



Du
04
OCT.
2017

14h00
-
15h30

RÉGA

Michael Temkin "Logarithmic resolution of singularities" 14h-15h30

IHP
Salle 314

Seminaire Réga

Michael Temkin (Einstein Institute of Mathematics)

Logarithmic resolution of singularities

The famous Hironaka's theorem asserts that any integral algebraic variety X of characteristic zero can be modified to a smooth variety X_{res} by a sequence of blowings up. Later it was shown that one can make this compatible with smooth morphisms $Y \rightarrow X$ in the sense that $Y_{\text{res}} \rightarrow Y$ is the pullback of $X_{\text{res}} \rightarrow X$.

In a joint project with D. Abramovich and J. Włodarczyk we construct a new resolution algorithm which is compatible with all log smooth morphisms (e.g. covers ramified along exceptional divisors). We expect that this algorithm will naturally extend to an algorithm of resolution of morphisms to log smooth ones. In particular, this should lead to functorial semistable reduction theorems.

In my talk I will tell about main ideas of the classical algorithm and will then discuss some logarithmic and (if time permits) stack-theoretic modifications we had to make in the new algorithm.

URL of the page: https://www.ihp.fr/fr/agenda/michael-temkin-logarithmic-resolution-singularities-14h-15h30&is_pdf=true



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