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**Title:** Application of Velusqrt algorithm to Huff's curves

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In 2020 Bernstein, De Feo, Leroux, and Smith presented a new odd-degree  $\ell$ -isogeny computation method called Velusqrt. This method has complexity  $\tilde{O}(\sqrt{\ell})$ , compared to the complexity of  $\tilde{O}(\ell)$  of the classical Vélu method. In this paper, the application of the Velusqrt method to Huff's curves is presented. It is shown how to compute odd-degree isogeny on Huff's curves using the Velusqrt algorithm and  $x$ -line arithmetic for different compression functions, especially for degree 4 compression function  $f_{4,x^2} = x^2$ .