

Symplectic rigidity and Quantum Mechanics

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I present a new link between Symplectic Topology and Quantum Mechanics which has been discovered in the framework of function theory on symplectic manifolds. Recent advances in this emerging theory [1] highlight rigid features of the Poisson bracket, a fundamental operation governing mathematical model of Classical Mechanics. Unexpectedly, the intuition behind this rigidity comes from Quantum Mechanics.

References

- [1] L. Polterovich, D. Rosen. Function theory on symplectic manifolds. CRM Monograph Series, 34. American Mathematical Society, Providence, RI, 2014.