"The secret to creativity is knowing how to hide your sources." —Albert Einstein

The Trivial Notions Seminar
Proudly Announces

The Lefschetz fixed-point formula

A talk by
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Abstract

Suppose you have a smooth map of a closed oriented manifold into itself, which is nondegenerate. Then you can attach a number to each of its fixed points, that depends only on the local behaviour of the map around the point. The Lefschetz formula says that the sum of all these numbers equals a cohomological quantity, the Lefschetz number of the map. The point is that a global object can be computed as a sum of local contributions. This phenomenon is quite common in differential geometry and is at the heart of many deep theorems, the most important being the Atiyah-Singer Index Theorem. I'll give a proof of the formula and discuss some applications, including a derivation of the Poincaré-Hopf theorem as a corollary.

Friday, September 22$^{\text{nd}}$ at 2:00 pm
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