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Arithmetic Progressions on Conic Sections

We view the set $\{(1,1), (5,25), (7,49)\}$ as a 3-term collection of rational points on the parabola $y = x^2$ whose y-coordinates form an arithmetic progression of perfect squares. In this talk we will provide a generalization to 3-term arithmetic progressions on arbitrary conic sections $\mathcal{C}$ with respect to a linear rational map $\ell : \mathcal{C} \to \mathbb{P}^1$.