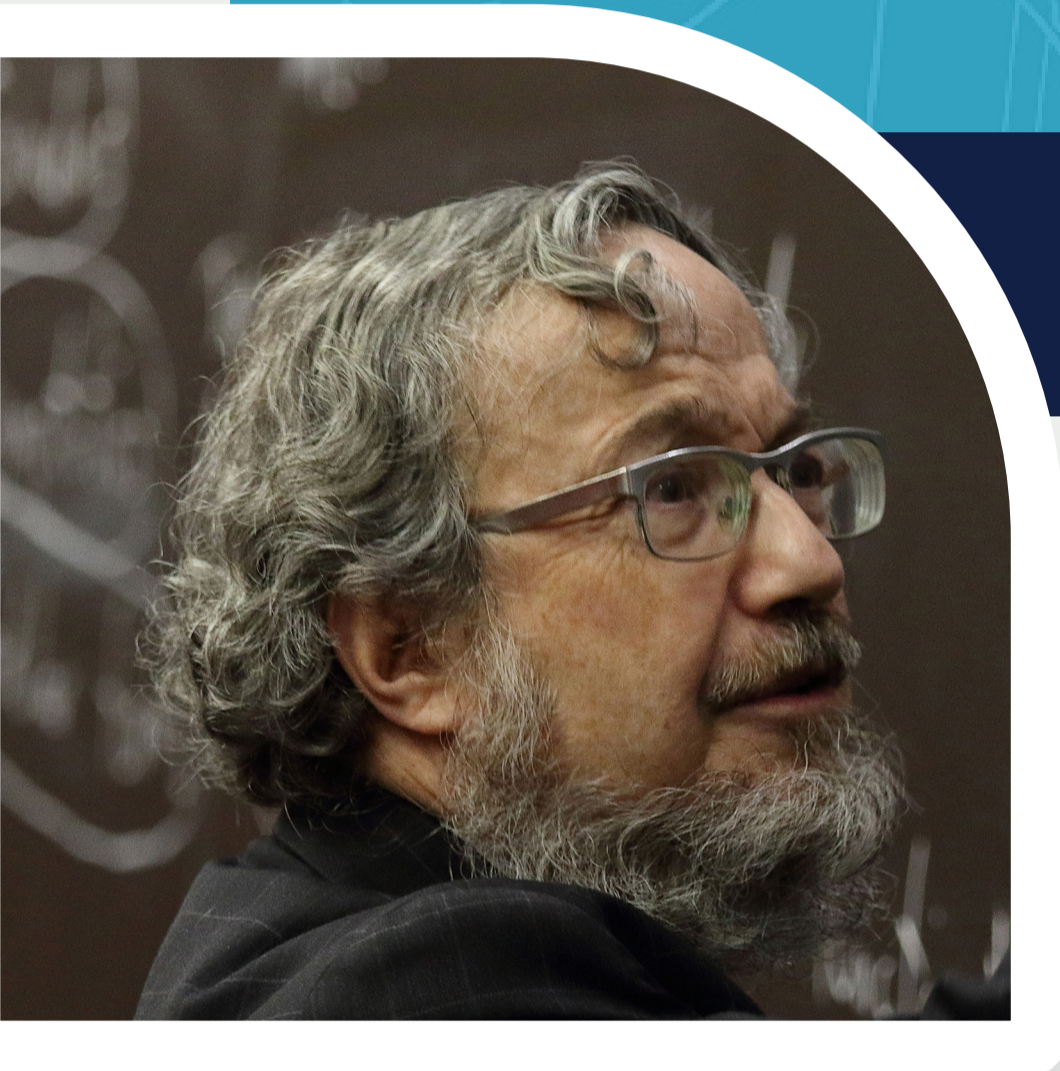


PhD Course at SISSA

“From quadratic forms to modular forms to quantum modular forms”



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The lectures start Monday, March 31, 2025 at 2 p.m. in room 136 at SISSA (via Bonomea, 265), and will continue on Mondays and Fridays at 2 p.m. in Room 136 until Friday, June 6, 2025.

DESCRIPTION:

The theory of quadratic forms and the theory of modular forms are two of the pillars of classical number theory. Serre's famous advanced introductory text "Cours d'Arithmétique" consisted of two parts, an algebraic part on quadratic forms and an analytic part leading to the theory of modular forms. The course will provide an introduction to some of the main parts of both theories and discuss both the classical connections between them (such as the theory of theta functions, which are used in coding theory and many other parts of mathematics) and several more recent but also very interesting ones. The last part of the course will introduce the relatively recent notion of quantum modular forms, with many examples, ranging from odd weight Eisenstein series to quantum invariants of knots and 3-dimensional manifolds. Everything will be presented from the beginning, with no prerequisites beyond standard topics like Cauchy's theorem.

ICTP's shuttle service to SISSA operates Monday - Friday, at 13:30
ICTP departures are from the Leonardo Building parking lot.

For people who work at the ICTP, we remind you to reserve a seat 24 hours in advance by sending a request to: transportation@ictp.it and info_pt@ictp.it. The Transportation or Info Point will confirm the reservation based on availability.



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