

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. 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 2nd 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.