

Title: Ultracold physics and exactly solvable models

Outline

- 1- Review of experimental results in ultracold physics.
- 2- Basic introduction to the Bethe ansatz and the quantum inverse scattering method.
- 3- Exactly solvable models in relation to ultracold and atomic physics.
- 4- Classical and quantum analysis of the models.
- 5- Learning from exact solutions.
- 6- Conclusion.