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**Mike Siddoway\*** ([msiddoway@coloradocollege.edu](mailto:msiddoway@coloradocollege.edu)), Mike Siddoway, Department of Mathematics, Colorado College, Colorado Springs, CO 80903. *Ideal Numbers, Unique Factorization, and Ideals.*

In the mid 19th century Ernst Kummer introduced the notion of "ideal (complex)numbers" to ensure unique factorization which he needed in order to provide the first great breakthrough in the quest to solve Fermat's Last Theorem. Kummer supplied the insight which led to the proof of this famous conjecture for regular primes. Along the way, his work also proved to be very important in the development of algebraic number theory and algebra. In this talk I will report on a presentation of Kummer's work and related investigations by Dedekind that I use in my number theory and abstract algebra courses to motivate the theory of ideals. (Received July 03, 2000)