Cornell University Library

We gratefully acknowledge support from
the Simons Foundation
and member institutions

arXiv.org > math > arXiv:1206.0521

Search or Article-id

(Help | Advanced search)

All papers | Go!

Mathematics > Number Theory

On Character Sums and Exponential Sums over Generalized Arithmetic Progressions

Xuancheng Shao

(Submitted on 4 Jun 2012 (v1), last revised 21 Jul 2012 (this version, v2))

We study upper bounds for sums of Dirichlet characters. We prove a uniform upper bound of the character sum over all proper generalized arithmetic progressions, which generalizes the classical Polya and Vinogradov inequality. Our argument is based on getting an upper bound for the l1 norm of the Fourier coefficients of a generalized arithmetic progression. Our method also applies to give upper bounds for polynomial exponential sums.

Comments:	12 pages: Proposition 2.2 improved
Subjects:	**Number Theory (math.NT)**
Cite as:	**arXiv:1206.0521** [math.NT]
	(or **arXiv:1206.0521v2** [math.NT] for this version)

Submission history

From: Xuancheng Shao [view email]
[v1] Mon, 4 Jun 2012 05:22:05 GMT (7kb)
[v2] Sat, 21 Jul 2012 00:42:03 GMT (9kb)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.