## The Hardy-Littlewood Circle Method

In this talk we will motivate and present the Hardy-Littlewood circle method, which remains the most important tool in the study of exponential sums with aritmetic phases and related diophantine problems. We will follow the first two chapters of R.C. Vaughan's standard book [1]. We will put great emphasis on how this method emerges from, and proceeds along modular arithmetic considerations.

### References

[1] R.C. Vaughan, *The Hardy-Littlewood method*, 2nd edition, Cambridge University Press, 1997.