

## Accepted Manuscript

Study on Feet Forces' Distributions, Energy Consumption and Dynamic Stability Measure of Hexapod Robot During Crab Walking

Abhijit Mahapatra , Shibendu Shekhar Roy , Dilip Kumar Pratihar

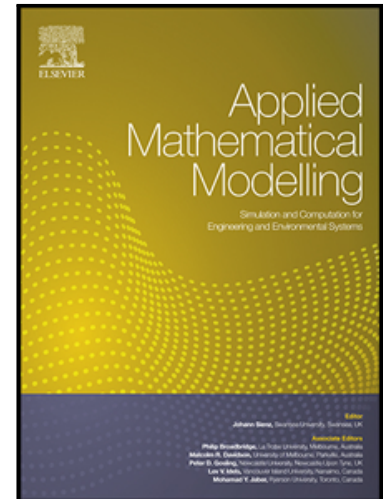
PII: S0307-904X(18)30457-8  
DOI: <https://doi.org/10.1016/j.apm.2018.09.015>  
Reference: APM 12467

To appear in: *Applied Mathematical Modelling*

Received date: 15 January 2018  
Revised date: 18 August 2018  
Accepted date: 6 September 2018

Please cite this article as: Abhijit Mahapatra , Shibendu Shekhar Roy , Dilip Kumar Pratihar , Study on Feet Forces' Distributions, Energy Consumption and Dynamic Stability Measure of Hexapod Robot During Crab Walking, *Applied Mathematical Modelling* (2018), doi: <https://doi.org/10.1016/j.apm.2018.09.015>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



## Highlights:

- During crab walking of hexapod, impact forces are generated, whenever the swing leg touches the ground
- Both specific energy consumption and dynamic stability margin decrease with the increase in trunk body velocity
- Specific energy consumption increases but dynamic stability margin decreases with the increase in body height
- Both specific energy and dynamic stability margin increase with the body stroke, lateral offset, crab angle
- Both specific energy consumption and dynamic stability margin increase with the increase in duty factor

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/11032137>

Download Persian Version:

<https://daneshyari.com/article/11032137>

[Daneshyari.com](https://daneshyari.com)