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*t-sion of Two Polynomial Sequences and Factorization Properties*,
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**Abstract**

Certain second-order recurrence sequences \((G_n)\) and \((H_n)\) give the coefficients for sequences \(P\) and \(Q\) of polynomials in \(\mathbb{R}[x]\). The *t-sion* of \(P\) and \(Q\), denoted by \(P \circ_t Q\), is then defined so as to generalize both the fusion and fission of \(P\) and \(Q\). Specifically, \(P \circ_t Q\) is the fusion of \(P\) and \(Q\) if \(t = 1\) and the fission if \(t = -1\). Choosing \(Q\) in a certain manner derived from \(P\) gives a sequence \(\tilde{P}\) for which \(P \circ_t \tilde{P}\) is the *self t-sion* of \(P\). Explicit formulas are obtained for the polynomials in \(P \circ_t \tilde{P}\).