Exponential Patterns in Arithmetic Ramsey Theory

In this talk I will give an overview of some of results and techniques in the area of exponential patterns in arithmetic Ramsey theory. This story begins with the following result: no matter how the integers are finitely coloured, there exist \( a, b > 1 \) so that \( \{a, b, a^b\} \) is monochromatic. From here I will sketch some of the, perhaps surprising, results in this rich area. I will also discuss some open problems and quantitative aspects.