

## ***Unique Investigation of Primes Based upon Symmetric Sequences of Integers and their Transforms***

This investigation unearthed interesting new finds and insights, which are now available at [www.primestructure.com](http://www.primestructure.com). These include:

- a method to superimpose structure upon the sieve of Eratosthenes
- 2 recursive prime formulae expressing this method algebraically
- infinitely many structures useful in modeling prime numbers
- a general construct that encompasses these structures
- singular properties of 2 types of symmetric sequences of integers
- structures that provide insights into prime numbers even though they appear independent of primes
- original derivations of 14 properties of primes using the above

For example, the infinitude of primes derives directly from the structured sieve method and its algebraic expression:

With  $S_0 \equiv [1 \ 1]$ , by construction the 2<sup>nd</sup> term in each of the recursively generated integer sequence  $S_k$ ,  $k = 1, 2, 3 \dots$ , is a distinct prime.

For an overview, or full details, see [www.primestructure.com](http://www.primestructure.com).