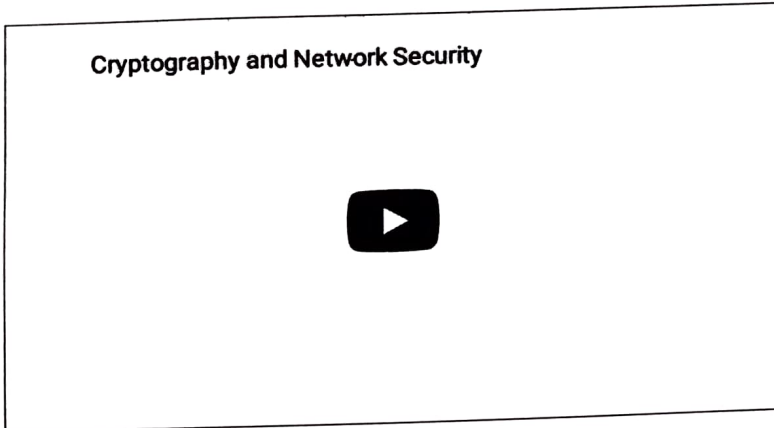


# Course Name: Cryptography and Network Security

[About Course](#)
[Certificate Type](#)
[Toppers list](#)
[Statistics](#)


## Course abstract

The aim of this course is to introduce the student to the areas of cryptography and cryptanalysis. This course develops a basic understanding of the algorithms used to protect users online and to understand some of the design choices behind these algorithms. Our aim is to develop a workable knowledge of the mathematics used in cryptology in this course. The course emphasizes to give a basic understanding of previous attacks on cryptosystems with the aim of preventing future attacks.

## Course Instructor

 Media Object

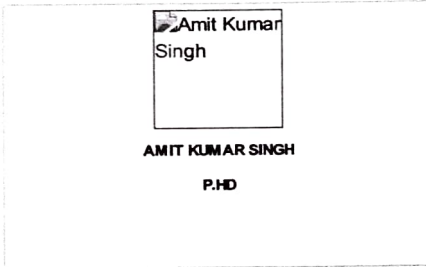
### Prof. Sourav Mukhopadhyay

Sourav Mukhopadhyay is an Associate Professor, Department of Mathematics at Indian Institute of Technology Kharagpur. He has completed his B.Sc (Honours in Mathematics) in 1997 from University of Calcutta, India. He has done M.Stat (in statistics) and M.Tech (in computer science) from Indian Statistical Institute, India, in 1999 and 2001 respectively. He worked with Cryptology Research Group at Indian Statistical Institute as a PhD student and received his Ph.D. degree in Computer

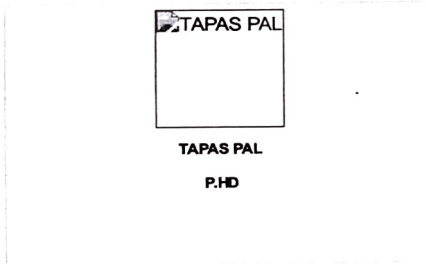
( ) Science from there in 2007. He was a Research Assistant at the Computer Science department of School of Computing, National University of Singapore (NUS). He visited

Inria Rocquencourt, project CODES, France and worked as a post-doctoral research fellows at the School of Computer Engineering, Nanyang Technological University (NTU), Singapore. He was a post-doctoral research fellows and a part time Lecturer with School of Electronic Engineering, Dublin City University (DCU), Ireland.

### Teaching Assistant(s)



Amit Kumar Singh  
AMIT KUMAR SINGH  
P.HD



TAPAS PAL  
TAPAS PAL  
P.HD


🕒 Course Duration : Jan-Apr 2020

📖 View Course (<http://archive.nptel.ac.in/courses/106/105/106105162/>)

📅 Enrollment : 18-Nov-2019 to 03-Feb-2020

✍ Exam registration : 16-Dec-2019 to 20-Mar-2020

✍ Exam Date : 25-Apr-2020

  
PRINCIPAL  
G. Narayanamma Institute of  
Technology & Science (for women)  
(AUTONOMOUS)  
Shaikpet, Hyderabad - 500 104



**G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (For  
Women)  
(AUTONOMOUS)  
Shaikpet, Hyderabad – 500104**

**Department: Information Technology**

2019-20

REPORT

**NPTEL Course on Cryptography and Network Security**

Date of program: Jan-Apr 2020

Resource person: Prof. Sourav Mukhopadhyay, IIT Kharagpur

About the Program:

This course develops a basic understanding of the algorithms used to protect users online and to understand some of the design choices behind these algorithms. Our aim is to develop a workable knowledge of the mathematics used in cryptology in this course. The course emphasizes to give a basic understanding of previous attacks on cryptosystems with the aim of preventing future attacks. A wide variety of basic cryptographic primitives will be discussed along with recent developments in some advanced topics like identity-based encryption, attribute-based encryption, functional encryption, two-party/multi-party computation, bitcoin and cryptocurrency and postquantum cryptography. The cryptanalysis part will help us understanding challenges for cybersecurity that includes network security, data security, mobile security, cloud security and endpoint security.

PRINCIPAL  
G. Narayanamma Institute of  
Technology & Science (for women)  
(AUTONOMOUS)  
Shaikpet, Hyderabad - 500 104.

Signature of the Faculty member

V. Sessa Bhargavi