1114-82-109   **Eleni Panagiotou*** (`panagiotou@math.ucsb.edu`), South Hall, Room 6523, Department of
Mathematics, University of California Santa Barbara, Santa Barbara, CA 93106-3080, and **Martin
Kroeger**. *Pulling-force-induced elongation and alignment effects on entanglement and knotting
characteristics of linear polymers in a melt.*

We employ a primitive path (PP) algorithm and the Gauss linking integral to study the degree of entanglement and
knotting characteristics of linear polymer model chains in a melt under the action of a constant pulling force applied to
selected chain ends. Our results for the amount of entanglement, the linking number, the average crossing number, the
writhe of the chains and their PPs and the writhe of the entanglement strands all suggest a different response at the
length scale of entanglement strands than that of the chains themselves and of the corresponding PPs. (Received August
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