



北京理工大学

数学与统计学院学术报告

Stable envelopes for critical loci

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地点： 文萃楼F 403

摘要： Stable envelopes are geometric objects introduced by Maulik-Okounkov on cohomology of Nakajima quiver varieties. They can be used to construct R-matrices and Yangian type quantum groups.

In a joint work with Andrei Okounkov, Yehao Zhou and Zijun Zhou. We extend the theory of stable envelopes to critical cohomology of symmetric quiver varieties with potentials. We prove that critical stable envelopes are compatible with dimensional reductions, specializations, Hall products, and other geometric constructions.

These have applications to geometric representation theory of shifted quantum groups and enumerative geometry of critical loci.

个人简介： 曹亚龙是中科院晨兴数学中心的副教授，主要研究方向是计数几何与几何表示论。其博士期间与导师梁迺聪教授创立了四维Calabi-Yau流形上的Donaldson-Thomas理论。现在的兴趣方向逐渐转向几何表示论。论文发表在MAMS, JEMS, Advances, CMP等数学杂志。