ACI FIN'QUANT

Optimal Quantization and Applications to Mathematical Finance

1-2 September 2008

Programme

Monday, 1th Sept

09h00-09h30 . Welcome and coffee

09h30-10h10. H. LUSCHGY: Fractal Functional Quantization of mean regular processes.

10h15-10h55. A. LEJAY: Functional Quantization for control variate, an approach using least-square.

11h00-11h40. B. WILBERTZ: Constructive Quantization for Gaussian measures on $(C[0,1], \|\cdot\|_\infty)$.

11h45-13h55. Lunch

14h00-14h40. H. PHAM: Optimal Quantization methods in nonlinear filtring and applications to finance.

14h45-15h25 . F. DELARUE: Quantization and discretization of quasilinear PDEs.

15h25-15h40. Coffee Break

15h45-16h25. A. L. BRONSTEIN: Basket options and parallel quantization.

16h30-17h10. C. ILLAND: Quantization algorithm for backward stochastic differential equations.

Tuesday, 1th Sept

09h00-09h30 . Coffee

09h30-10h10. G. PAGÈS: Distortion mismatch in the quantization of probability measures and some applications.

10h15-10h55. A. SAGNA: Asymptotics of the maximal radius of an L^r-optimal sequence of quantizers.

11h00-11h40. J. PRINTEMS: A Hybrid Quantization-Monte carlo methods applied to the pricing of some financial derivatives.

11h45-13h55. Lunch

14h00-14h40. S. BOUTHEMY: Gas Storage capacities valuation by Optimal Quantization.

14h45-15h25 . S. CORLAY: Fast nearest neighbor search algorithms.

15h25-15h40 . Coffee Break

15h45-16h25. A. FRAYSSE: Scalar Quantization of sparse natural images.

16h30-17h10. J. C. FORT: Kohonen algorithm, self-organization and quantization. Numerical and data analysis aspects.

17h10-17h30. Summary and perspectives.