



**Workshop on Control and Inverse Problems**  
IISc Mathematics Initiative  
Department of Mathematics, Indian Institute of Science, Bangalore



**December 01 - 05, 2009**  
Venue : Lecture Hall I, Department of Mathematics, IISc

Date	09:30 - 10:30	10:30 - 10:50	10:50 - 11:50	12:00 - 01:00	01:00 - 02:30	02:30 - 03:30	03:30 - 03:50	03:50 - 04:50
01.12.2009 Tuesday	MV	<b>Tea</b>	HC	SE	<b>Lunch</b>	RA	<b>Tea</b>	AJS
02.12.2009 Wednesday	MV		HC	RA		SE		DG
03.12.2009 Thursday	MV		RA	RB		XF		RB
04.12.2009 Friday	SS		SE	RA		XF		NN
05.12.2009 Saturday	SS		NN	SE		SS		NN

	Speaker	Title
<b>MV</b>	M. Vanninathan	Optimal Control Problems and Homogenization
<b>HC</b>	Hui Cao	Ill-posed elliptic Cauchy problem and the application of the balancing principle for its regularization
<b>SE</b>	Sylvain Ervedoza	Resolvent estimates in controllability and application to the discrete wave equation.
<b>RA</b>	Rakesh	Carleman estimates and inverse problems for hyperbolic PDEs
<b>AJS</b>	A. J. Shaiju	Nonlinear control and Hamilton-Jacobi-Bellman equations
<b>DG</b>	Debasish Ghose	Consensus in Multi-Agent Systems: From Collectivism to Oligarchy
<b>RB</b>	Ravi Banavar	Control, mechanics and geometry
<b>SS</b>	Shiva Shankar	An algebraic approach to the control of systems of PDE
<b>XF</b>	Xiaoyu Fu	Controllability and observability of wave equations
<b>NN</b>	Neela Nataraj	Adaptive FEM for elliptic problems.



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**December 07 - 12, 2009**  
 Venue : Lecture Hall I, Department of Mathematics, IISc

Date	09:30 - 10:30	10:30 - 10:50	10:50 - 11:50	12:00 - 01:00	01:00 - 02:30	02:30 - 03:30	03:30 - 03:50	03:50 - 04:50
07.12.2009 Monday	AKN	<b>Tea</b>	VK	PR	<b>Lunch</b>	VK	<b>Tea</b>	RMV/N
08.12.2009 Tuesday	AKN		VK	AKN		RMV/N		PR
09.12.2009 Wednesday	AKN		VK	-		-		-
10.12.2009 Thursday	RMV/N		RMV/N	RP		RP		-
11.12.2009 Friday	RP		EZ	BD		-		-
12.12.2009 Saturday	EZ		EB	BD		JPR		-

	<b>Speaker</b>	<b>Title</b>
<b>VK</b>	Venky Krishnan	Microlocal analysis of some inverse problems
<b>RMV/N</b>	R. M. Vasu / Naren Naik	Introduction to tomography based on light propagation, Reconstruction analysis of dual-grid and shape based reconstruction approaches in subsurface tomography
<b>AKN</b>	A.K. Nandakumaran	Exact Controllability and Hilbert Uniqueness Method
<b>PR</b>	Praveen	Numerical shape optimization.
<b>EZ</b>	E. Zuazua	Control of heat processes: Theory and Numerics.
<b>BD</b>	Belhassen Dehman	Exact controllability for the wave equation
<b>RP</b>	Radhakant Padhi	NonlinearControl Design Based on Dynamic Inversion: An Overview & Applications
<b>EB</b>	Eric Bonnetier	Small volume asymptotics for the detection of small inhomogeneities
<b>JPR</b>	J-P. Raymond	Feedback stabilization of semilinear parabolic systems



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**December 14 - 15, 2009**  
 Venue : Lecture Hall I, Department of Mathematics, IISc

Date	09:30 - 10:30	10:30 - 10:50	10:50 - 11:50	12:00 - 01:00	01:00 - 02:30	02:30 - 03:30	03:30 - 03:50	03:50 - 04:50
14.12.2009 Monday	EZ	Tea	JPR	BD	Lunch	EB	Tea	JPP
15.12.2009 Tuesday	JPP		JPR	JS		EB		-

	Speaker	Title
<b>EZ</b>	E. Zuazua	Control of heat processes: Theory and Numerics.
<b>JPR</b>	J-P. Raymond	Application to the Navier-Stokes equations.
<b>BD</b>	Belhassen Dehman	Exact controllability for the wave equation
<b>EB</b>	Eric Bonnetier	Small volume asymptotics for the detection of small inhomogeneities
<b>JPP</b>	J . P. Puel	Controllability problems for parabolic type equations, global Carleman estimates and applications
<b>JS</b>	Jasvinder singh Khorral	Spacecraft Dynamics & Optimal Spacecraft Rotational Maneuvers