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**Hirotschi Abo\*** ([abo@uidaho.edu](mailto:abo@uidaho.edu)), 300 Brink Hall, Department of Mathematics, University of Idaho, Moscow, ID 83844. *Secant varieties to tangential varieties of cubic Veronese embedding.*

The past several decades have seen an interest in secant varieties cross an ever widening collection of disciplines including algebraic complexity theory, algebraic statistics, interpolation as well as algebraic geometry.

A well known classification of defective secant varieties of Veronese varieties has been completed in a series of papers by Alexander and Hirschowitz. There is a conjecturally completed list of defective secant varieties to tangential varieties of Veronese varieties suggested by Geramita, Catalisano and Gimigliano.

In this talk, I will discuss an inductive approach to establish the existence of large classes of non-defective secant varieties to tangential varieties of cubic Veronese embeddings. This approach was inspired by the work of Brambilla and Ottaviani. (Received August 17, 2009)