MANY CHEERFUL FACTS

presents

Vanishing Vector Fields and Topological Invariants

a talk by A.J. Tolland

1:10 pm - 2:00 on Wednesday, October 26th, in room 1015.

One of the more fun facts in basic topology is that you can compute the Euler characteristic of a manifold by counting (with signs) the zeros of a sufficiently general vector field. I'll introduce the Thom class of a vector bundle, and use it to prove the relationship mentioned above.

I am the very model of a modern Major General,
I've information vegetable, animal, and mineral,
I know the kings of England, and I quote the fights historical
From Marathon to Waterloo, in order categorical;
I'm very well acquainted, too, with matters mathematical,
I understand equations, both the simple and quadratical,
About binomial theorem I'm teeming with a lot o' news,
With many cheerful facts about the square of the hypotenuse!

- Gilbert & Sullivan $P \circ P$