

---

**ISMAIL ABOUAMAL**, Université de Montréal

*A fifth-order quantum superintegrable system and its relation with the Painlevé property.*

We consider a two dimensional quantum Hamiltonian in Cartesian coordinates and its coexistence with a fifth-order integral of motion. We impose the superintegrability condition and find explicitly all exotic superintegrable potentials allowing the existence of such an integral. All of these potentials are found to have the Painlevé property and some of them are expressed in terms of Painlevé transcendents and elliptic functions.