1116-11-1441   **Jennifer S. Balakrishnan*** (`balakrishnan@maths.ox.ac.uk`). *p-adic heights on elliptic curves over number fields.*

p-adic heights play a key role in the p-adic Birch and Swinnerton-Dyer conjecture. They also figure prominently in parts of Kim's nonabelian Chabauty program and can be used to explicitly find rational points on curves. We give an overview of methods to compute p-adic heights on elliptic curves over number fields and discuss some of these applications. Along the way, we highlight some computational challenges that arise. (Received September 19, 2015)