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**Jordan Schettler\*** ([jschettler@math.arizona.edu](mailto:jschettler@math.arizona.edu)). *Cyclic  $p$ -Extensions of  $\mathbb{Z}_p$ -Fields.*

Kida and Iwasawa proved number theoretic analogs of the Riemann-Hurwitz formula where the lambda invariant of a  $\mathbb{Z}_p$ -field plays the role of (twice) a genus of a curve. We can derive special formulas in the case of cyclic  $p$ -extensions of  $\mathbb{Z}_p$ -fields which yield extra information about lambda invariants that cannot be gleaned from the previously known formulas. (Received September 15, 2011)