Physicists dealing with Feynman integrals in high energy physics are often interested in rationalizing square roots of polynomials by some suitable change of variables.
Unfortunately, such change of variables does not always exist.
In this talk we will introduce the concept of rationalizability for a square root of a polynomial and we will give easy criteria to decide whether the square root of a polynomial in one or two variables is rationalizable.
We will then investigate the case of square roots of polynomials in more variables and the rationalizability of sets of square roots.
If time permits, we will show applications of the criteria to several cases coming from physics and we will state some still open questions.