



Du  
**16**  
MARS.  
2016

16h00  
-  
17h00

**RÉGA**

**Martin Ulirsch "The moduli stack of tropical curves"**

IHP  
Salle 314

INSCRIPTION

Martin Ulirsch (Bonn)  
The moduli stack of tropical curves

The moduli space of tropical curves (and its variants) are some of the most-studied objects in tropical geometry. So far this moduli space has only been considered as an essentially set-theoretic coarse moduli space (sometimes with additional structure). As a consequence of this restriction, the tropical forgetful map does not define a universal curve (at least in the positive genus case). The classical work of Knudsen has resolved a similar issue for the algebraic moduli space of curves by considering the fine moduli stacks instead of the coarse moduli spaces.

In this talk I am going to give an introduction to these fascinating moduli spaces and report on ongoing work with Renzo Cavalieri, Melody Chan, and Jonathan Wise, where we propose the notion of a moduli stack of tropical curves as a geometric stack over the category of rational polyhedral cones. Using this framework one can give a natural interpretation of the forgetful morphism as a universal curve. The coarse moduli space arises as the set of  $\mathbb{R}_{\geq 0}$ -valued points of the moduli stack. Given time, I will also explain how the process of tropicalization for these moduli stacks can be phrased in a more fundamental way using the language of logarithmic algebraic stacks.

URL of the page: [https://www.ihp.fr/fr/agenda/martin-ulirsch-moduli-stack-tropical-curves&is\\_pdf=true](https://www.ihp.fr/fr/agenda/martin-ulirsch-moduli-stack-tropical-curves&is_pdf=true)



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### **HORAIRES**

L'institut :

- lundi au vendredi de 8h30 à 18h,
- fermé les jours fériés.

Le musée - Maison Poincaré :

- lundi, mardi, jeudi et vendredi de 9h30 à 17h30,
- samedi de 10h à 18h,
- fermé le mercredi et le dimanche.