



THE WORLDWIDE CENTER OF MATHEMATICS

Local Volumes



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Coffee, tea, cookies: 3:30pm
Talk: 4-5pm

929 Massachusetts Ave., Cambridge, Suite #102

Abstract: Local volumes are a common generalization of two invariants appearing in seemingly separate areas of mathematics. On the one hand, we have the Hilbert-Samuel multiplicity of m -primary ideals with its slight extension, the ε -multiplicity. On the other hand, we have an algebraic and topological invariant of normal isolated surface singularities due to Wahl. I will explain the construction and properties of this volume. It naturally leads to a generalization of Wahl's invariant to normal isolated singularities in arbitrary dimensions. A different generalization for isolated singularities has been studied by Boucksom, de Fernex, and Favre. I will also briefly explain the relationship between these volumes.

The Worldwide Center of Mathematics, www.centerofmath.org, is located midway between Harvard and Central Squares, at 929 Massachusetts Avenue, Cambridge, MA, in Suite #102. Travel to the Center by public transportation is easy via the #1 bus, or by taking the subway (the T) to Central Square, and walking for 10 minutes. Suite #102 is located on floor 01, which is distinct from floor 1.