

# MSRI–Evans Talk

Monday, 4:10–5:00pm, 60 Evans

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Jan. 26     **Robert Lazarsfeld**, University of Michigan

*Positivity Properties of Divisors and Higher Codimension Cycles*

A very basic idea in algebraic geometry is to try to study a variety by considering all the hypersurfaces (and non-negative linear combinations thereof) inside it. This allows one to construct various interesting cones of cohomology classes, whose structure often reflects the geometry of the underlying variety. Remarkably, the precise shape of these cones is unknown even for some quite simple surfaces.

After quickly reviewing the classical theory, I will survey more contemporary developments concerning the codimension one situation. Then I will present some questions and conjectures about what one might expect for cycles of higher codimension.