

**STANFORD UNIVERSITY**  
**DEPARTMENT OF STATISTICS**  
**DEPARTMENTAL SEMINAR**

4:15 p.m., Tuesday, January 8, 2008  
Sequoia Hall Room 200  
(Cookies at 3:45 in 1st Floor Lounge)

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**On the Path to Extinction**

Populations can certainly die out for diverse reasons, the most basic probably being through stably insufficient reproductive power (whatever the ground for that may be). Even in this case there is an abundance of paths to extinction. Still, if the starting population is large, a simple and beautiful pattern emerges, where random and deterministic effects are of roughly the same order of magnitude. We describe this path and the time to extinction of large subcritical branching populations, and discuss whether mathematically 'large' could be biologically 'small' (=threatened).