



# THE WORLDWIDE CENTER OF MATHEMATICS

## Restricted local volumes and deformation theory



### Antoni Rangachev

Northeastern University, Boston

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**Coffee, tea, cookies: 3:30pm**

**Talk: 4-5pm**

**929 Massachusetts Ave., Cambridge, Suite #102**

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Abstract: In this talk, I will introduce the restricted local volume of a line bundle as a powerful tool of deformation theory. As the name suggests, the restricted local volume is the local counterpart of the usual restricted volume of a line bundle as introduced by Ein, Lazarsfeld, Mustata, Nakamaye, and Popa.

I will present a result of mine that determines the change of the restricted local volume across flat families for a fairly general class of line bundles. The change turns out to be the degree of a certain projective scheme. Then I will discuss applications to deformation theory of singularities generalizing previous work of Gaffney, Kleiman, Teissier, and Hironaka among others.

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