

# UC Berkeley

## UC Berkeley Previously Published Works

### Title

25 April 2015 Gorkha Earthquake in Nepal Himalaya (Part 2)

### Permalink

<https://escholarship.org/uc/item/6bj3d9v7>

### Authors

Rao, N Purnachandra  
Burgmann, Roland  
Mugnier, Jean-Louis  
et al.

### Publication Date

2017-06-01

### DOI

10.1016/j.jseaes.2017.05.038

Peer reviewed

# 25 April 2015 Gorkha Earthquake in Nepal Himalaya (Part 2)

Author links open overlay panel [N. PurnachandraRao](#) [RolandBurgmann](#) [Jean-](#)

[LouisMugnier](#) [VineetGahalaut](#) [AnandPandey](#)

Show more

<https://doi.org/10.1016/j.jseaes.2017.05.038> [Get rights and content](#)

- [Previous article in issue](#)
- [Next article in issue](#)

## 1. Preface

The response from the geosciences community working on Himalaya in general, and the 2015 Nepal earthquakes in specific, was overwhelming, and after a rigorous review process, thirteen papers were selected and published in Part-1. We are still left with a few good papers which are being brought out as Part–2 of the special issue. In the opening article Jean-Louis Mugnier and colleagues attempt to provide a structural geological perspective of the 25 April 2015 Gorkha earthquake and highlight the role of segmentation in generating the Himalayan mega-thrusts. They could infer segmentation by stable barriers in the HT that define barrier-type earthquake families. In yet another interesting piece of work, Pandey and colleagues map the crustal structure across the earthquake volume using Receiver function approach and infer a 5-km thick low velocity layer that connects to the MHT ramp. They are also able to correlate the rupture termination with the highest point of coseismic uplift. The last paper by Shen et al. highlights the usefulness of INSAR technique in mapping the coseismic slip distribution applied to the 25 April 2015 Gorkha earthquake. They infer low stress drop and corner frequency which coupled with hybrid modeling explain the low level of slip heterogeneity and frequency of ground motion. We compliment the journal of Asian Earth Sciences for bringing out the two volumes and do hope that these efforts have made a distinct impact on furthering our understanding of seismogenesis in Himalaya using the very latest data sets.

## 2. Selected Papers

1)

JAES-D-15-00942R1 - Jean-louis mugnier - Segmentation of the Himalayan megathrust around the Gorkha earthquake (25 April 2015) in Nepal

2)

JAES-D-15-00938R1 - Ajay Paul - Redefining the Central Seismic Gap in Himalaya with reference to recent Nepal Earthquakes of 25th April 2015 Mw7.8 and 12th May 2015 Mw7.3

3)

JAES-D-15-00859R1 – M. Ravi Kumar – Earthquake genesis in Nepal Himalaya: A perspective from imaging of the 25th April 2015 Mw 7.8 earthquake source zone

4)

JAES-D-16-00572R1 – Wenhao shen - Hybrid stochastic ground motion modeling of 2015, Mw7.8, Gorkha, Nepal earthquake, based on the InSAR inversion