



# Library Indian Institute of Science Education and Research Mohali



**DSpace@IISERMohali (/jspui/)**  
**/ Publications of IISER Mohali (/jspui/handle/123456789/4)**  
**/ Research Articles (/jspui/handle/123456789/9)**

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/3165>

Title:	Unimodular bilinear Fourier multipliers on $L_p$ spaces
Authors:	Kaur, Jotsaroop (/jspui/browse?type=author&value=Kaur%2C+Jotsaroop)
Keywords:	Fourier multipliers Bilinear multipliers Transference methods
Issue Date:	2020
Publisher:	Springer
Citation:	Monatshefte fur Mathematik, 193(1), pp.87-103.
Abstract:	In this paper we investigate the boundedness properties of bilinear multiplier operators associated with unimodular functions of the form $m(\xi, \eta) = e^{i\phi(\xi-\eta)}$ . We prove that if $\phi$ is a $C^1(\mathbb{R}^n)$ real-valued non-linear function, then for all exponents $p, q, r$ lying outside the local $L^2$ -range and satisfying the Hölder's condition $1/p + 1/q = 1/r$ , the bilinear multiplier norm $\ e^{i\lambda\phi(\xi-\eta)}\ _{M_{p,q,r}(\mathbb{R}^n)} \rightarrow \infty$ as $ \lambda  \rightarrow \infty$ . For exponents in the local $L^2$ -range, we give examples of unimodular functions of the form $e^{i\phi(\xi-\eta)}$ , which do not give rise to bilinear multipliers. Further, we also discuss the essential continuity property of bilinear multipliers for exponents outside local $L^2$ -range.
Description:	Only IISERM authors are available in the record.
URI:	<a href="https://link.springer.com/article/10.1007%2Fs00605-020-01417-4">https://link.springer.com/article/10.1007%2Fs00605-020-01417-4</a> ( <a href="https://link.springer.com/article/10.1007%2Fs00605-020-01417-4">https://link.springer.com/article/10.1007%2Fs00605-020-01417-4</a> ) <a href="http://hdl.handle.net/123456789/3165">http://hdl.handle.net/123456789/3165</a> ( <a href="http://hdl.handle.net/123456789/3165">http://hdl.handle.net/123456789/3165</a> )
Appears in	Research Articles (/jspui/handle/123456789/9)
Collections:	

Files in This Item:

File	Description	Size	Format
Need to add pdf.odt (/jspui/bitstream/123456789/3165/1/Need%20to%20add%20pdf.odt)		8.63 kB	OpenDocument Text

[View/Open \(/jspui/bitstream/123456789/3165/1/Need%20to%20add%20pdf.odt\)](#)

[Show full item record \(/jspui/handle/123456789/3165?mode=full\)](#)

[Statistics \(/jspui/handle/123456789/3165/statistics\)](#)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.