1154-54-1133 **Jacob Pichelmeyer*** (`jacobpichelmeyer@gmail.com`), 3129 Lundin Dr, Apt 12, Manhattan, KS 66503. *Genera of knots in the complex projective plane.*

Let $K : S^1 \to S^3$ be a knot and $M$ be a smooth closed four-dimensional manifold. The $M$*-genus of* $K$ is the least genus among all smooth, orientable surfaces $\Sigma$ smoothly and properly embedded in $M \setminus B^4$ such that $\partial\Sigma = K$. The $M$-genera has been computed for all 2,977 prime knots up to twelve crossings in the cases where $M$ is the four-sphere $S^4$ or $S^2 \times S^2$. In the case of $\mathbb{C}P^2$, there are 4,000+ prime knots up to twelve crossings along with their mirrors for which computation of the $\mathbb{C}P^2$-genus is non-trivial. Of these, the $\mathbb{C}P^2$-genus was known for only 8 such knots. We have obtained both obstruction and construction results that have allowed the computation of 146 more prime knots of twelve crossings or less for which computation of the $\mathbb{C}P^2$-genus is nontrivial, along with several infinite families. We present background on this topic, explanation of how the constructions and obstructions were obtained, and how the computations were made using these results. (Received September 13, 2019)