# Institut Henri Poincaré

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## String Theory in Greater Paris

**Rencontres Théoriciennes**

**"Supergravité, théorie des cordes et théorie M"**

***Jeudi 27 Octobre 2016, 11:45***


# Daniel Thompson

***VUB***


## Generalised Duality, Integrability and Resurgence


*T-duality in string theory and integrability in holography have a rich interplay. Here I will review some recent developments that expand this theme making crucial use of generalised T-dualities. After giving some review of these generalised notions of T-duality, I will comment on recent progress relating non-Abelian T-duality to integrable marginal deformations of holography and the use of Poisson Lie T-duality in constructing new integrable string models known as eta and lambda deformations. This novel class of theories have been conjectured to encode quantum group deformations of holography. In the second part of the talk I will focus on a particular example of an eta deformed sigma model and describe how it displays the remarkable phenomenon of "resurgence" : the way deeply non-perturbative physics can be encoded in perturbative data. Time permitting I will also outline an intriguing connection between the eta deformed sigma model and Stokes phenomena in a mass deformed 4d N=2 gauge theory.*


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