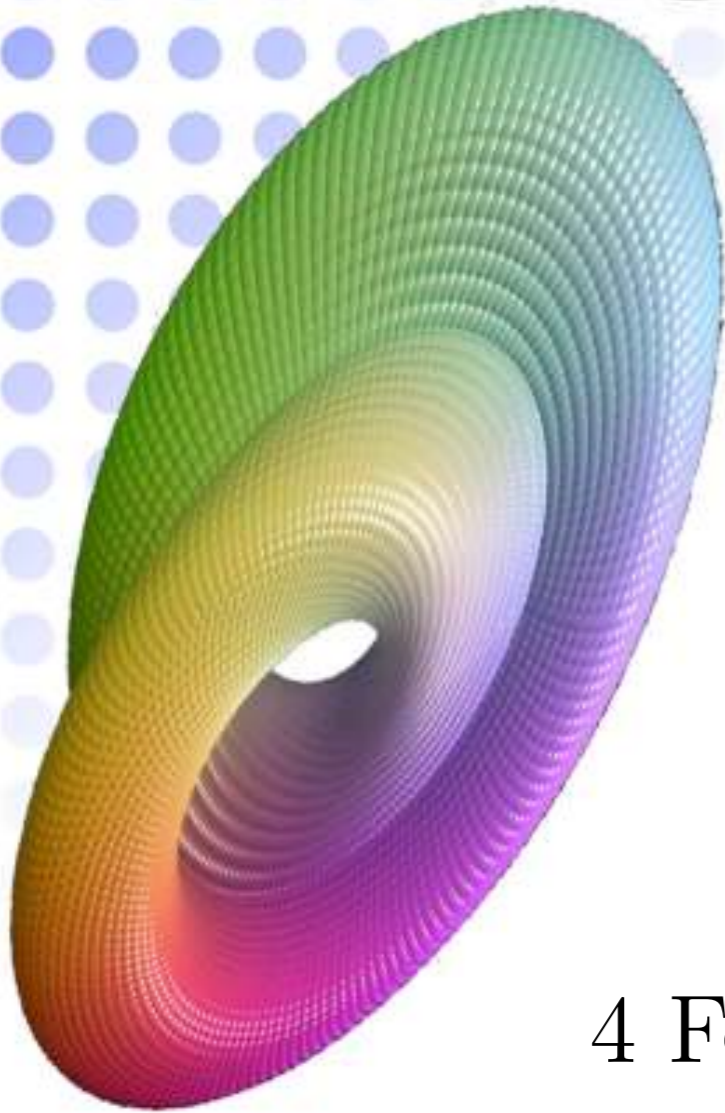


Michigan Math Club

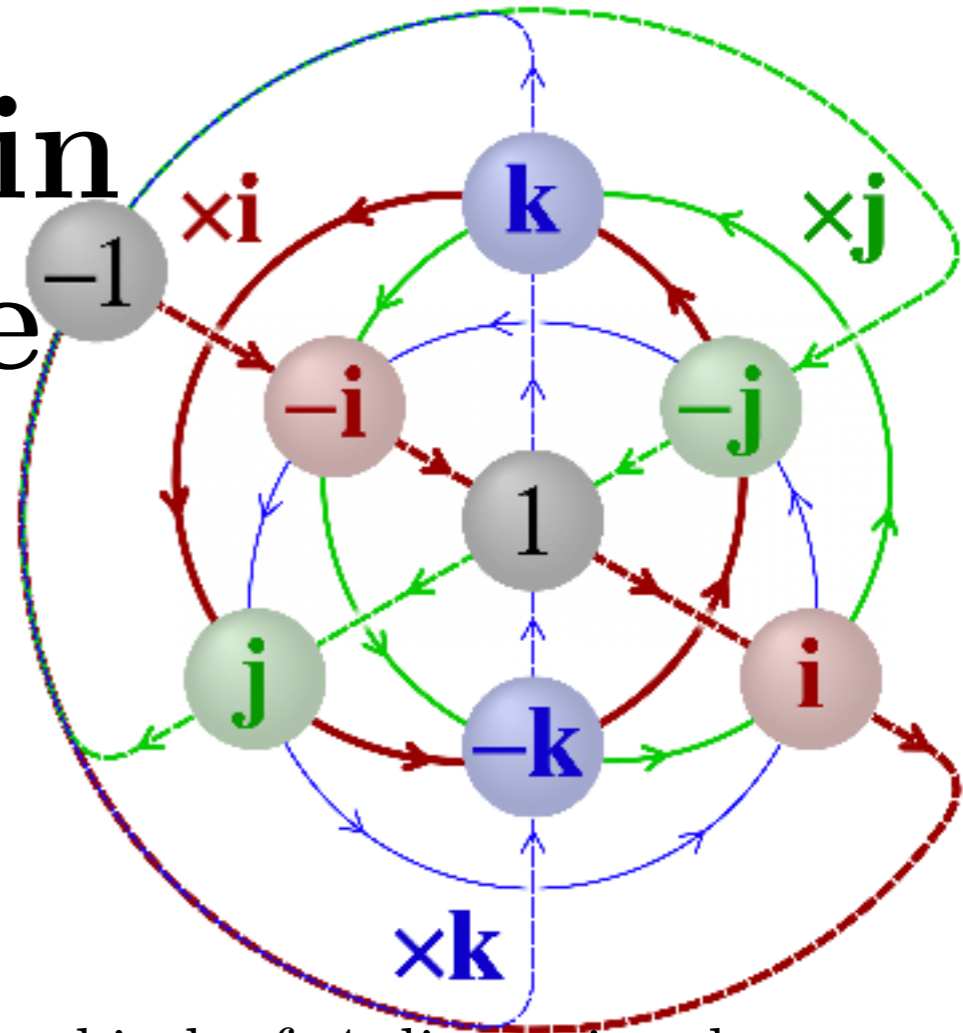
Meeting [virtually](#) for Winter 2021
Thursdays at 4pm EST



Quaternions in everyday life

Joe Rabinoff
Duke University

4 February 2021



I'll introduce Hamilton's quaternions, a kind of 4-dimensional non-commutative relative of the complex numbers. We'll talk about several areas where they appear: number theory (the four square theorem), physics (if you turn around 360 degrees, you don't actually get back to where you started), and computer graphics (representing orthogonal transformations).