The Alexander-Briggs tabulation of knots in R^3 (started almost a century ago, and considered as one of the most traditional ones in classical Knot Theory) is based on the minimal number of crossings for a knot diagram. From the point of view of Real Algebraic Geometry it is more natural to consider knots in RP^3 rather than R^3, and use a different number also serving as a measure of complexity of a knot: the minimal degree of a real algebraic curve representing this knot.

As it was noticed by Oleg Viro about 20 years ago, the writhe of a knot diagram becomes an invariant of a knot in the real algebraic set-up, and corresponds to a Vassiliev invariant of degree 1. In the talk we'll survey these notions, and consider the knots with the maximal possible writhe for its degree. Surprisingly, it turns out that there is a unique maximally writhed knot in RP^3 for every degree d. Furthermore, this real algebraic knot type has a number of characteristic properties, from the minimal number of diagram crossing points (equal to $d(d-3)/2$) to the minimal number of transverse intersections with a plane (equal to $d-2$). Based on a series of joint works with Stepan Orevkov.