

# Corrugation crack front waves

J. R. Willis, N. V. Movchan, A. B. Movchan

(Submitted on 5 Jun 2012)

The paper presents a model of a dynamic crack with a wavy surface. So far, theoretical analysis of crack front waves has been performed only for in-plane perturbations of the crack front. In the present paper, generalisation is given to a more general three-dimensional perturbation, and equations that govern corrugation crack front waves are derived and analysed.

Comments: 13 pages, 3 figures

Subjects: **Analysis of PDEs (math.AP)**; Mathematical Physics (math-ph)

MSC classes: 35Q74, 34E10

Cite as: **arXiv:1206.0870 [math.AP]**(or **arXiv:1206.0870v1 [math.AP]** for this version)

## Submission history

From: Alexander Movchan [[view email](#)]

[v1] Tue, 5 Jun 2012 10:21:34 GMT (61kb)

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

## Download:

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

## Current browse context:

math.AP

[< prev](#) | [next >](#)[new](#) | [recent](#) | [1206](#)

## Change to browse by:

[math](#)[math-ph](#)

## References & Citations

- [NASA ADS](#)

## Bookmark([what is this?](#))

Science  
WISE