UNIVERSITY OF MIAMI
COLLEGE of
ARTS & SCIENCES

Physics Seminar

Date: October 20, 2023

Time: 2:00 pm

Location: Conference Room

Speaker:

Alexander Turbiner

Title:

"Once again about two-body Coulomb problem: exact-solvability, hidden $g^{(2)}$ algebra, cubic polynomial algebra of integrals"

Abstract:

By studying the Hydrogen atom in (r, \rho, \phi) variables a new planar problem is discovered. It corresponds to the motion on the 2d curved manifold. This is the exactly-solvable, superintegrable system with hidden algebra gl(2,R) (semi-direct) R^3 discovered by S Lie circa 1880 and with cubic polynomial algebra of integrals.