

1172-11-102      **Tung T Nguyen\*** ([tungnt@uchicago.edu](mailto:tungnt@uchicago.edu)), 108 S Harvey Ave, 1W, 108 S Harvey Ave, Oak Park, IL 60302. *Heights and Tamagawa numbers of motives.*

The class number formula is an inspiring pillar of number theory. By the work of many mathematicians, notably Deligne, Beilinson, Bloch, Kato, Fontaine, Perrin-Riou, Jannsen, and many others, we now have a quite general (conjectural) class number formulas for motives, i.e., the Tamagawa number conjecture of Bloch-Kato. Recently, Kato has proposed a new approach to this problem using heights of motives. In this talk, we will give an overview of this approach. In particular, we will show a precise relation between heights to Tamagawa numbers of motives. We also partially answer some of Kato's questions about the number of mixed motives of bounded heights in the case of mixed Tate motives. (Received August 20, 2021)