All graduate students are eligible to participate.
To submit your solution, e-mail it to bazaliy@mailbox.sc.edu

Jumping ball

Elastic ball of mass $m$ is thrown from a point on incline with velocity $\vec{v}$ pointing at an angle $\beta$ to the horizon (see figure). The angle of incline is $\alpha$, and $\alpha \leq \beta \leq 90^\circ$. The ball makes several jumps up the incline, but eventually turns to move downwards. Every collision with the incline is completely elastic. Find the range of angles $\beta$ for which the ball makes only one upward jump.