

Combinatorics of colliding bullets

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The finite colliding bullets problem is the following simple problem: consider a gun, whose barrel remains in a fixed direction; at each time $1, 2, \dots, n$, shoot a bullet with a uniform and independent random speed. Since the bullets move along the same trajectory, they might collide. When two bullets collide, they both annihilate. What is the distribution of the number of bullets that survive forever ?

This is joint work with J.-F. Marckert.

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