



UNIVERSITÀ
degli STUDI
di CATANIA

DIPARTIMENTO DI FISICA E ASTRONOMIA
Ettore MAJORANA

DOTTORATO DI RICERCA IN FISICA

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**Exact solutions of selected problems of one dimensional quantum
many particle systems**

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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.