POLYNOMIAL KNOTS AND MINIMAL DEGREE SEQUENCE

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ABSTRACT

Polynomial knots were introduced by Vasiliev and are now studied by many mathematicians. They are important from Algebraic Geometry point of view to settle the famous age old conjucture of Abhyankar. Notion of degree sequence and minimal degree sequence has been introduced to understand the knot type of the polynomial knots. In this poster presentation we discuss the minimal degree sequence of few important classes of knots namely Torus knots and 2-Bridge knots.

Keywords: Knot-Type, Torus Knot, 2-Bridge Knots, Rational Tangles, Polynomial Knots, Real Morsification.

References

- Fulton, W., Algebraic Curves, An Introduction to Algebraic Geometry, W.A. Benjamin, Inc. (1969).
- [2] Prabhakar Madeti and Rama Mishra, Minimal Degree Sequence for Torus Knots of Type (p, 2p-1), Communicated, (2003). http://www.worldscinet.com/jktr/editorial/paper/750349.pdf.
- [3] Rama Mishra, Polynomial Representation of Torus knots of type(p,q), Journal of Knot Theory and its Ramifications, World Scientific Publishing Company, Vol.8, No.5 (1999) 667-700.

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- [4] Rama Mishra, Minimal Degree Sequence for Torus knots, Journal of Knot Theory and its Ramifications, World Scientific Publishing Company, Vol.9, No.6 (2000) 759-769.
- [5] Ranjan, A., Rama Shukla, On Polynomial Representation of Torus knots, Journal of Knot-theory and its ramification, World Scientific Publishing Company, Vol.5, No.2 (1996) 279-294.
- [6] Rolfsen, D., Knots and Links, Publish or Perish Press, Berkeley(1976).
- [7] Shastri, A. R., Polynomial Representations of Knots, Tohoku Math. J., Vol.44 (1992) 11-17.
- [8] Vasiliev, V. A. On spaces of polynomial knots. (Russian) Mat. Sb. 187 (1996), no. 2, 37-58.