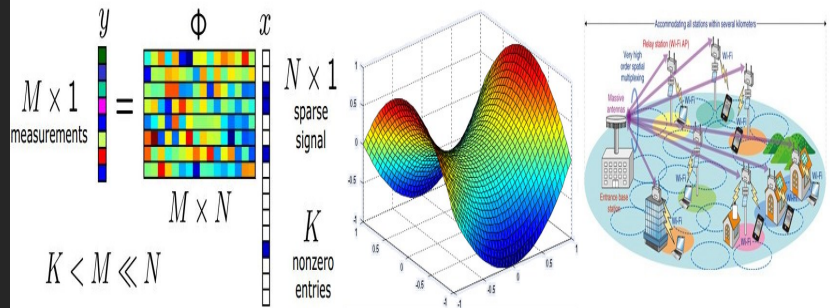


**Short Course
on
Optimization for 5G Cellular
Networks, Compressive
Sensing and Data Science:
With CVX-MATLAB Project**



Important Dates

Course Dates
Oct 5th - 8th, 2017

Last Date for Registration
Sep 18th, 2017

Venue

Seminar Hall,
Pioneer Batch Building,
Visitor's Hostel,
IIT Kanpur

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Convex Optimization techniques are key enablers for next generation wireless technologies, advanced signal processing and big data solutions. Recently developed state-of-the-art optimization tools such as CVX can be employed to tackle large-scale optimization problems arising in research and industry. Several new convex optimization techniques have been successfully developed for modern applications that have led to a significant impact in areas such as Massive MIMO/ OFDM based 4G/ 5G Wireless Networks, Compressive Sensing, Cooperative Communication Systems, Cognitive Radio, Image/ Video Processing, Big Data amongst others.

This course is a valuable resource for engineers, data scientists, faculty and B.Tech/ M.Tech/ Ph.D. students to acquire the necessary skills for research and industry applications in next generation 5G wireless network optimization, sparse signal processing and data analytics. It is especially designed with both a research and industry focus towards providing participants with an in depth technical exposure to modern optimization theory with practical hands on technology experience. The modular approach will present a comprehensive treatment of optimization techniques and tools for Massive MIMO, OFDM, Image/ Video Processing, Compressive Sensing, Big Data, Machine Learning and other key technologies. The classes will focus on introducing the strong theoretical underpinnings of modern optimization along with illustration of several practical applications in current technology areas. Problem solving tutorials will also be conducted to further enhance and consolidate understanding. Participants will also be able to participate in a full day CVX-MATLAB project intended to provide hands-on training towards solving practical problems in the areas of Massive MIMO-OFDM, Compressive Sensing and Big Data.

Target Audience

- Ph.D./B.Tech/M.Tech students interested in Massive MIMO-OFDM, Compressive Sensing, Big data.
- Data scientists, Engineers and Industry Professionals
- ECE/EEE/CSE Faculty of Government and Private Engineering Colleges/Universities.

For more details and registration information, visit the website

<http://www.iitk.ac.in/mwn/cvx/>