SEMINÁRIO DE GEOMETRIA

Dia 22 Fevereiro (sexta-feira), às 13h30, sala 6.2.38

Relative Strongly Regular Holonomic D-Modules

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Abstract:

This talk will be about a joint work with Teresa Monteiro Fernandes.

We will start with a basic introduction to the problem of studying the Riemann Hilbert correspondence in the relative case. This research field started with the works of T. Monteiro Fernandes and C. Sabbah whose main result is the relative Riemann-Hilbert correspondence for mixed twistor $\mathcal{D}_{X \times S/S}$-modules.

In a joint paper with T. Monteiro Fernandes we introduced the notion of strongly regular honomic $\mathcal{D}_{X \times S/S}$-module and we proved that the functor RH^S takes image in $\mathrm{D}^{\mathrm{b}}_{\mathrm{srhol}}(\mathcal{D}_{X \times S/S})$. Moreover we proved that for $\dim X = 1$ the contravariant functors

$$\mathrm{RH}^S : \mathrm{D}^{\mathrm{b}}_{\mathbb{C}\text{-c}}(p^{-1}\mathcal{O}_S) \longrightarrow \mathrm{D}^{\mathrm{b}}_{\mathrm{srhol}}(\mathcal{D}_{X \times S/S})$$

$$^{\mathrm{P}}\mathrm{Sol} : \mathrm{D}^{\mathrm{b}}_{\mathrm{srhol}}(\mathcal{D}_{X \times S/S}) \longrightarrow \mathrm{D}^{\mathrm{b}}_{\mathbb{C}\text{-c}}(p^{-1}\mathcal{O}_S).$$

are equivalences of categories one quasi-inverse of each other.