

# SOME UNEXPECTED CONNECTIONS BETWEEN ANALYSIS, COMBINATORICS, AND NUMBER THEORY

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We go over Sullivan's proof [2] of Andrica-Tomescu conjecture and point out what can be shown in general and what are the difficulties in the general case. Also, we will introduce and discuss the signum equation of an Erdős-Suranyi sequence and we will concentrate on the sequence of primes. Some results obtained in the recent paper of D.Andrica and E.J.Ionascu [1] as well as some open problems, will be discussed.

## References

- [1] Andrica, D., Ionascu, E.J., *Some Unexpected Connections Between Analysis and Combinatorics*, in "Mathematics Without Boundaries", Surveys in Pure Mathematics, Th.M.Rassias and P.M.Pardalos (Eds.), pp.1-19, Springer, 2014.
- [2] Sullivan, B.D., *On a Conjecture of Andrica and Tomescu*, J.Integer Sequence 16(2013), Article 13.3.1.

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