

Indo-French Centre for Applied Mathematics (IFCAM)
National Mathematics Initiative (NMI)
Department of Mathematics
Indian Institute of Science
Bangalore

Summer School on Large Scale Optimization
June 28 - July 07, 2016

Venue: LH 1 - Department of Mathematics

Schedule for the school on basics of optimization

Date	09.00 am to 10.30 am	10.30 am to 11.00 am	11.00 am to 12.30 pm	12.30 pm to 02.00 pm	02.00 pm to 03.30 pm	03.30 pm to 04.00 pm	04.00 pm to 05.30 pm
28-06-2016 Tuesday	Optimization without calculus: interesting examples by Prof. Mallikarjun Rao, Prof. Vishnu Narayan, IEOR, IIT Bombay	C O F F E T E A B R E A K	Essential real analysis used in optimization theory IITB Bombay	L U N C H B R E A K	Convex analysis; important properties of convex sets and functions IITB Bombay	C O F F E T E A B R E A K	Convex analysis; important properties of convex sets and functions IITB Bombay
29-06-2016 Wednesday	Linear programming and applications IITB Bombay		Linear programming and applications IITB Bombay		KKT optimality conditions and duality IITB Bombay		KKT optimality conditions and duality IITB Bombay
30-06-2016 Thursday	Steepest Descent method IITB Bombay		Newton's method IITB Bombay		First Order Methods for Convex Optimization by Prof. Saketha Nath CSE, IIT Bombay		First Order Methods for Convex Optimization by Prof. Saketha Nath CSE, IIT Bombay
01-07-2016 Friday (Venue - LH 5)	Large-Scale Convex Optimization for Image Processing by Prof. Kunal Narayan Chaudhury, EE, IISc.		Large-Scale Convex Optimization for Image Processing by Prof. Kunal Narayan Chaudhury, EE, IISc.		Hands on Session		Hands on Session

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Schedule for the Workshop on Advanced Topics in Optimization

Date	09.00 am to 10.30 am	10.30 am to 11.00 am	11.00 am to 12.30 pm	12.30 pm to 02.00 pm	02.00 pm to 03.30 pm	03.30 pm to 04.00 pm	04.00 pm to 05.30 pm
04-07-2016 Monday	Large-scale optimization for machine learning by Francis Bach INRIA, Paris	C O F F E T E A B R E A K	An interplay of SVD and k-means by Amit Deshpande Microsoft Research India	L U N C H B R E A K	Introduction to linear complementarity problems: bridging the continuous and discrete world by Ankur Kulkarni IIT Bombay	C O F F E T E A B R E A K	Linear complementarity, independent sets and network games by Ankur Kulkarni IIT Bombay
05-07-2016 Tuesday	Optimization for Financial Engineering by Garud Iyengar Columbia Univ., NY		Optimization for Financial Engineering by Garud Iyengar Columbia Univ., NY		Optimization for Financial Engineering by Garud Iyengar Columbia Univ., NY		Semidefinite Approximation of Quadratic Problems by Kunal Narayan Chaudhury, IISc
06-07-2016 Wednesday	Provable Non-convex Optimization for Machine Learning by Prateek Jain Microsoft Research India		Provable Non-convex Optimization for Machine Learning by Prateek Jain Microsoft Research India		Large-scale optimization for machine learning by Francis Bach INRIA, Paris		An interplay of SVD and k-means by Amit Deshpande Microsoft Research India
07-07-2016 Thursday	Large-scale optimization for machine learning by Francis Bach INRIA, Paris		Large-scale optimization for machine learning by Francis Bach INRIA, Paris		Large-scale optimization for machine learning by Francis Bach INRIA, Paris		Manifold optimization: applications and algorithms by Bamdev Mishra Amazon Development Centre India