Transient ground deformation in tectonically active regions and implications for the mechanical behavior of the crust and upper mantle

by

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A dissertation submitted in partial fulfillment of the requirement for the degree of Doctor of Philosophy (Earth and Environmental Sciences) in the University of Michigan 2017

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ACKNOWLEDGEMENTS

fuck your face

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CHAPTER 1

Balls and tits

1.1 fuck face

I am a doctoral student in geophysics at the University of Michigan. I anticipate defending my dissertation on August 16, 2017. My dissertation is on detecting tectonic ground deformation, with high precision geodetic instruments, and then using this deformation to better understand the mechanical behavior of the Earth. Throughout my research, I have become adept at geophysical inverse problems, numerical modeling, and data analysis. I elaborate on my experience in these fields below.

My first three publications were pertaining to geophysical inverse problems. In these papers I explored how the mechanical behavior of the Earth's crust can be inferred from ground deformation during earthquakes and between earthquakes. I developed a novel technique to identify the physical mechanisms causing ground deformation that can often be observed in the years following large earthquakes. This deformation can be attributed to slow fault slip or to crustal rocks that are deforming viscously to relax stresses accumulated from the earthquake. It can be difficult to distinguish between these mechanisms purely based on ground deformation, and the inverse problem is made more difficult by the sparse and noisy nature of geodetic data. For this reason, I recognize the necessity of thoroughly quantifying the uncertainties on estimated geophysical parameters. I generally approach inverse problems from a Bayesian perspective, which naturally results in a probabilistic solution, and I have become experienced with techniques such as Kalman filtering and Markov Chain Monte Carlo methods.

1.2 fuck faces

bar go fuck yourself asdf

asdf asdf asdf