Contribution ID: **87** Type: **not specified**

Resurgence at work in the Principal Chiral Model

Wednesday 25 September 2013 17:10 (20 minutes)

Also in theories without instantons non-perturbative saddle points play a crucial role. Using the example of the 2d principal chiral model we show how resurgence theory, which unifies perturbative and non-perturbative physics, predicts the existence of several types of non-perturbative saddles: the fractons. With these new saddles is possible to understand the quantum interpretation of unstable classical solutions called unitons. We explain also how these fractons lead to a semi-classical realization of IR renormalon and yield the generation of the mass gap. We will conclude with some remarks on integrability and localization.

Primary author: DORIGONI, Daniele (DAMPT Cambridge)

Presenter: DORIGONI, Daniele (DAMPT Cambridge)

Session Classification: Parallel Session 3: Strings & Mathematical Physics

Track Classification: Strings & Mathematical Physics