

IEEE REVA University Student Branch



REPORT ON

Technical Talk and Short Film On “Claude Shannon & His Theory of Information” “

Date: 30th April 2016

Coordinators:

1. Dr. Venkata Siva Reddy
Professor's, School of E&C Engineering,
REVA University, Bengaluru
2. Prof. Shrikant S. Tangade,
IEEE Student Branch Counselor,
Asst. Prof., School of E&C Engineering,
REVA University, Bengaluru.

Correspondence:

Prof. Gopal Krishna Shyam (School of Computing and IT)
Prof. Nirmalkumar S. Benni (School of ECE)
Prof. MaheshG.S. (School of EEE)

Total Students Participated: 92

Targeted Audience: UG and PG Students of School of ECE, Computing &IT and EEE

Resource Person:

Himanshu Tyagi is an Assistant Professor at the Electrical and Communication Engineering Department of the Indian Institute of Science (IISc), Bangalore. His research focuses on information theory and its applications in communication, computation, security, statistics, and control. Prior to joining IISc, he was a postdoctoral researcher at the Information Theory and its Applications Centre of University of California, San Diego. Himanshu has a Ph.D. degree in Electrical and Computer Engineering from the University of Maryland, College Park, an M.Tech. degree in Communication and Information Technology and a B.Tech. in Electrical Engineering, both from the Indian Institute of Technology, Delhi.

About The Talk:

Our IEEE REVA University Student Branch (RU SB) along with School of ECE, Computing & IT and EEE "Celebrated 100th (1916-2016) Birthday of Claude Elwood Shannon-Father of Information Theory" by arranging Technical Talk and Short Film on "ClaudeShannon and His Theory of Information". The resource person is Dr. Himanshu Tygi, Assistant Professor at Electrical Communication Engineering of the Indian Institute of Science (IISc).

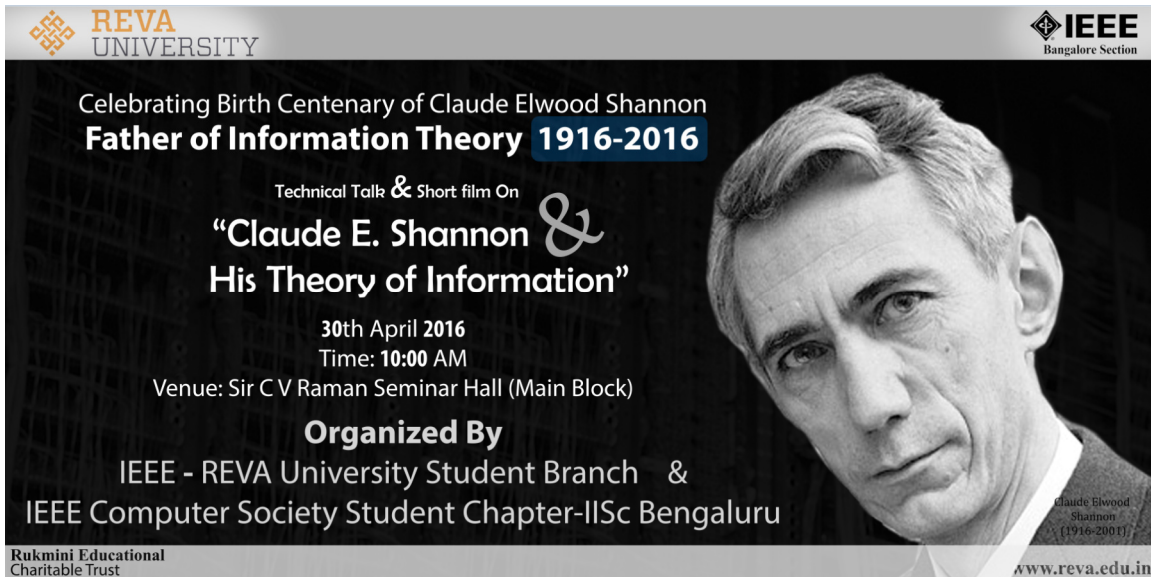
Talk Abstract:

On the occasion of the 100th birthday of Claude Shannon, we revisited some of his famous works and recalled how his simple mathematical theory of information ushered in the age of digital communication and information.

How many bits of communication do we need to send the information of this abstract over an email? How many bits of information can be transmitted over a noisy communication channel? In order to answer these questions, in a mathematically rigorous fashion with engineering utility, Claude Shannon crafted the notions of entropy and mutual information as measures of information. His discovery led to a unified mathematical understanding of communication, computation and learning in terms of associated information transfer and ushered in the age of information. Every digital communication system, every secure transaction, every Tweet and every joke shared via WhatsApp and every data storage and data analytics algorithm draws something from Shannon's information theory. On the occasion of his 100th birthday, we shall review the basic mathematical measures of information and illustrate their utility via simple illustrative examples.

The Photographs:

Photo-1: Banner



The banner features a black and white portrait of Claude Elwood Shannon on the right side. The text on the left side of the banner reads: "REVA UNIVERSITY" at the top left, "IEEE Bangalore Section" at the top right, "Celebrating Birth Centenary of Claude Elwood Shannon" in a smaller font, "Father of Information Theory 1916-2016" in a larger font, "Technical Talk & Short film On 'Claude E. Shannon & His Theory of Information'", "30th April 2016", "Time: 10:00 AM", "Venue: Sir CV Raman Seminar Hall (Main Block)", "Organized By IEEE - REVA University Student Branch & IEEE Computer Society Student Chapter-IISc Bengaluru", "Rukmini Educational Charitable Trust" at the bottom left, and "www.reva.edu.in" at the bottom right. A small caption "Claude Elwood Shannon (1916-2001)" is visible near the portrait.

Photo-2: Participants with Resource Persons

