FEZA GÜRSEY
CENTER FOR
PHYSICS AND
MATHEMATICS

Dual
Perspectives
Meetings

Holonomic D-modules and non-isolated singularities

Shinichi Tajima
Niigata University

Abstract:

In the first part of the talk, I will give a quick introduction to D-modules, local cohomology, s-parametric annihilators and Bernstein-Sato polynomials. In the second part, I will consider holonomic D-modules associated to a hypersurface with non-isolated singularities. I will show a method for computing holonomic D-modules and microlocal b-functions. The keys of the method are the use of a Poincare-Birkhoff-Witt algebra and local cohomology. I will discuss, as applications, relations between the structure of holonomic D-module and the vertical monodromy introduced by Siersma and Le cycles introduced by Massey.

Date:
Friday, May 26, 2023

Program:
Morning session 10:30-12:00, Afternoon session 13:30-15:00

Location:
Boğaziçi University, Kandilli Campus, Üsküdar-İstanbul