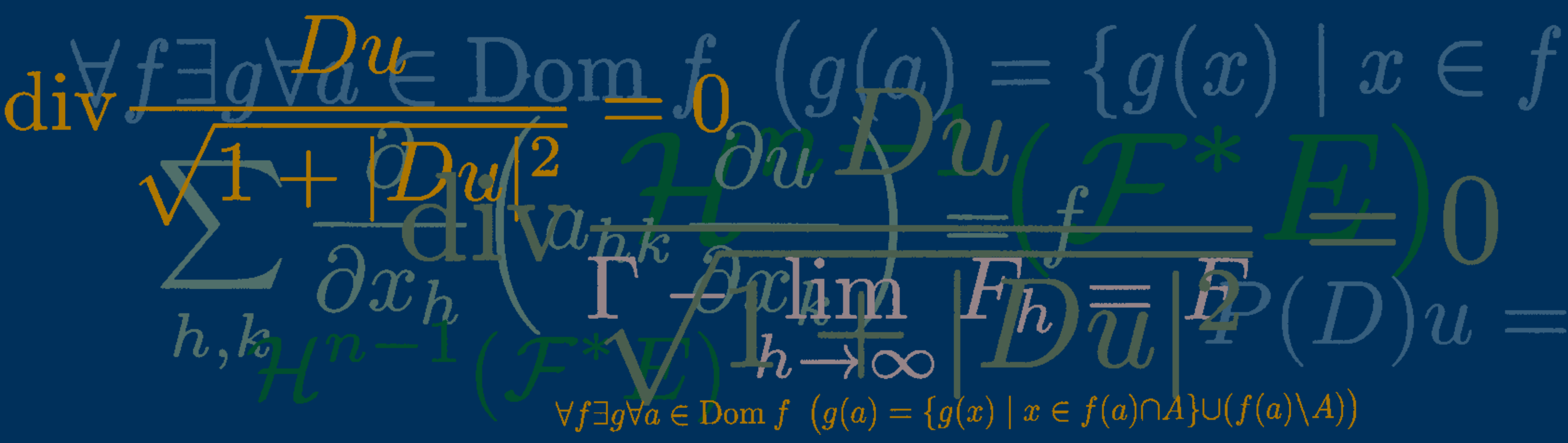

Colloquio De Giorgi

6 December 2023
4:00 pm

DON ZAGIER

Max Planck Institute for Mathematics, Bonn & ICTP, Trieste

From three-dimensional topology to quantum modular forms

Aula Dini
Palazzo del Castelletto
via del Castelletto
Pisa

Abstract: Connections between topology and number theory have been known and studied for many years, a classical example being the relation between Bernoulli numbers and exotic spheres discovered in the 1960s. But in the last few years it has been discovered that also much more sophisticated number-theoretical objects like algebraic K-groups and new types of modular forms arise naturally from 3-dimensional topology and more explicitly from the study of so-called quantum invariants of knots and 3-manifolds. I will try to give as gentle an introduction as possible to these new ideas, culminating in the discovery of a new type of modular forms. No knowledge of any of the ingredients of the title will be assumed, and in particular I will give a feeling for both classical modular forms and their young quantum cousins. Most of the material presented is joint work with Stavros Garoufalidis.

Web site: ***http://www.crm.sns.it/course/6813/***

The event will take place in person.

info
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SCUOLA NORMALE SUPERIORE

Centro di Ricerca Matematica Ennio De Giorgi