

**Explicit  $p$ -adic heights on Jacobians of genus 2 curves**

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We use some  $p$ -adic sigma/theta functions to describe explicitly a  $p$ -adic height on the Jacobian of a genus 2 curve over the rationals. Algorithms to compute  $p$ -adic heights have many arithmetic applications; if time permits, I will present one involving the quadratic Chabauty method to determine integral/rational points on curves.