

Degree of a polynomial via pluripotential theory

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This poster is based partly on [2]. The Lelong degree is a pluripotential theoretic notion of the degree of a polynomial on an affine variety. It is based on the notion of Lelong number (see e.g. chapter 4 of [1]). Using the Lelong degree, a version of Bezout's theorem follows by a straightforward calculation. We interpret the Lelong degree geometrically on an algebraic curve and describe how to compute it explicitly.

References

- [1] J.-P. Demailly. *Complex analytic and differential geometry*. Book at <https://www-fourier.ujf-grenoble.fr/~demailly/manuscripts/agbook.pdf>.
- [2] J. Hart and S. Ma'u. Lelong classes of plurisubharmonic functions on an affine variety. Preprint. [arXiv:1806.10780](https://arxiv.org/abs/1806.10780)