

Faculty Information



Prof. Gaurav Sharma is with the University of Rochester, where he is a Professor in the Department of Electrical and Computer Engineering, Department of Computer Science, Department of Biostatistics and Computational Biology, and Department of Oncology. From 2008-2010, he served as the Director for the Center for Emerging and Innovative Sciences (CEIS), a New York state supported center for promoting

joint university-industry research and technology development, which is housed at the University of Rochester. From 1996 through 2003, he was with Xerox Research and Technology in Webster, NY first as a member of research and technology staff and then as a Principal Scientist and Project Leader. He received the Ph.D. in Electrical and Computer Engineering from North Carolina State University, Raleigh, NC, and masters degrees in Applied Mathematics from NCSU and in Electrical Communication Engineering from the Indian Institute of Science, Bangalore, India. He received his bachelor of engineering degree in Electronics and Communication Engineering from Indian Institute of Technology, Roorkee (formerly, Univ. of Roorkee). Professor Sharma is a fellow of the IEEE, a fellow of SPIE, and a fellow of the Society for Imaging Science and Technology (IS&T). For more information visit: <http://www.ece.rochester.edu/~gsharma/>



Dr. Surya Prakash is currently an Assistant Professor in Discipline of Computer Science and Engineering at Indian Institute of Technology Indore, India. He is also the Head of discipline of computer science and engineering. He received his MS and PhD degrees in computer science and engineering from Indian Institute of Technology Madras, India and Indian Institute of Technology Kanpur, India respectively.

His research interest includes image processing, computer vision, pattern recognition, biometrics, and identity and infrastructure management. He has published several research articles in peer-reviewed international journals and conferences. He has also co-authored two books titled "IT Infrastructure and Its Management" published by Tata McGraw-Hill, India and "Ear Biometrics in 2D and 3D: Localization and Recognition" published by Springer. He has also been in the program committees of several international conferences in the field of pattern recognition, image processing and intelligent computing. For more information please visit: <http://iiti.ac.in/people/~surya/>

Topics to be Covered

- **Introduction to Media Security and Forensics:** Cryptography Basics, Public Private Key Crypto, AES and RSA Encryption and Decryption, Hash functions and Signatures
- **Media Authentication:** Image, Video, and Hardcopy, MD5/Secure Hash Algorithm, Watermarking, Data Hiding, Steganography
- **Image Watermarking:** Spread Spectrum Watermark Embedding, Hardcopy Image Data Hiding, Quantization Index Modulation, Watermark Embedding
- **Audio and Video Watermarking:** Spread Spectrum and Echo Audio Data Embedding, Speech Watermarking, Perceptual Shaping for Audio Data Embedding, Video Watermarking
- **Steganography:** Image Steganography and Steganalysis, Image Steganography Evaluation, Media Encryption for Distribution and Privacy, Access Control for Video Distribution, Compressive Sensing Based Image Encryption
- **Media Forensics:** Image Sensor Forensics, PRNU Camera Identification, Counter-forensics and Privacy, Summary and Emerging Directions, PRNU Counter forensics

Who Should Attend the Course ?

- Research scholars, graduate students, researchers from different organization across the country working in the area of multimedia security and forensics.
- Faculty members and academicians interested in the field of multimedia security and forensics.
- Young researchers working in R & D laboratories related to multimedia security and forensics.
- Student of all levels (BTech/MTech/MS/PhD) from academic and technical institutions.

Course Co-ordinator

Dr. Surya Prakash
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For any further information and registration, please visit :
<http://cse.iiti.ac.in/GIAN/MSF/index.html>

GLOBAL INITIATIVE ON ACADEMIC NETWORK



10 Days Course

On

**MEDIA SECURITY AND
FORENSICS**

March 26–April 06, 2018

Under the aegis of
**MINISTRY OF HUMAN
RESOURCE DEVELOPMENT**



Organized By

**Discipline of Computer Science & Engineering
Indian Institute of Technology Indore
Indore -453552**

Overview

The area of digital media security and forensics mainly deals with finding deleted or hidden data in digital media. It is the science of investigation into the systemic processes and primarily utilizes computing and communication technologies to acquire, treat, store, transmit and analyze data. It also deals with understanding the underlying technologies behind various computing tools used in the generation and the consumption of digital data and the development of ability to obtain reliable and scientifically valid information from digital media. It deals with developing techniques and tools to identify the person(s) responsible for the compromise or theft of sensitive digital data, if it occurs. This course on *media security and forensics* will provide an excellent opportunity to students, researchers and practitioners to know about the latest developments in the area of media security and forensics.

Objectives of the course

Main objectives of the proposed course are listed below.

- It will introduce participants to the exciting area of media security and forensics.
- It will provide participants an opportunity to learn basic as well as advance topics of media security and forensics.
- The course will deal with both theoretical and practical aspects of the media security and forensics. It will cover various techniques/algorithms used in media security and forensics.

Schedule of The Course

Date : March 26–April 06, 2018
Total No. of days/lectures : 10 days /30 lectures & tutorials

Registration Fee

Registration	Early Registration (on or before January 26, 2018)	Late Registration (on or before February 26, 2018)	After February 26, 2018 or onsite
Participant from outside India	USD 500	USD 600	USD 650
Participant from Industry/ Business organization	Rs. 20,000	Rs. 24,000	Rs. 26,000
Participant from Academic Institution	Rs. 5,000	Rs. 6,000	Rs. 6,500

The fee includes all instructional materials, computer use for tutorials, and lunch. The participants will be provided with single bedded accommodation on payment basis.

How to Apply

Step 1: Payment of Registration Fee:

Payment for the registration fee can be made through online/offline mode. Online payment can be made through **NEFT transfer** and offline payment can be made through **Demand Draft**. Details regarding payment are as follows:

I. By Demand Draft: Demand Draft should be drawn in favor of “**Registrar, IIT Indore**”, payable at Indore.

II. By NEFT Transfer: Registration fee can be paid through NEFT. Transfer of the amount can be done to the account number given below:

Name of the Beneficiary : Registrar, Indian Institute of Technology Indore

Name of Bank : Canara Bank

Branch Code : IIT Indore, Simrol Campus Branch

Beneficiary Account No. : 1476101027440

Bank MICR Code : 452015003

Bank IFS Code : CNRB0006223

Step 2: Registration: After completing the payment of registration fee, fill the application form available <http://gian.iiti.ac.in/register.php> to complete the registration.

If payment is made through Demand Draft, send your Demand Draft to the following address (also e-mail the scanned copy of the Demand Draft to surya@iiti.ac.in):

Dr. Surya Prakash

Assistant Professor

Research Group on Biometrics, Pattern Recog. & Computer Vision

Discipline of Computer Science and Engineering

Indian Institute of Technology Indore

Simrol Campus, Khandwa Road,

Indore – 453552, India.

Registration can be also be done offline by filling the form printed in this brochure and sending it along with Demand Draft (print of the online payment receipt if payment is made online) to above mentioned address

Credits

The course carries 2 credits. All the participants will be provided a certificate after completion of the course.



**A 10 Days Course
On**

Media Security and Forensics

Registration Form

March 26–April 06, 2018

Personal Details:

Name of the Applicant :

Designation:

Affiliation:

Address for Correspondence:

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Phone:.....

E-mail:.....

Details of Bank Draft:

Draft number:

Bank Name:

Branch Name:.....

Amount Rs.Dated/...../2018

Accommodation Required:

YES : No:

Note: Accommodation can be arranged on payment basis.

(Signature of Candidate)

Note: A photocopy of this form can also be used for the registration .