# Seminário de sistemas dinâmicos e estocásticos

**Departamento de Matemática - IMECC - UNICAMP**

# A semi-discrete approach of some Hamilton-Jacobi equations

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**Resumo:**

Hamilton-Jacobi equations are specific partial differential equations of order one. In some important cases the solutions are computed using characteristics (solutions of the Hamiltonian flow). Unfortunately the long time behaviour cannot be attained using this method. By discretizing in time the path, we obtain two particular equations: the discrete cell equation, the discounted discrete cell equation. We will explain in this lecture how the discretized solutions converge to the solutions of the original Hamilton-Jacobi equations.

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