

LMS Durham Symposium
1st July - 11th July 1994

QUANTUM CONCEPTS IN SPACE AND TIME

Friday 1 July

Version 18/07/94

14:30-19:00 Arrival and Registration
19:00 DINNER

Saturday 2 July

8:15-9:00 BREAKFAST
9:00-10:00 A Connes Non-commutative geometry and quantum gravity I
10:00-11:00 A Connes " " " " II
11:00-11:30 COFFEE
11:30-12:30 B Kay Quantum field theory on non-globally hyperbolic spacetimes
13:00-14:00 LUNCH
14:30-15:30 J Madore Non-commutative geometry and Kaluza-Klein theory
15:30-16:00 TEA
16:00-17:00 B DeWitt The role of the measure in Feynman's functional integral
19:00 DINNER

Sunday 3 July

8:15-9:00 BREAKFAST
9:00-10:00 C Rovelli Non-perturbative quantum general relativity
10:00-11:00 J Mourao Projective techniques in the spectrum of the Ashtekar-Isham
holonomy algebra
11:00-11:30 COFFEE
11:30-12:30 A Ashtekar Calculus on A/G: New geometry for Planck-scale physics
13:00-14:00 LUNCH
14:30-15:30 K Kuchar Geometrodynamics of quantum collapse; time and
observables I
15:30-16:00 TEA
16:00-17:00 J Hartle Quantum gravity and generalised quantum theory I
19:00 DINNER

Monday 4 July

8:15-9:00 BREAKFAST
9:00-10:00 M Green A phase of string theory with point-like structure
10:00-11:00 M Duff String duality in four dimensions
11:00-11:30 COFFEE
11:30-12:30 S Hawking Pair creation of charged black holes
13:00-14:00 LUNCH
14:30-15:30 G Horowitz Spacetime singularities in string theory
15:30-16:00 TEA
16:00-17:00 M Perry Spacetime in string theory
19:00 DINNER

Tuesday 5 July

8:15-9:00		BREAKFAST
9:00-10:00	J Hartle	Quantum gravity and generalised quantum theory II
10:00-11:00	C Isham	Quantum logic & generalised quantum theory
11:00-11:30		COFFEE
11:30-12:30	K Kuchar	Geometrodynamics of quantum collapse; time and observables II
13:00-14:00		LUNCH
14:30-15:30	P Hajicek	Group quantization for constrained systems
15:30-16:00		TEA
16:00-17:00	L Smolin	Physics of the Planck scale in the Loop-Representation
17:00-18:00	S Carlip	Inequivalent quantisations of (2+1)-dimensional gravity
19:00		DINNER

Wednesday 6 July

8:15-9:00		BREAKFAST
9:00-10:00	G t'Hooft	Black holes and quantum coherence
10:00-11:00	C Teitelboim	The off-shell black hole
11:00-11:30		COFFEE
11:30-12:30	W. Unruh	Black Holes, Dumb Holes, and High Frequency Dependence of Evaporation.
13:00-14:00		LUNCH
14:30-15:30	A Hosoya	Quantum black holes in (2+1) dimensions
15:30-16:00		TEA
16:00-18:00		Tour of Cathedral
19:00		DINNER

Thursday 7 July

8:15-9:00		BREAKFAST
9:00-10:00	P D'Eath	The Wheeler-DeWitt equation and supergravity
10:00-11:00	H Nicolai	The Ernst equation on a Riemann surface and extensions of the Geroch group
11:00-11:30		COFFEE
11:30-12:30	A Tseytlin	Exact solutions and duality symmetry in string theory
13:00-14:00		LUNCH
14:30-15:30	K Stelle	BRST quantization and hidden string symmetries
15:30-16:00		TEA
16:00-17:00	B-L Hu	Stochastic fields and metric fluctuations
19:00		DINNER

Friday 8 July

8:15-9:00		BREAKFAST
9:00-10:00	M. Ortiz	Black holes, the Wheeler-DeWitt equation and the semiclassical approximation"
10:00-11:00	J Gauntlett	Strong-weak coupling duality in Yang-Mills theory and string theory
11:00-11:30		COFFEE
11:30-12:30	R Kalosh	Black holes, wave-duality and supersymmetry
13:00-14:00		LUNCH
14:30-15:30	G Gibbons	Solitons and quantum gravity
15:30-16:00		TEA
16:00-17:00	P West	A review of W-string theory
17:00-18:00	P Townsend	The brane-drain: plumbing new horizons
19:00		DINNER

Saturday 9 July

8:15-9:00		BREAKFAST
9:00-10:00	R Sorkin	Is locality compatible with discreteness and Lorentz invariance?
10:00-11:00	E Alvarez	Space-time geometry out of conformal fields
11:00-11:30		COFFEE
11:30-12:30	J Barrett	Relation of topological QFT to quantum gravity
13:00-14:00		LUNCH
14:30-15:30	R Williams	Simplicial quantum gravity and invariants of discretised manifolds
15:30-16:00		TEA
16:00-17:00	F Dowker	A critical look at consistent histories
19:00		SYMPOSIUM DINNER

Sunday 10 July

8:15-9:00		BREAKFAST
9:00-10:00	R Penrose	The twistor approach to quantised space-time
10:00-11:00	L Mason	Twistors in classical and quantum gravity
11:00-11:30		COFFEE
11:30-12:30	P Howe	Twistors and supersymmetry
13:00-14:00		LUNCH
14:30-15:30	E Newman	A characteristic surface reformulation of general relativity
15:30-16:00		TEA
16:00-17:00	E Jacobson	Black hole entropy and vacuum fluctuations
19:00		DINNER

Monday 11 July

8:15-9:00		BREAKFAST
9:00		Departure

Plus: Evening seminars on the more philosophical aspects of quantum theory & quantum gravity from Barbour, Butterfield, Penrose, Redhead, Sudbery, Squires & others.