

## Generating Links That Are Both Quasi-Alternating and Almost Alternating

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**Abstract :** We construct an infinite family of links which are both almost alternating and quasi-alternating from a given either almost alternating diagram representing a quasi-alternating link, or connected and reduced alternating tangle diagram. To do that we use what we call a dealternator extension which consists in replacing the dealternator by a rational tangle extending it. We note that all non-alternating and quasi-alternating Montesinos links can be obtained in that way. We check that all the obtained quasi-alternating links satisfy Conjecture 3.1 of Qazaqzeh et al. (JKTR 22 (6), 2013), that is the crossing number of a quasi-alternating link is less than or equal to its determinant. We also prove that the converse of Theorem 3.3 of Qazaqzeh et al. (JKTR 24 (1), 2015) is false.

**Keywords :** quasi-alternating links, almost alternating links, tangles, determinants

**Conference Title :** ICLDTKT 2021 : International Conference on Low-Dimensional Topology and Knot Theory

**Conference Location :** Berlin, Germany

**Conference Dates :** July 22-23, 2021