CSRC Short Course on Renormalization Group Methods and Applications

21-25 March, 2016 Conference Room II, Level 3, CSRC

	Mon, 21/3	Tues, 22/3	Wed, 23/3	Thur, 24/3	Fri, 25/3
8:30 -	Registration				
9:00 - 10:15	CSRC introduction (CSRC Central, Complex Sys)	Orland (phi-4 theory, epsilon expansion)	Chen Leiming (dynamic RG)	Chen Leiming (phase transition in incompressible flocks)	Conference on recent developments in nonequilibrium StatMech
10:15 - 10:45	tea break				Morning
10:45 – 12:00	Tang (review of equilibrium StatMech, Legendre transforms, Ising model)	Orland (phi-4 theory, epsilon expansion)	Delamotte (NPRG)	Delamotte (NPRG)	a) Quantum quench and (pre)thermalization b) FDT violation in timescale separated
12:00 - 14:00	lunch break				systems
14:00 – 15:15	Lan Yueheng (nonlinear dynamics, phase space trajectory, fixed point analysis)	Delamotte (NPRG)	Delamotte (NPRG)	Delamotte (NPRG)	Afternoon a) p-spin models (paper by Berthier and Kurchan, Nature Phys 2013) b) Hard sphere
15:15 - 15:45	tea break, discussions				glass, colloids under shear, and active colloids,
15:45 – 17:00	Special seminar by Guo Wenan (quantum criticality with two length scales)	Delamotte (NPRG)	Special seminar by Xing Xiangjun (Singular perturbations and the RG)	Group presentations	similarities and differences, phase diagram, scaling properties
18:30 - 21:00	Tutorials on generating fns, functional derivatives, gaussian integrals, etc., led by Lan Yueheng, Tang Leihan and Xing Xiangjun, project discussions				

14/3/16