## The groupoidal picture of Quantum Mechanics: the classical and semiclassical limits

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Abstract:

Schwinger's picture of Quantum Mechanics fits perfectly in a categorical/groupoidal description. Building upon this idea the main notions of quantum mechanics will be succinctly reviewed and a novel interpretation of the quantum-to-classical transition will be discussed. In particular, it will be shown how Schwinger's quantum dynamical principle leads to Lagrangian dynamics on Lie algebroids and its dual Hamiltonian formulation.