



Mathematical Physics

Alexander Polynomial Invariants of Torus Knots $T(n,3)$ and Chebyshev Polynomials

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The explicit formula, which expresses the Alexander polynomials $\Delta_{\{n,3\}}(t)$ of torus knots $T(n,3)$ as a sum of the Alexander polynomials $\Delta_{\{k,2\}}(t)$ of torus knots $T(k,2)$, is found. Using this result and those from our previous papers, we express the Alexander polynomials $\Delta_{\{n,3\}}(t)$ through Chebyshev polynomials. The latter result is extended to general torus knots $T(n,l)$ with n and l coprime.

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