

Abstract Submitted  
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**Analogy between optical interferometry and integer factorization  
inspires novel mathematical results** GABRIEL SEIDEN, Weizmann Institute  
of Science — Prime factorization of integers is an outstanding problem in arithmetic  
with important consequences in a variety of fields, most notably cryptography. We  
explore the intriguing relationship between prime factorization and optical interfer-  
ometry with the aim of obtaining novel analytic expressions for number-theoretic  
functions directly related to prime factorization [1]. [1] G. Seiden, Phys. Rev. A 85,  
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