



Leibniz
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Oberseminar Institut für Algebraische Geometrie

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Gromov's cancellation question in birational geometry

In 1999 Gromov has asked to which extent an open embedding of an algebraic variety U into X determines the (birational) isomorphism class of the complement $X \setminus U$. It was understood for a long time that this question has a natural interpretation in terms of the Grothendieck ring of varieties but until recently no counterexamples were known. I will rephrase Gromov's question as nonvanishing of certain subgroups of the Grothendieck groups, and then explain which of these groups are non zero, thus effectively classifying all possible negative answers to Gromov's question. This talk is based on the work of Hassett–Lai 2016 (where the first counterexample can be deduced from), Shinder–Lin–Zimmermann 2020 (the surface case), Shinder–Lin 2022 (the general case).

Donnerstag, 08.06.2023, 16:30-17:30, Raum F142.

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Alle Interessierten sind herzlich eingeladen.