



**Speaker:** Robin Koytcheff  
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Thursday, February 7, 2013  
4:00 PM  
127 Hayes-Healy Hall

**Title:** Linking numbers, configuration space integrals, and finite-type invariants of knots and links

**Abstract:**

Finite-type invariants (also known as Vassiliev invariants) are important in that they conjecturally approximate all knot invariants and hence separate knots. I will describe them in elementary, purely combinatorial terms. I will then discuss the configuration space integrals of Bott and Taubes which generalize the Gauss linking integral from links to knots and which provide one way of constructing all finite-type invariants. These integrals have more generally been used to construct cohomology classes in spaces of knots and links. I will conclude by discussing a more homotopy-theoretic perspective on these configuration space integrals.