Workshop

Graph Theory is one of the multifaceted branches of Mathematics enriched with interesting problems and applications. It is one of the most explored and fastest emerging fields in Mathematics, pouring umpteen opportunities for research. Besides its wide applications in diverse fields of Engineering and Sciences, various branches of Mathematics like Algebra, Topology, Probability, Number Theory etc. have significant roles in the study of Graph problems. The prime focus of this Workshop is to explore the relationship of Graph Theory with Algebra, mainly due to its association with the two important Algebraic objects: *Adjacency Matrix and Automorphism Group*. The connection with these algebraic objects involves two different Algebraic techniques – *Linear Algebra and Group Theory*. This leads to two interesting perspectives of Graph Theory – *Graph Theory from the perspective of Linear Algebra and from that of Group Theory*.

## Objectives

The main objective of this Workshop is to introduce the basic concepts of Algebraic Graph Theory (AGT), with an intention to bring into light an interesting perspective of Graph Theory and its research avenues to the upcoming young researchers. With this aim, the talks are planned to focus on the following:

- Fundamentals of Algebraic Graph Theory Recent research topics on Algebraic Graph Theory with the aid of a number of Survey talks
- Introducing open problems
- Tutorial sessions for problem solving

## Resource persons:

Faculty members of NITK and guest faculty members from other premier institutions will deliver lectures. The following is the list of confirmed speakers:

- Prof. E. Sampathkumar, University of Mysore.
- Prof. Ambat Vijayakumr, CUSAT, Cochin.
- Prof. Murali K Srinivasan, IIT Bombay.
- Prof. Niranjana Balachandran, IIT Bombay.

- Prof. PratimaPanigrahi, IIT Kharagpur.
- Prof. S. Arumugam, MIT Manipal.
- Prof. Tamizhchelvam, MSU, Tirunelveli.
- Prof. Rajesh Kannan, IIT Kharagpur.
- Faculty members from NITK Surathkal.

## Who shall attend?

The workshop is open to all U.G. (final year), P.G., Ph.D.students, Faculty members and researchers from academic and research Institutes.

**Maximum number of participants: 60**

## Course fees:

UG and PG students: ₹ 1000/-

Full-time Research Scholars & Post Doc fellows: ₹ 2000/-

Faculty members outside NITK: ₹ 2500/-

Faculty and students from NITK: Nil

The registration fees (non-refundable) includes all instructional materials, use of laboratory facilities for tutorials, access to the Internet; lunch and tea on all days.

## Accommodation:

Limited on-campus accommodations are available on payment basis.

## Registration details:

Interested participants must first register at

<https://goo.gl/forms/9mDVmtGkE5sWDyuJ3>

Scanned copy of duly Filled-in registration form should be sent to [agt2018nitk@gmail.com](mailto:agt2018nitk@gmail.com) on or before **18<sup>th</sup> January 2018**. The registration form can also be downloaded from <http://macs.nitk.ac.in/workshops> Payment of registration fees shall be made only through NEFT/Online bank transfer:

Account Number: 10175365060

Account Type: Current Account

Name of the Account: Director, NITK Surathkal

Bank : SBI, NITK Campus Branch, 575025

IFSC: SBIN0002273

**Note:** In NEFT/bank transfer, please mention AGT-2018[Your first name] as remark.

**Registration deadline: 18<sup>th</sup> January 2018**



सत्यमेव जयते

Government of India

National Board for Higher Mathematics



## Six Day Workshop on ALGEBRAIC GRAPH THEORY

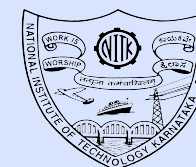
Funded by  
**NATIONAL BOARD FOR HIGHER  
MATHEMATICS, Department of Atomic Energy,  
Government of India**

&

**Council of Scientific & Industrial Research,  
Human Resource Development Group,  
Government of India**

**January 25-30, 2018**

Organized by  
**Department of Mathematical and Computational  
Sciences**



**National Institute of Technology Karnataka  
Surathkal, Mangalore -575025, India.**

<http://www.nitk.ac.in/>

## NITK at a glance

The National Institute of Technology Karnataka (formerly known as Karnataka Regional Engineering College), Surathkal is one of the premier institutes of National importance in India, funded by Ministry of Human Resource Development, Government of India. It is situated on the coastal belt of Karnataka, at about 18km towards the north of Mangalore city. Since its inception in the year 1960, the institute has established itself as one of the top institutes in the country imparting quality technical education with state of the art facilities for teaching, research and consultancy. Prof. Karanam Uma Maheshwar Rao, is the present Director of NITK.

## About the Department

The Department of Mathematical and Computation Sciences, formerly known as Department of Mathematics, was established in 1960. The department caters to the needs of the UG and PG Engineering departments. The faculty members of the department are specialized in different branches of Mathematics and Computer Science; actively engaged in inter-disciplinary research, as well. The department offers two PG programmes: *Master of Computer Applications and M.Tech. in Computational Mathematics (CMA)*, Full time/Part time Doctoral Programmes in Mathematics and Computer Applications. The department has a centralized computer lab providing state-of the-art facilities for students and researchers.

### Patron:

Prof. K. Uma Maheshwar Rao, Director, NITK.

### Coordinators:

Dr. A. SenthilThilak([asthilak23@gmail.com](mailto:asthilak23@gmail.com))  
Dr.Pushparaj Shetty D([psrajschetty@gmail.com](mailto:psrajschetty@gmail.com))  
Dr. Srinivas Rao Kola ([srinu.iitkgp@gmail.com](mailto:srinu.iitkgp@gmail.com))  
Department of MACS, NITK Surathkal, India.

### Advisory Committee:

Dr. B.R. Shankar, HOD, MACS, NITK.  
Prof. S.M Hegde, MACS, NITK  
Dr. S.S.Kamath, MACS, NITK  
Prof. A.Kandasamy, MACS, NITK  
Prof. N.N. Murulidhar, MACS, NITK.  
Prof. Santhosh George, MACS, NITK.

### Organizing Committee:

Mrs. Sujatha Achar, MACS, NITK  
Dr. R. Masdhusudhan, MACS NITK  
Dr. Vivek Sinha, MACS, NITK  
Dr. Jidesh P, MACS, NITK  
Dr. P. Sam Johnson, MsACS, NITK  
Dr. V. Murugan. MACS, NITK  
Dr. Satyanarayana Engu, MACS, NITK  
Dr. Vishwanath K.P, MACS, NITK  
Dr. Chandhini G., MACS, NITK  
Dr. Kedarnath Senapati, MACS, NITK

## Registration form

1. Name of applicant :
2. Gender (Male/Female) :
3. Designation & Department :
4. Qualification :
5. Mailing Address :  
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6. Contact number :
7. Email :
8. Payment Details  
Amount : ₹  
NEFT Ref. (UTR) No. :  
Bank :  
Date :  
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9. Category of participants:  
 Faculty/Student of NITK  
 UG/PG student  
 Full Time Research scholar / PDF  
 Faculty/Student from other institutes
10. Require accommodation Facility? : Yes / No

Place & Date:

Signature of the applicant

Dr./Mr./Ms. \_\_\_\_\_ is a  
faculty / student / research scholar of this institute  
and permitted to attend this workshop.

Signature of the Head of the Institution

**Note:** Please email the scanned copy of the duly signed registration form to [agt2018nitk@gmail.com](mailto:agt2018nitk@gmail.com) & produce the original form the time of registration at NITK.s