



University of Crete
Department of Physics

Physics Colloquium

Thursday, 4 April 2024 | 17:00 – 18:00, Seminar Room, 3rd floor

SU(2) Lie-Poisson algebra and its descendants

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ABSTRACT

The Poisson structure is a widely investigated concept that has both physical and mathematical relevance. The concept originates from Poisson's research on analytic mechanics, which now provides a very general and solid framework for describing Hamiltonian dynamics.

Thus, the concept of a Poisson structure has subsequently found numerous applications beyond the original focus that was on classical mechanics and differential geometry. Poisson structures now appear in a large variety of contexts starting from string theory, topological and conformal field theory and integrable systems; extending to deformation quantization and non-commutative geometry; and all the way to algebraic geometry, representation theory and abstract algebra.