



UNIVERSITÀ
degli STUDI
di CATANIA

DIPARTIMENTO DI FISICA E ASTRONOMIA

DOTTORATO DI RICERCA IN FISICA

ANNO ACCADEMICO 2017 - 2018

TITLE

Advanced topics in nuclear astrophysics
2 CFU

Teaching staff

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Reception hours:

Program of the course:

1. The R-matrix method in nuclear astrophysics
 - a. Basic theory
 - b. Applications to nuclear astrophysics
 - c. Hands-on session
2. Fusion reactions in plasmas produced by laser interaction with matter
3. Photodissociation reactions in nuclear astrophysics
4. Reaction networks: *s* and *r* processes

Bibliography:

Iliadis C., Nuclear Physics of Stars, Wiley (2015)