



UNIVERSITÀ  
degli STUDI  
di CATANIA

DIPARTIMENTO DI FISICA E ASTRONOMIA  
Ettore MAJORANA

DOTTORATO DI RICERCA IN FISICA  
CICLO XXXVI

ANNO ACCADEMICO 2020 - 2021

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## Exactly solvable one dimensional quantum many particle systems

3 CFU

### Teaching staff

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### Program of the course:

*Integrability and exact solution of the bosonic quantum field theory in one spatial dimension through the Quantum Inverse Scattering technique.*

*Exact solution of quantum many-particle systems with pairing force interaction.*

*Integrability of bosonic quantum field theories.*

### Bibliography:

[1] A. G. Izergin, N. M. Bogoliubov, and Vladimir Korepin, Quantum Inverse Scattering Method and Correlation Functions, (Cambridge University Press 1993).

[2] Course notes.