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## Generalized Riemann-Hilbert correspondence (2)

*Thursday, December 6, 2018 11:30 AM (1 hour)*

Let  $P$  be a compact holomorphic Poisson manifold with an open dense symplectic leaf  $M$ . Then, under certain convergence assumptions, one can define two triangulated categories over complex numbers. The first category (A-model) is the compact Fukaya category of  $M$  considered as a real symplectic manifold endowed with a  $B$ -field. The second category is the category of perfect modules over the non-perturbative deformation quantization of  $P$ , with the vanishing restriction to  $P-M$ . Generalized Riemann-Hilbert correspondence is a conjectured (by Y. Soibelman and me) equivalence between these two categories. I'll explain in details this conjecture and related companion conjectures. Also I'll illustrate it in the case of usual holonomic D-modules (when  $M$  is a cotangent bundle), and of  $q$ -difference and elliptic difference equations.

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