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(HOD Mathematics)

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Roorkee

# Mini Symposium on **Analytic Number Theory and its Applications in** Cryptography/Computing: A tribute to S. Ramanujan

(August 31-September 1, 2019)

Organized by

#### **Department of Mathematics**





#### **VENUE:**

**Jaypee Institute of Information Technology** Sector 128, Noida 201304 - U.P. Tel: 0120-4195834/5942 Website: www.jiit.ac.in

#### Overview

Number Theory is a vast and fascinating field of mathematics, sometimes called "higher arithmetic" consisting of the study of the properties of whole numbers. The best known application of number theory is public key cryptography, such as the RSA algorithm. Number theory and Cryptography are inextricably linked. Cryptography is the process of transferring information securely, in a way that no unwanted third party will be able to understand the message. It depends on a continuing stream of new insights and methods from number theory, arithmetic algebraic geometry, and other branches of algebra.

The focus of the event will be on the development. of algorithms with respect to algebraic coding and various other applications of number theory with the objective to make the participants understand concepts of number theory and cryptography. The content of this event will be based on emerging developments and discussion of open problems posed by applications. It is vital that scientists, engineers and researchers across these fields meet and explore new dimensions in applicable mathematics for their academic and research activities.

#### Resource Persons

- ☐ Prof. Rajendra Kumar Sharma, Indian Institute of Technology (IIT), New Delhi.
- ☐ Dr. Shanta Laishram, Associate Professor, Indian Statistical Institute (ISI), New Delhi.
- ☐ Dr. Anuradha Sharma, Associate Professor, **Indraprastha Institute of Information Technology** (IIITD), New Delhi.

## **Call for Papers**

The organizing committee welcomes abstract submissions for oral presentations on following themes:

Coding theory: Error-correcting codes, Linear Block Codes, Convolutional Codes, Reed Solomon codes.

Algorithmic aspects of cryptology: Symmetric cryptology, public-key cryptography, cryptanalysis, Perfect secrecy.

Discrete mathematics and algorithmic tools: Boolean functions, sequences, finite fields, related algebraic systems.

## **About the University**

Jaypee Institute of Information Technology (JIIT), Noidayvailable on request on first come first served basis, was established in the year 2001 and has been declared as a "Deemed to be University" under Section 3 of UGC Act 1956. The university is accredited by the National Assessment and Accreditation Council (NAAC) of the UGC. The undergraduate and post graduate programs of the university have been approved by AICTE. JIIT's state-of-the-art, environmentally conditioned campus comprises smart buildings with Wi-Fi connectivity covering the academic block, business school cum research block, faculty residences, student hostels and Annapurna. JIIT has been constantly ranked amongst the top engineering college in Delhi NCR. Recently it has been ranked among top Engineering Colleges in India by NIRF (MHRD) Rankings.

#### **Department of Mathematics**

Mathematics plays a key role in the development of modern sciences, engineering, management and many other important areas. With this aim in mind the Department of Mathematics was created from the very inception of the institute. Besides catering to the basic needs of the various B. Tech. / M. Tech./M.Sc programs of the institute, it had a strong fervor towards research and development from the very beginning and efforts are being made for the convergence of Mathematics with other disciplines by introducing courses interdisciplinary nature such as Fuzzy sets and systems, Information theory and coding, Fractals and Chaos, Finite Element Methods, Optimization Techniques etc. At present a number of research scholars are working for Ph.D. degree in various areas of specialization.

## Who can participate?

The program is open to all Research Scholars/Faculty Members/ Scientists/ Engineers working in Educational Institutes/ Industries/ R&D organizations.

## **Accommodation and support**

All the participants would be provided tea/lunch on each

day of the workshop. Limited paid accommodation may be a

## **Registration Fee**

Industry personnel Rs. 2500 Academicians Rs. 1500 Research Scholars/Students Rs. 500 Participants can pay the fees either by online NEFT/ demand draft/ cash (at the time of registration), Demand draft should be in favor of "Javnee Institute of Information Technology", payable at NOIDA.

#### Bank Details for NEFT

Bank and Branch: Axis Bank, KARKARDOOMA, NEW **DELHI 110092** 

Beneficiary Name: Jaypee Institute of Information **Technology** 

Account Number: 910010050443719

IFSC code: UTIB0000372

#### **Important Dates**

17<sup>th</sup> August , 2019 Last date for Submission of **Application Form/abstracts** 

19th August 2019. Display of List of Selected **Participants** 

## How to Apply

The interested persons may submit the dully filled application form to:

Dr. Amita Bhagat, Dr. Pinkey Chauhan

**Department of Mathematics** 

**Jaypee Institute of Information Technology** 

Sector -128, Noida, 201304, Uttar Pradesh.

Contact no: 9999291230, 9958585655

It can also be emailed at mathiiitworkshop2018@gmail.com

#### How to reach

Metro: The station closest to the campus is Botanical Garden. Shared autos and reserved autos are available there. You have to hire one for JIIT, Sector-128.

Railway: The New Delhi Railway Station and the Old Delhi railway station connect Noida to the Indian railway network.



#### APPLICATION FORM

Mini Symposium on **Analytic Number Theory and its Applications in Cryptography/Computing:** A tribute to S. Ramanujam Organized by

Department of Mathematics, JHT, Noida (August 31-September 1, 2019)

Name (In capital letters)	•••••
Designation	•••••
Affiliation / Institution	•••••
Specialization	
Correspondence Address	
E-mail	• • • • • • • • • • • • • • • • • • • •
Mobile No	•••••
DD NoDate	•••••
Accommodation Required:	Yes/No
Date and time of arrival:	
Date and time of departure:	
Date	Signature

Follow the subsequent Google form Link for registration with Payment Details:

https://docs.google.com/forms/d/e/1FAIpOLSc1NG056Cd0U46UBaF quhBoFbS4uxdueg-WrMPrBpir89pYKA/viewform