

ALGEBRA AND NUMBER THEORY
SEMINAR

Variations on a theme of Shinzel and Wójcik

Matthew Just
Emory University

Abstract: Let α and β be rational numbers not equal to 0 or ± 1 . How does the order of $\alpha \pmod{p}$ compare to the order of $\beta \pmod{p}$ as p varies? A result of Shinzel and Wójcik states that there are infinitely many primes p for which the order of $\alpha \pmod{p}$ is equal to the order of $\beta \pmod{p}$. In this talk, we discuss the problem of determining whether there are infinitely many primes p for which the order of $\alpha \pmod{p}$ is strictly greater than the order of $\beta \pmod{p}$. This is joint work with Paul Pollack.

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