NIC FELLINI, Queen's University
Non-Wieferich Primes in Number Fields

An odd prime p is called a base-a Wieferich prime for some integer $a \neq 0, \pm 1$ if

$$a^{p-1} \equiv 1 \bmod p^2.$$

The interest in Wieferich primes stems from their connection to Fermat's Last Theorem. While results on base-a Wieferich primes remain elusive, there has been some progress in understanding their complement, known as non-Wieferich primes, under various hypotheses. In this talk, I will discuss joint work with M. Ram Murty on number field analogues of non-Wieferich primes.