ABSTRACT OF THE TALK

The finite colliding bullets problem is the following simple problem: consider a gun, whose barrel remains in a fixed direction; let \((V_i)_{1 \leq i \leq n}\) be an i.i.d. family of random variables with uniform distribution on \([0,1]\); shoot \(n\) bullets one after another at times \(1,2,\ldots,n\), where the \(i\)th bullet has speed \(V_i\). When two bullets collide, they both annihilate. We will discuss the distribution of the number of surviving bullets, as well as some similar quantities in intimately related models.

This is joint work with Jean-Francois Marckert.

BIOGRAPHY

Nicolas Broutin is a Visiting Associate Professor of Mathematics at NYU Shanghai. Until very recently, he was also a researcher at Inria Paris. He has just moved to Université Pierre et Marie Curie - Paris 6 that he joined as a professor. He holds a MEng from Ecole Polytechnique (Paris), and a Ph.D. from McGill University. His research interests include probability, random structures and algorithms, especially around random graphs.