Math 206A/Algebraic Geometry Seminar

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Homological conjectures and big Cohen-Macaulay algebras

Abstract:
I will talk about joint work with Raymond Heitmann that gives a construction of big Cohen-Macaulay algebra in mixed characteristics following the recent breakthroughs on the direct summand conjecture by André and Bhatt. In fact, we prove a weakly functorial version for certain surjective ring homomorphism that leads to the solution of the vanishing conjecture for maps of Tor in mixed characteristic. Our work also gives a simplified proof of the direct summand conjecture, and that direct summand of regular rings are Cohen-Macaulay.

Host: Kiran Kedlaya

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12:00 PM
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