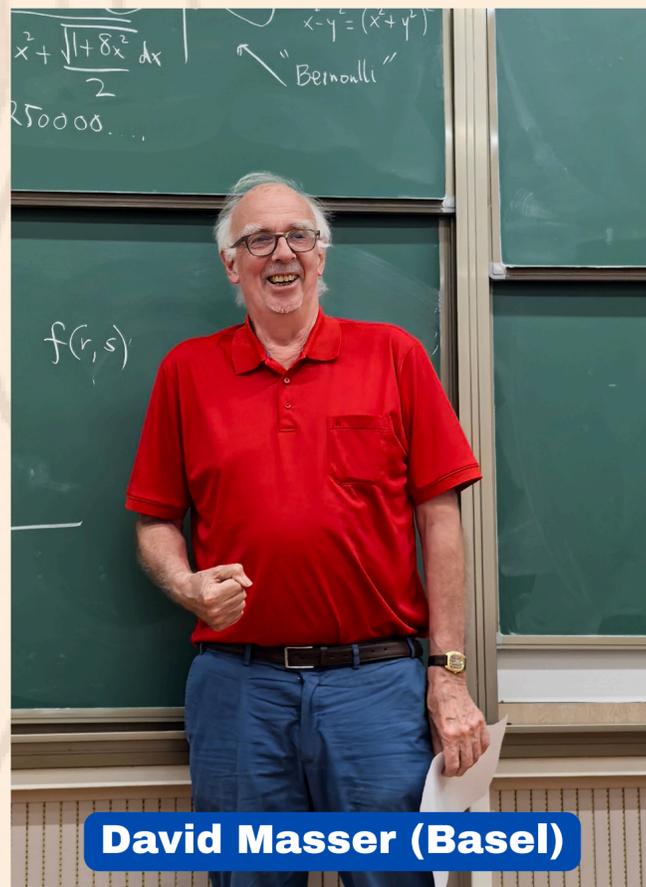




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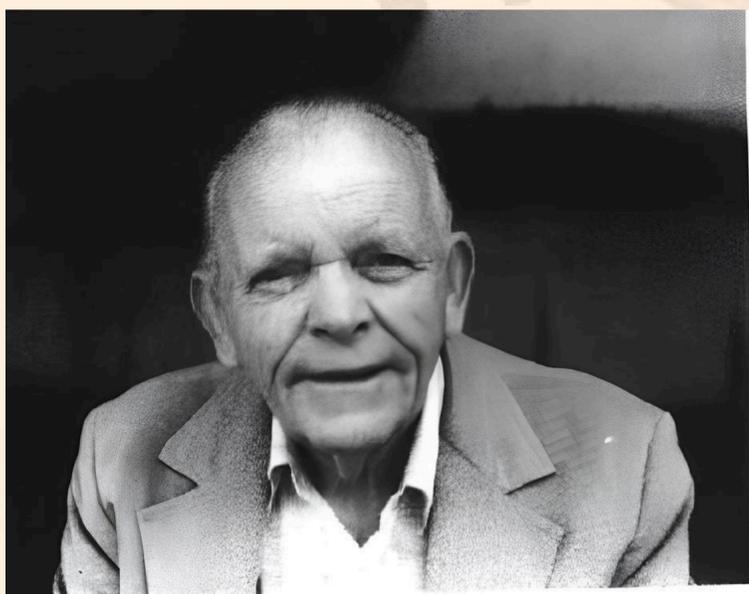
**DAVID MASSER**

# Lower bounds for heights over function fields



**Mercoledì  
18 Marzo  
2026**

**Ore 16.00  
AULA M1  
Blocco Aule S. Murialdo**



*Helmut Lehmer*

## **ABSTRACT:**

After introducing heights we discuss the Lehmer Question over the rational field  $\mathbb{Q}$ , unanswered since 1933, as well as elliptic analogues. Then we move to results over the function field  $\mathbb{C}(t)$ . Even though this makes heights rather easier to define, there were no relevant elliptic estimates in the literature before 2024. Then Silverman proved a result using the "Fourier Method". I will describe an alternative method through auxiliary polynomials and an approach first used by Sieburg in his 1983 thesis, since then hardly developed in the literature. That method is based on a "t-adic" analogue of Mahler's p-adic transcendence techniques. If there is time we may briefly touch on analogues for abelian surfaces.



**Roma Tre**