

Thursday, October 31st, 12.00-13.00

0.13 Classroom at the Mathematics Department of UPV/EHU

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QUANTUM MEAN FIELD ASYMPTOTICS AND MULTISCALE ANALYSIS

Joint work with Z. Ammari, and F. Nier. In this work, we study how multiscale analysis and quantum mean field asymptotics can be brought together. In particular we study when a sequence of one-particle density matrices has a limit with two components: one classical and one quantum. The introduction of separating quantization for a family" provides a simple criterion to check when those two types of limit are well separated. We give examples of explicit computations of such limits, and how to check that the separating assumption is satisfied.