An “Idiot Scientist”, Dr. Jumba Jookiba∗, discovers an efficient (polynomial time) factoring algorithm. Does this mean the end of public key cryptosystems and internet trading?

Because of the nature of public key cryptography, it would threaten it. Since we are not supposed to rely on secrecy for security, knowing how to break these large primes down would make the keys very easy to break. If we look at quantum computing, this is already being threatened (Maarten Bodewes, StackExchange).

Source:

https://crypto.stackexchange.com/questions/33650/do-any-cryptography-algorithms-work-on-numbers-besides-primes