

# Product decompositions in finite simple groups

Martin Liebeck, Nikolay Nikolov, Aner Shalev

(Submitted on 7 Jul 2011)

We propose a general conjecture on decompositions of finite simple groups as products of conjugates of an arbitrary subset. We prove this conjecture for bounded subsets of arbitrary finite simple groups, and for large subsets of groups of Lie type of bounded rank. Some of our arguments apply recent advances in the theory of growth in finite simple groups of Lie type, and provide a variety of new product decompositions of these groups.

Subjects: **Group Theory (math.GR)**

MSC classes: 20D40, 20D06

Cite as: **arXiv:1107.1528 [math.GR]**

(or **arXiv:1107.1528v1 [math.GR]** for this version)

## Submission history

From: Nikolay Nikolov [[view email](#)]

[v1] Thu, 7 Jul 2011 21:40:15 GMT (5kb)

*[Which authors of this paper are endorsers?](#)*

## Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

## Current browse context:

math.GR

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

## Change to browse by:

[math](#)

## References & Citations

- [NASA ADS](#)

## Bookmark (what is this?)



Science  
WISE