



TUTORIAL WORKSHOP CUM FDP on “MATHEMATICAL FOUNDATIONS of STATIC & DYNAMIC OPTIMIZATION”

Resource Person:

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This **tutorial workshop cum FDP on “Mathematical foundations of Static & Dynamic Optimization”** was organised by the Department of Electronics and Communication Engineering (ECE), SoET, Bhubaneswar Campus, Centurion University of Technology and Management, Odisha, India. Total of 93 participated in the tutorial FDP in online and offline mode including both students and faculties.

Topics Covered:

An overview of Static Optimization

- Unconstrained optimization
- Constrained optimization with equality constraints
- Constrained optimization with inequality constraints
- Numerical Optimization
 - Line search method
 - Newton’s method
 - Steepest descent search
- A generic MATLAB function for optimization

Dynamic Optimization Fundamentals

- Optimal decision control variables
- Examples: guidance of missiles, guidance of UAVs, guidance of Spacecrafts
- Typical challenges
- Calculus of variations: basic concepts
- Boundary conditions
- Problem statement for a Dynamic optimization
- Solution approach for dynamic optimization

- o Direct approach: Gradient and Transcription methods
- o Indirect approach: Variation calculus
- Discussion on safe landing of Chandrayaan-3.



Dr. Prasanta Ku. Mohanty
Dean Academic



Co-ordinator: Dr Harish Chandra Mohanta
HOD, ECE

Images:





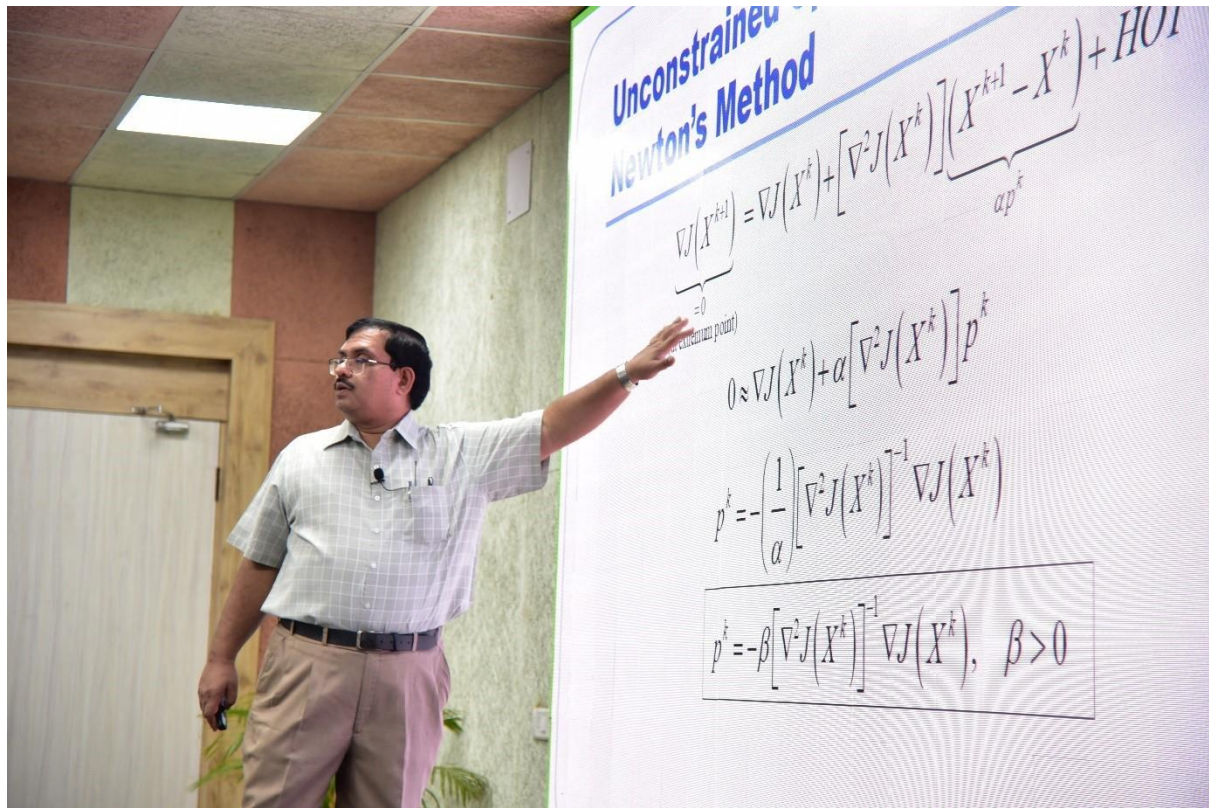












LIST OF THE PARTICIPANTS

	Name of the Participant	Department Name	Designation
1	R.C. Mohanty	MECH	Professor
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5	N.Jeebaratnam	ECE	Assttand Professor
6	Sasmita Kumari Nayak	CSE	Assttand Professor
7	Dr Dillip Kumar Panigrahi	MECH	Assttand Professor
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10	Rama Prasanna Dalai	EEE	Assistant Professor
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16	Chinmay Das	Mechanical Engineering	Associate Professor
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30	Sharma	Department of Physics	Research Scholar
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55	Debajani Sahoo	Mathematics	Student
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70	Barsarani Mohanty	Mathematics	Students
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92	Ananya Mishra	Botany	Research scholar
93	Satyaprakash Naik	Management	Research Scholar