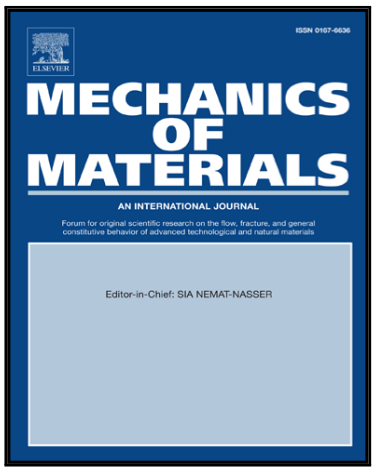

A Receding Frictional Contact Problem between a Graded Layer and a Homogeneous Substrate Pressed by a Rigid Punch

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PII: S0167-6636(17)30252-1
DOI: 10.1016/j.mechmat.2017.08.003
Reference: MECMAT 2781

To appear in: *Mechanics of Materials*

Received date: 4 April 2017
Revised date: 6 July 2017
Accepted date: 4 August 2017

Please cite this article as: Sami El-Borgi, Isa Çömez, A Receding Frictional Contact Problem between a Graded Layer and a Homogeneous Substrate Pressed by a Rigid Punch, *Mechanics of Materials* (2017), doi: 10.1016/j.mechmat.2017.08.003

Highlights

- We study the receding frictional nonlinear contact between a graded layer and a homogeneous half-space pressed against each other by a rigid stamp.
- Plane elasticity equations are converted to two singular integral equations using Fourier transform and the resulting nonlinear algebraic equations are solved by supplementing the global force and moment equations in addition to a robust iterative algorithm.
- We study the effect of the non-homogeneity parameter of the graded layer, the friction coefficient in the contact zones and the stamp radius on the receding contact dimensions and contact pressures.